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Reforming The Cold War State: Economic Thought, Internationalization, And The Politics Of Soviet Reform, 1955-1985.

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Abstract

This dissertation explains how, as the USSR's narrative of the Cold War shifted from the military-industrial competition envisioned by Stalin to Khrushchev's "peaceful socioeconomic competition of the two systems," economics began to tackle the challenge of transforming the Soviet economy from one focused on mobilization and production to one that could deliver well-being and abundance. Soviet economics changed from a field that only justified the state's actions to a "science" whose practitioners could use their "expertise" to propose and critique domestic government policy. This opening allowed Soviet theorists to engage with the emerging issues of global economic interdependence and post-industrialism, which also challenged the post-war economic consensus in the West in the 1970s and the 1980s. Economists and scientists from East, West, and South created a transnational community gathered around institutions such as the United Nations, the Club of Rome, and the International Institute for Applied Systems Analysis (IIASA) to adapt the institutions of the postwar state to the conditions of nascent globalization. By documenting these engagements, I challenge the prevailing historiographical narrative that so-called Soviet "liberals" "learned from the West" and instead show that reform-minded economists became equal partners in trans-European intellectual communities that hoped to reconcile the institutions of national economic planning to the conditions of globalization. I argue that to understand the politics of the post-Stalin USSR, one must understand the "Cold War Paradigm" in Soviet economic thought and policy making and how it allowed for the consolidation of a conservative hegemony under Brezhnev. Further, I suggest that despite fraying between 1985 and 1993, the conservative direction in economic thought continues to structure contemporary Russian and Post-Soviet politics. This work is based on primary research in the State Archive of the Russian Federation, the Archive of the Russian Academy of Science, the Russian State Archive of the Economy, the Russian State Archive of Contemporary History, the Central Archive of the City of Moscow, the Lyndon Johnson Presidential Library, the Rockefeller Archive Center and the MIT Institute Archives and the Harvard University Archives.

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REFORMING THE COLD WAR STATE: ECONOMIC THOUGHT,
INTERNATIONALIZATION, AND THE POLITICS OF SOVIET REFORM, 1955-
1985.

Yakov Feygin

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To My Grandfather and My Parents

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ABSTRACT

REFORMING THE COLD WAR STATE: ECONOMIC THOUGHT, INTERNATIONALIZATION, AND THE POLITICS OF SOVIET REFORM, 1955-1985.

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Prof. Benjamin Nathans

This dissertation explains how, as the USSR's narrative of the Cold War shifted from the military-industrial competition envisioned by Stalin to Khrushchev's "peaceful socioeconomic competition of the two systems," economics began to tackle the challenge of transforming the Soviet economy from one focused on mobilization and production to one that could deliver well-being and abundance. Soviet economics changed from a field that only justified the state's actions to a "science" whose practitioners could use their "expertise" to propose and critique domestic government policy. This opening allowed Soviet theorists to engage with the emerging issues of global economic interdependence and post-industrialism, which also challenged the post-war economic consensus in the West in the 1970s and the 1980s. Economists and scientists from East, West, and South created a transnational community gathered around institutions such as the United Nations, the Club of Rome, and the International Institute for Applied Systems Analysis (IIASA) to adapt the institutions of the postwar state to the conditions of nascent globalization. By documenting these engagements, I challenge the prevailing historiographical narrative that so-called Soviet "liberals" "learned from the West" and instead show that reform-minded economists became equal partners in trans-European intellectual communities that hoped

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Introduction

Persistent Factors in Russian Economic Policy?

Lenin and his Politburo are riding in a train. The train breaks down. Lenin says: "let's organize a voluntary labor day, go to the woods and chop down some wood for the train." They do so and the train begins to run.

Stalin and his Politburo are riding in a train. The train breaks down. Stalin says: "shoot the engineer, promote the coal shoveler to engineer." They do so and the train begins to run.

Khrushchev and his Politburo are riding in a train. The train breaks down. Khrushchev says: "These steam engines are obsolete comrades! Let us build an atomic train that is faster and more reliable than any cutting-edge capitalist diesel and let us do it before it gets dark!"

One atomic train is built, it is indeed faster than, but not as reliable as, the capitalist trains and there is only one built. It arrives two days late but, eventually, the train begins to run.

Brezhnev and his Politburo are riding on a train. The train breaks down. Brezhnev says: "close the blinds, rock the carriage, and make train noises."

Gorbachev and his Politburo are riding a train. The train breaks down. Gorbachev says: "comrades, let's just walk."

-Russian Joke

In 1930, Andrei Platonov finished writing his novel, *The Foundation Pit*. His biting critique of Stalinist industrialization followed a group of workers digging a massive foundation pit for a workers' housing project. As the novel goes on, the pit grows as peasants turn into workers and this, in turn, means they need to make the pit larger. Finally, facing a giant pit with no structure, one of the main characters leaves, exclaiming "Communism is just something for the kids."¹

Platonov's metaphor of Stalinist industrialization as a foundation pit being dug but never filled in is a convenient way of introducing the subject of this dissertation: the attempt

¹ Andrei Platonov, *The Foundation Pit* (New York: New York Review of Books Classics, 2009)

of Soviet economic reformers in the state, Communist Party, and academic establishment to build a structure on the foundation pit that Stalinist industrialization had dug. This is a story of how the Soviet state, or at least some elements of it, tried to “build communism” but wound up flooding the foundations of the Soviet order.

This dissertation traces how the emergence of Soviet economics as a field and the ensuing discussion of fundamental reform of the Soviet system were deeply intertwined with the way the USSR’s intellectuals and leaders understood the country’s role in the world. The Soviet Union, which, by virtue of its economic order, was supposed to supersede capitalism, explicitly tied its domestic economic doctrines to its international position as the ostensible leader of a global revolutionary movement. Yet, the revolution did not come as Lenin and the leaders of the USSR expected—German workers did not successfully seize power after WWI and with the defeat in the Soviet-Polish war of 1921, revolutionary socialism was confined to one country. Stalinist industrialization overcame these setbacks by interpreting “socialism in one country” as the period in which the USSR could industrialize and form its social base to prepare for an inevitable war that would destroy the European state system and spread socialism. This world view, shaped by a mix of Marxism and traditional Russian realism, was deeply rooted in the imperial political order that was aggressively being reconstructed by the European great powers in the interwar period. The Soviet institutions created in the interwar cauldron were designed to mobilize the population to prepare for industrialization and war. This system worked—it helped the USSR survive the Second World War and to become the second superpower, punching far above its economic weight. However, things were changing. The increasingly educated and urbanized Soviet population was expecting rewards for their sacrifices which

meant abandoning the engine of shock industrialization—the diversion of the populations savings from consumption to investment into producer goods—what economists call “financial repression.” Moreover, the international conditions which underpinned the institutions created by Stalinism were different. The postwar period saw the emergence of something that had not existed before 1945: a liberal hegemon which controlled both military and financial resources. The world competing imperial rivalries in which the Soviet system was born, and which Stalin so brilliantly exploited, was replaced by the American led order in which great power status would be measured not only through military power and industrial prestige but also through consumption and prosperity. To continue the USSR’s challenge to the capitalist system in a new world with new demands and a weapon that made superpower war too destructive to wage, the Soviet Union’s project shifted to trying to use the institutions of Soviet socialism to beat postwar capitalism at its own game—mass prosperity.

I argue that Soviet reformist economic thought and the emergence of economics as a “policy science” interested in making recommendations on state actions, were deeply related to how Soviet elites tried to square the circle of simultaneously being a revolutionary state fighting against the imperialist world order, being a superpower with a stake in the maintenance of peace, and pursuing normality and prosperity at home. The Post-Stalin Soviet leadership solved this dilemma by tying the performance of the Soviet economy vis-à-vis its main adversary, the United States, to the USSR’s revolutionary mission. Successfully outperforming the United States would prove the superiority of the Socialist order and thus create a space in international politics for the emergence of “anti-imperialist forces” that would pave the way to a transition away from capitalism. This new

approach to interpreting the political economy of socialism was formally announced by Khrushchev at the XXth Party Congress in his declaration of “the peaceful socio-economic competition of the two systems.” The new doctrine immediately raised the question of how the USSR would gain information about its competitor and tailor its own domestic economy to winning this competition. The new battlefield between Soviet socialism and American capitalism necessitated the establishment of a corps of experts who would not only understand the economies of capitalist countries and their industrial policies but also to determine what the USSR could borrow from contemporary capitalism to improve its own domestic practices.

The economists and economic reformers of the late 1950s and the 1960s became conduits between the USSR’s international ideological commitments and its domestic politics. Thus, I label the economics that emerged in the wake of the XXth Party Congress, and especially its mathematical variant, a “Cold War Science.” I argue that the agencies and institutes that these actors embedded themselves in—most prominently research institutes in the Soviet Academy of Sciences but also the State Commission on Science and Technology (GKNT)—became “Cold War institutions” whose existence was predicated on the ambition to “catch up and overtake” the United States in explicit, measurable terms. They were designed to use the cutting edge of both domestic and global social science—which these Soviet elites viewed as just another kind of normatively neutral technology to be imported—to improve the system of central planning to adapt it to the conditions of the Cold War.

These groups and their political allies almost immediately clashed with more established “Stalinist Institutions” such as the central planning agencies, most prominently

The State Planning Commission (Gosplan), and the production ministries which ran the day-to-day operations of the Soviet economy. For these powerful interest groups, any change to the organization of the Soviet economy would challenge their pre-eminent status as arbiters of resources and power. Many of those associated with these conservative factions believed that a radical reorganization of central planning would not only pose technical and operational issues in factory floor production that the academics had no idea about, but also posed dangerous questions of whether abandoning Stalinist institutional arrangements also meant the end of socialism or if socialism could exist without these practices in an alternate form? For these more conservative figures, it was, in fact, the institutional practices of the Soviet economy which defined the state's socialist nature vis-à-vis the capitalist economies of the West.

I argue that these tensions are critical to understanding the domestic politics of economic reform and the emergence of a debate on the future of the Soviet planning system in the mid-1960s that was held not only in Communist Party and government committees but also on the pages of academic journals and official newspapers. These clashes reached their zenith during the “Kosygin Reforms” of 1965-1969, which attempted to decentralize industrial production by increasing the independence of individual enterprises and introducing a higher level of fiscal responsibility and profitability through more strictly enforced *Khozraschet*—roughly analogous to enterprise cost accounting in Western business parlance. The failure of these reforms to take root showed the fundamental weakness of the Post-Stalin Soviet state. Without a strong ruler at the center, any attempt to legislate was doomed to failure since the Soviet state did not operate under law, or even through law. The practices of democratic centralism caused the USSR to be caught in a

loop in which the lack of strong state institutions meant that the government could neither formally legislate the positive economic rights of enterprises, nor enforce negative rights through administrative law due to a lack of enforcement mechanisms—most importantly bankruptcy. The failure of the Kosygin Reforms is critical to understanding the political life of the Brezhnev-era. By ending the radical phase of economic reform, Brezhnev strived to build a consensus amongst the USSR's political factions and to use this stability to implement a conservative economic reform—a gradual improvement of technical elements of Soviet planning practice without fundamentally challenging its institutional arrangements. This approach, which proponents called “the improvement of the mechanism of the national economy” rather than the earlier more provocative term “economic reform,” was part and parcel of a larger attempt to enforce norms through procedure and administrative law rather than ad-hoc mobilization, or a legislative rethinking of economic rights.

The central ideological constructs of this era— “developed socialism” and “the global scientific-technical revolution” (STR)— promised that Communism would eventually be built when the USSR's planned system would integrate the fruits of new scientific advances such as automated production and computer-based management. Instead of Khrushchev's promises of Communism by 1980, Brezhnev's interpretation of the STR put these advancements into the distant future, encouraging a focus on the present and Soviet life as it was. The fact that the Soviet economy was planned and thus had no contradictions between capital and labor was officially deemed enough to guarantee that the USSR would eventually reap the fruits of global scientific advancement more successfully than the capitalist economies, thereby paving the way for socialism's global

triumph. This new discourse did the ideological work of sustaining Brezhnev's conservative turn but it also had unintended consequences. By placing the USSR into the context of "global processes," it allowed economists and allied social scientists to begin expanding their contacts with their counterparts from the West. Connections that had been built up on a bilateral basis in the context of the "peaceful competition of the two systems"—fought most actively in the development of newly decolonized states—gradually became multilateral. Soviet economic science began to adapt the "systems approach" propagated by proponents of the "new planning"—the idea of introducing non-hierarchical corporate planning practices into the public sphere—developed in institutions such as MIT's Sloan School of Management and the RAND Corporation. Social scientists, engineers, and political figures from East and West clustered around international institutions such as the United Nations, The Club of Rome, and The International Institute for Applied Systems Analysis (IIASA) to try to bring this theory to life on both sides of the Iron Curtain. As we shall see, Soviet actors were key to establishing these institutions and advocating for a non-hierarchical approach to planning both on a national and a global level. This embeddedness in international networks of expertise helped turn scholarly discussions about the impact of the "scientific-technical revolution" into a Soviet version of the debates about "post-industrialism" and "interdependence" that were challenging the post-war international liberal order.

By the late 1970s, many Soviet social scientists and economists close to the state had abandoned the strict division between the two systems that had dominated Cold War social science and instead understood each as a set of nested socio-economic systems that often-crossed borders. This was a fundamental change in how the USSR's elite saw the

world. Following the failure of the conservative reform agenda with the collapse of “the Second Kosygin Reform” of 1979, this shift led to an unexpected alliance between young regional Party bosses interested in bypassing the rigid practices and corruption of the Brezhnev era and the academic economic reformers who both saw Soviet institutions as the impediment to an efficient economy.

The Historiography of Economic Reform and Economics in the USSR

Much ink has been spilled on ideas and practices of economic reform in the USSR. Moshe Lewin wrote a short book on the subject in 1974, arguing that contemporary discussions in the USSR spoke to an underground current of Bukharinism.² Lewin was overestimating—there is no evidence that the Soviet mathematical-economists he was writing about had any interest or hidden identification with figures from the 1920s. Sovietologists including Richard Judy, Thane Gustafson, and Mark Beissinger all documented, often extremely accurately, the existence of economists and economic reformers as a distinct interest group in Soviet politics, as well as their clashes with more established factions.³ After the USSR’s collapse, political scientists like Robert English and Archie Brown began to study particular reformist groups embedded within the Central Committee apparatus during the 1970s to explain the sudden emergence of *Perestroika* and its consequences. These factions often included economists and supporters of economic reforms who worked in what Brown referred to as “amphibious institutions” whose staffers were making a quasi-liberal critique of Communism within the discourses and structures

² Moshe Lewin, *Political Undercurrents in Soviet Economic Debates: From Bukharin to the Modern Reformers*. (London: Pluto Press, 1975).

³ Richard Judy, “The Economists,” in *Interest Groups in Soviet Politics*, ed. Harold Gordon Skilling and Franklyn Griffiths, New edition edition (Princeton, N.J.: Princeton University Press, 1973), 209–52; Mark R. Beissinger, *Scientific Management, Socialist Discipline, and Soviet Power* (Cambridge, Mass: Harvard University Press, 1988); Thane Gustafson, *Reform in Soviet Politics: The Lessons of Recent Policies on Land and Water* (Cambridge: Cambridge University Press, 1981).

of the Party itself.⁴ Mark Sandle extended this argument to the entire period Brezhnev as a whole arguing that it represented of remarkable intellectual and political diversity cloaked by a discourse of conformism.⁵ In fact, as we shall see, the actors whom these authors write about were not closet liberals. Rather, many were dedicated Soviet patriots and Communists who were trying to deal with problems of the modern territorial state that thinkers west of the Iron Curtain were grappling with at the exact same time.

While these works were extremely important for opening the conversation, they do not address the political mechanics of economic reform and say little about structures in which these actors operated in. Indeed, this is why Brown emphasizes “the Gorbachev factor” in explaining how these seemingly isolated groupings with little direct power gained as much influence as they did during the 1980s. This project will attempt to rectify this narrative by discussing the institutional and ideological contexts of Soviet economic debates occurred and reveal the longer story of how the Soviet economy was, in theory, in a state of almost constant reinvention from the 1960s forward. With this extended timeline of reform, it becomes harder to conceptualize the origins of *Perestroika* as driven by a few individuals in important institutions the who found their leader in Gorbachev. Rather, what emerges is a longer story of deep institutional transformation spurred by the intersection of international and national politics, into which economic discourses were embedded.

Another set of works that touch on the history of economic thought and reform in the Soviet Union are intellectual and cultural histories of “the Thaw.” Two outstanding

⁴ Robert English, *Russia and the Idea of the West: Gorbachev, Intellectuals, and the End of the Cold War* (New York: Columbia University Press, 2000); Archie Brown, *The Rise and Fall of Communism* (New York: Ecco, 2009).

⁵ Mark Sandle, “A Triumph of Ideological Hairdressing: Intellectual Life in the Brezhnev Era Reconsidered.” in *Brezhnev Reconsidered*, ed. Edwin Bacon and Mark Sandle (London: Palgrave Macmillan, 2002).

examples are Vladislav Zubok's *Zhivago's Children* and Slava Gerovitch's *From Newspeak to Cyberspeak*.⁶ Both make serious advances over their predecessors by demonstrating that the emergence of reformist discourse was linked to the opening of the Soviet Union associated with the post-XXth Party Congress thaw and the transformation of the terms of the Cold War from a purely military-industrial conflict to a socio-economic one. However, these authors conflate economics with the more general trends in cybernetics, thus overshadowing the economic critique of incentives in the Soviet system of the former with the larger "cyberspeak" of the latter. While the history of economics in the USSR is deeply intertwined with the popularity of cybernetics, economic critiques of central planning presaged the rise of cybernetics as a leading paradigm for social science in the USSR and, in fact, many Soviet economists actively distanced themselves from cybernetics, viewing it as a tool rather than a discipline. Conflating the two approaches marginalizes the powerful economic critique that developed in the "Thaw" both amongst economists influenced by cybernetics and those who based their work in more traditional Marxism or, often subtly, pre-cybernetic marginalist economics.

Other scholars interested in the history of economic thought in the USSR come from sociology, and particularly the history and sociology of science. Currently, cutting-edge work is being done by Olessia Kirtchik and Ivan Boldylov at Moscow's Higher School of Economics, who have conducted in depth, interview-based research to map the methodological contours of Moscow-based mathematical economics and to ask whether it

⁶ Vladislav Zubok, *Zhivago's Children* (Cambridge, Mass: Belknap Press, 2009); Slava Gerovitch, *From New Speak to Cyber Speak: A History of Cybernetics* (Cambridge, Mass: MIT Press, 2002).

could be understood as a coherent scientific approach.⁷ Adam Leeds engaged in an anthropological study of these same figures using similar methods, attempting to show how the cultural practices of the Soviet intelligentsia intersected with economic methodology to form a political identity.⁸ Benjamin Peters' recent book on "the Soviet internet" makes the useful distinction between economists and supporters of cybernetics, using memoirs to note that the two communities had diverging political interests.⁹ Aleksander Bikbov's *Gramatika poriadka*, has made contributions to the study of the study of Soviet social science by deploying Pierre Bourdieu's understandings of habitus to explain how various social groupings of elites, often defined by their institutional contexts, established differing definitions of concepts overtime from the nineteenth century to present day Russia.¹⁰

The most famous of these works is Johanna Bockman's *Markets in the Name of Socialism*.¹¹ Bockman points out that the neo-classical economics of the Swiss father of neo-classical analysis, Leon Walras—the development of supply and demand and early general equilibrium—was not initially associated with markets but rather was ideologically neutral. The mechanism at the heart of the first neo-classical model, the auctioneer setting the price, could just as easily be a state planner as a self-organizing market. In the eyes of many neo-classical economists both East and West (or moving between the two) during

⁷ Ivan Boldyrev and Olessia Kirtchik, "The Cultures of Mathematical Economics in the Postwar Soviet Union: More than a Method, Less than a Discipline," *Studies in History and Philosophy of Science Part A*, corrected proof, [accessed April 16, 2017]

⁸ Adam E. Leeds, "Dreams in Cybernetic Fugue," *HIST STUD NAT SCI* 46, no. 5 (November 1, 2016): 633–68; Adam Leeds, *Spectral Liberalism: On the Subject of Political Economy in Moscow* (Ph.D. Dissertation, the University of Pennsylvania, 2016).

⁹ Benjamin Peters, *How Not to Network a Nation: The Uneasy History of the Soviet Internet* (Cambridge, Massachusetts: The MIT Press, 2016).

¹⁰ Aleksander Bikbov, *Gramatika Porriadka: istoriia sociologiiia poniatii kotoriie menaiout nashu realnost* (Moscow: HSE, 2014).

¹¹ Johanna Bockman, *Markets in the Name of Socialism: The Left-Wing Origins of Neoliberalism* (Stanford University Press, 2011).

the height of the Cold War, the state had far more information to make these calls than a market which was, after all, not always efficient. Bockman also goes further than all these works in attempting to connect economic theory with the practice of politics. However, despite a short chapter on the USSR, the bulk of her work is on Hungarian and Yugoslav economists who were outliers in the socialist world. Such omissions testify to a larger problem within this literature, namely that it lacks both research in the Russian archives, and it reduces politics to a cultural or methodological practice rather than the nitty-gritty of policy making and interest group battles. While perhaps useful for historians of science, this approach perpetuates a view of the USSR as somehow apolitical, with politics practiced in private places and the public and state dominated by a monolithic ideology.

One standout intellectual history of Soviet economic thought is Pekka Sutela's *Soviet Economic Thought and Economic Reform*.¹² Despite a lack of access to archives, Sutela, himself a first-class economist who later served as the director of the economic research department of the Finnish Central Bank, painstakingly reconstructs the theoretical and methodological assumptions of various reformist economic schools in the USSR. What makes Sutella so useful is that he never denies the connection of economics to legislation and public discourse on planning. Another standout intellectual history of Soviet economics was written by Vladimir Mau in 1990 documenting the connections between the emergence of mathematical economics and various strains of reformist thoughts with earlier debates in the 1930s involving engineering and material balances in central planning.¹³ These works are so impressive I will not attempt to revise or improve its

¹² Pekka Sutella, *Economic Thought and Economic Reform in the Soviet Union*. (Cambridge: Cambridge University Press, 1991).

¹³ V.A. Mau, *V poeskah planomernosti: iz istorii razvitiia sovetskii ekonomicheskii mysle 30-60kh godov* (Moscow: Nauka, 1990).

characterization of the evolution of Soviet economic thought, and particularly its categorization of the major works of Soviet mathematical economics by their influence, but rather contextualize it within Soviet institutional politics and state-building in a way that only archival research can do.

Beyond intellectual history, there has been quite a bit of ink spilled on the role of economic factors in the collapse of the USSR and late-Soviet political history in general. Perhaps the most extensive survey of the period is a series of works by Russian historian R.G. Pikhovia who has produced a variety of volumes documenting Soviet high politics in the post-Stalin period. With access to documents that unavailable to many other historians, Pikhovia has given us insights into Kremlin politics that are invaluable for scholars of the period. His latest edition written with sociologist A.K. Sokolov is a convenient one volume work on the history of the Soviet Union from 1970-1991.¹⁴ The central role of economic politics and reform in this period has not escaped his analysis. It also features strongly in the later works of Mau who written several pieces on the history of the USSR's economic policy and those who devised it. In his writings, Mau has successfully shown that economists and intellectuals were deeply engaged in policy making and that this work informed not only their theory but also their political opinions.¹⁵ The impact of economic problems on the political failures of *Perestroika* and the collapse of the USSR has featured in the literature. Vladimir Kantorovich has been critical of many of the arguments connecting the end of the USSR with its economic problems, noting most of them don't

¹⁴ R.G. Pikhovia and A.K. Sokolov, *Istoriia sovremennoi Rossii: krisis kommunisticheskoi vlasti v SSSR I rozhdeniia novoi Rossii 1970-1991* (Moscow: Rosspen, 2008).

¹⁵ Vladimir Mau, "Perestroika: Theoretical and Political Problems of Economic Reforms in the USSR," *Europe-Asia Studies* 47, no. 3 (May 1, 1995): 387–411; V.A. Mau et. al. *Istoriia ekonomiki SSSR i Rossii v konche XX veka, 1985-1999* (Moscow: Fond Sovremennoi Istorii, 2011), 38-49.

make the link between economic policy failure and political collapse. Rather, Kantorovich suggests that historians and political scientists need to look at the politics of economic reforms and ask if they led to larger political crises.¹⁶ Some works have taken this to heart. As early as the late 1980s, Moshe Lewin studied the relationship between more radicalized economic discourses, larger social changes in the USSR driven by urbanization, and the sudden emergence of Gorbachev's politics.¹⁷ However, Lewin skirts actual political events both because of the lack of archival material and because his approach to history prioritizes the primacy of social structure over political developments. A recent set of writings by Stephen Kotkin has addressed the last years of the Soviet Union as a long-term process, framing it through the lens of geopolitics and structural economic change. Kotkin's proximate cause for the collapse of the Soviet project in the USSR and Eastern Europe, and therefore the failure of reform, was that these structural changes incentivized Communist Party elites to "handover" power to a constructed "civil society" which functioned as a useful way of transitioning between two socio-economic systems once socialism's usefulness had exhausted itself for this elite.¹⁸ Kotkin's approach to studying the elite and its incentives also informs Chris Miller's recent work on the economic politics of the Gorbachev era. To Miller's credit, his work is unique in that it is the first published work to extensively use the widely available archival evidence to unpack the policy debates of the period. However, its focus on the question of "why the Soviet Union did not take the Chinese path" hamstrings both its economic interpretation and its

¹⁶ Vladimir Kantorovich, "The Economic Fallacy," *The National Interest*, no. 31 (1993): 35–45.

¹⁷ Moshe Lewin, *The Gorbachev Phenomenon: A Historical Interpretation* (Berkeley: University of California Press, 1991).

¹⁸ Stephen Kotkin, *Armagedon Averted: The Soviet Collapse 1970- 2000* (Oxford: Oxford University Press, 2008); Stephen Kotkin, *Uncivil Society: 1989 and the Implosion of the Communist Establishment* (New York: Modern Library, 2009).

understandings of the longer arch of economic reform in the post-Stalin era.¹⁹ This dissertation will thus be the first intervention into the economic politics of the late-Soviet period that is both based on archival sources and that traces the arch of Soviet economic reform over the entire post-Stalin period.

Writing a Political Economy

Instead of skirting politics, or treating it as the function of scientific culture, this dissertation will engage in writing the history of economic thought in the post-Stalin USSR through the lens of political economy. This means sacrificing some of the deeper, more nuanced discussions of individual motivations, scientific culture, or of a deep dive into the methodological differences within major schools of economics. Instead, I will use economics and its socio-political positions as a cipher through which we can observe the transformation of the Soviet state and its industrial and fiscal institutions. This will mean dealing with the fact that the USSR was a state driven by ideology and that ideological debates did, in fact, influence decision-making and institutional competition. This is not to say that ideology was the sole factor determining of Soviet actions but, as Nigel Gould-Davis has pointed out in his discussion of Soviet diplomacy, for a set of actors who believed that the future of Communism was intrinsically tied to the survival of the Soviet state, any action that furthered the latter goal furthered the former.²⁰ However, while the division between ideology and *realpolitik* was an artificial one for Soviet leaders, economic efficiency was always loaded with meaning as it struck to the core of what made USSR, and those that “adopted” its system, unique: the state-owned, centrally planned economy

¹⁹ Chris Miller, *The Struggle to Save the Soviet Economy: Mikhail Gorbachev and the Collapse of the USSR* (Chapel Hill, NC: UNC Press, 2016).

²⁰ Nigel Gould-Davies, “Rethinking the Role of Ideology in International Politics During the Cold War,” *Journal of Cold War Studies* 1, no. 1 (Winter 1999): 90–109.

that, theoretically, resolved the contradiction between capital and labor and thus would not suffer from the same inefficiencies as private property-based economies. Therefore, economic thought and its conceptualization of the relationship between the USSR's domestic economy, the greater socialist world, and most importantly "global imperialism" provides us with a unique insight into the relationship between ideology, geopolitics, and institutional change in the late-USSR.

Studying the connection between ideas and politics presents the historian with a set of methodological challenges. Should ideas be understood driving actors and thus of policy outcomes, or does politics drive ideas and thus the intentions of actors? One way to evaluate these issues is suggested by Charles Maier, who argues that historical political economy must treat ideas as "contingent and problematic; that is, they might have been different and need to be explained in particular political and social contexts." Maier's historical approach to political economy abandons some aspects of the "hermeneutic" explanation at the heart of many other histories—especially histories of science—and instead treats ideas as a "revealed preference" of certain socio-political groups. Instead of relying on the idea that "to explain action is to recreate the intentions of the actors, historical political economy presupposes that societies *in some sense* wanted what turned out to be." This does not mean, for example, that society chooses inflationary policies that would cause hyperinflation but rather that for some reason, "some groups in society were willing to countenance that outcome and prevailed over those who resisted it."²¹ In other words, an actor can be presented with a menu of options which each carry an attached set of risks and benefits. The choice of the actor—especially the elite policy maker—gives the historian

²¹ Charles S. Maier, *In Search of Stability: Explorations in Historical Political Economy* (Cambridge: Cambridge University Press, 1987), 6–7.

insight into the risks that the subject is willing to countenance and can thus shed light onto the biases of political culture. I do not want to reduce this analysis to a simple rational choice problem. Rather, the study of economic ideas as political rallying points for elite groups which articulate the risk preferences of said actors allow us to peel back the layers of cultural, political, and material biases that make up the motivations of the subjects of our history to choose under conditions of not only simple lack of information that the rational choice problem presents us with but the more serious matter of existential uncertainty about the future.

In addition to these contingent factors, one needs to understand choice within the larger institutional history of state organization—the field upon which interest groups battle. Maier provides this framework for politics with his conception of the rise of the “territorial-industrial state,” a political entity whose sovereignty is defined by borders and whose economic structure was dominated by vertically integrated, industrial enterprises. This industrial economic structure served to reinforced this “bordered” state power as it produced technologies of movement such as the steam engine and the telegraph that helped create national political coherence. Maier’s payoff in this analysis is to displace various “long” and “short” chronologies of the Twentieth Century and instead challenge historians to focus on the rise and fall of this particular political construct which he dates roughly 1870, with the consolidation of national states in Europe and North America, and 1970 when international supply chains and financial flows disrupted the congruence of economic organization and sovereign power.²² In *European Nation States 1648-1990*, Charles Tilly created a very useful and complimentary schema for understanding the transitions between

²² Charles S. Maier, “Consigning the Twentieth Century to History: Alternative Narratives for the Modern Era,” *American Historical Review* 105, no. 3 (June 2000): 807–31.

the various forms that the European State system took—coercion, or the ability to deploy direct violence and “capital” or the ability to mobilize financial resources.²³ For Tilly, a successful state needed both, as capital was needed to fund coercion and coercion to control and extract capital. Successful powers eventually began to shift toward capital intensive governance due to the growing need to administer large armies (creating a kind of civilian creep into once militarized state affairs) and the increasing importance of industrial power and internal consolidation (Maier’s “Territorial-Industrial” form of the state).

Where does the USSR, which only lasted 70 years by the most generous measures, fit into this longer history of state power? To answer this question, and connect it with the central issues of this dissertation, we need to understand the institutional and geopolitical heritage of the Soviet Union’s early leaders. Unlike most great powers that moved toward a capital-intensive form of political organization and a territorial-industrial organization, Imperial Russia took another course: with a large frontier often exposing it to non-state, nomadic in addition to traditional European great power threats, it continued to prioritize direct state power—coercion—with systems of economic organization tied to the need to deploy military might in large numbers at all times. Initially, the system of serfdom served an important purpose of first providing revenues for military elites and then supplying state revenue and recruits for a mass army after Peter the Great’s reforms.²⁴ Indeed, internal economic reform was intimately tied to the need to rebuild and reconstruct military structures toward a more efficient use of coercive power. Alfred Rieber has shown that it was not industrialization that was the goal of the “Great Reforms” of Alexander II, but

²³ Charles Tilly, *Coercion, Capital, and European States, AD 990-1990*, Studies in Social Discontinuity (Cambridge, Mass., USA: B. Blackwell, 1990).

²⁴ Richard Hellie, *Enserfment and Military Change in Muscovy* (University of Chicago Press, 1971).

rather the need to create a social structure for a modern army based on fewer mobilized and a smaller share of the state budget with the ability to mobilize an active reserve during war. Rieber concludes that viewed from this perspective, the “Great Reforms” were successful as they did the minimum work necessary to change social structure in the interests of maintaining Russian coercive state power and the groups that benefited from it.²⁵ This is not to say that the Russian Empire stood out from the great powers: the long nineteenth century was anything but a period of stability and cooperation. At the colonial periphery, where the Russian Empire sat, it was a violent, militarist, imperial world.

The Soviet state faced a similar problem but with the added ideological fear of foreign intervention to crush an upstart revolution. The experience of the Civil War and intervention by the entente only strengthened the insecurity inherent in the Leninist worldview, as evidenced by a series of war scares that helped end the NEP and usher in shock industrialization. The question that Stalin and his comrades faced was what industrialization should look like. They found their answer in what Stephen Kotkin called “The Interwar Conjuncture” of institutions that imagined themselves “modern” through mass production, mass politics, and vertical integration.²⁶ This was the vision that the Bolsheviks followed to imagine what a strong state was. This shaped what Kotkin labeled “the grand strategy of the state.”

The study of institutions and their logics is vital to understanding how ideas derived from “the interwar conjuncture” informed the “grand strategy of the state.” Indeed, this is why this dissertation will use Maier’s methods of studying how political interest groups

²⁵ Alfred Rieber, “Raison D’Etat: Military,” in *Emancipation of the Russian Serfs*, ed. Terence Emmons (New York: Holt, Rinehart and Winston, 1970), 72–80.

²⁶ Stephen Kotkin, “Modern Times: The Soviet Union and the Interwar Conjuncture,” *Kritika: Explorations in Russian and Eurasian History* 2, no. 1 (2001): 111–64.

rallied around certain ideas to look at conflicting perceptions of state strategies by different generations of Soviet elites. Through the late 1920s and 1930s, the Soviet state ran a breakneck campaign to copy the governmental systems of late nineteenth and early twentieth-century industrial production to establish high industrial capitalist production methods without capitalist institutional, legal, or financial practices.²⁷ The fact is that they succeeded. Robert Allen has shown that when the USSR began its journey into “high industrial modernity” in the early Twentieth Century, its GDP per annum could be compared to that of contemporary Indonesia while by 1945, it was the world’s second superpower. Yet Allen’s brilliant manipulation of data and improvisation of measurement techniques does not explain the motivation of Soviet leaders and what they maximized.²⁸ In other words, GDP does not reveal the organization of production and its priorities. The Soviet Union industrialized but it industrialized in a very particular way: steel and fighting power, or production goods, were prioritized over consumption goods. Allen, like early theorists of Soviet industrialization, assumes that this initial base would have rolled over into a consumption-led economy. Indeed, he argues that the failure of Soviet economic growth was the mal-allocation of resources in the 1960s and 1970s.²⁹ This, of course, means that the decision to invest resources was a political one which means that it is sensitive to the kind of analysis that Maier suggests historical political economy undertakes.

²⁷ Stephan Kotkin, *Magnetic Mountain: Stalinism as a Civilization* (Berkeley: University of California Press, 1995); Alfred J. Rieber, *Stalin and the Struggle for Supremacy in Eurasia* (Cambridge: Cambridge University Press, 2015).

²⁸ In Allen’s defense, this is not the aim of his meticulous and insightful research.

²⁹ Robert C. Allen, *Farm to Factory: A Reinterpretation of the Soviet Industrial Revolution* (Princeton University Press, 2009).

Sociologist Daniel Chirot argues that the founding of the USSR as a reaction to late-nineteenth century capitalism led to it building “the world’s most advanced nineteenth-century economy, complete with its greatest, most inflexible rust-belt.”³⁰ Chirot’s brilliant analogy is based on a deeper recognition that the Soviet leadership that would build the Stalinist system (most importantly Stalin and Lenin themselves) were not only good Marxists but also individuals who had grown up admiring the achievements of late-nineteenth century capitalism from afar, in a “backward state.” Thus, Marxism in the Russian Empire and the Soviet Union was more than an ideology of liberation. Rather, it was what Alexander Gerschenkron would call an ideology of modernization: one that had existed across the European continent as each European state rushed to modernize quicker than its neighbor bad. Each iteration of liberalism and later socialism was tied up with a vision state-building and economic institutions based on the accelerated adoption of the practices of a more advanced neighbor.³¹ Thus ideology and its history is important to understanding economic outcomes. While the *Longue Duree* of Russian history and geoeconomics are factors, they are not sufficient to explain why the Soviet Union took the steps that it took. For example, while some scholars have argued that diminishing terms of trade for primary goods contributed to “the great break,” therefore eliminating outside sources of capital for industrialization, this misses the point.³² The USSR was not the only commodity exporter to lose access to international capital in the 1930s, but it was the only one that proceeded to brutally collectivize its peasantry.

³⁰ Daniel Chirot, “What Happened in Eastern Europe in 1989?,” *PRAXIS International* 11, no. 3+4 (1991): 278–305.

³¹ Alexander Gerschenkron, *Economic Backwardness in Historical Perspective*, First Edition (Cambridge, Mass: Belknap Press, 1962).

³² Oscar Sanchez-Sibony, *Red Globalization: The Political Economy of the Soviet Cold War from Stalin to Khrushchev* (New York: Cambridge University Press, 2014).

This concern with ideology was reflected in how state institutions operated and understood their missions. Scholars like Paul Gregory are correct to argue that the system built by Stalin was not truly a planned system but rather a system designed for mobilization that was more arbitrary than truly planned—a fact that future Soviet scholars, including most of the subjects of this dissertation, readily agreed with, noting that good planning was more their aspiration than the reality of the USSR.³³ As I will argue further in the first chapter of the dissertation, the system created by Stalin valued arbitrary, non-“economic” decisions because they were, in fact, a means to project the “dictatorship of the proletariat’s” will, which *ipso facto* was part of the revolutionary process. The defense of the state and its goals of mobilizing society was the promulgation of the revolution. Ideology formed not just a *Weltanschauung* but also a transmission mechanism between elite perceptions of the world, the institutional arrangements of the Soviet state, and the behavior of the population.

Ideology has been a messy subject for historians. While the totalitarian theorists made it the *sine qua non* of their reading of the Soviet experience, the revisionist wave of the 1980s rejected it for narrating the birth of the Soviet state through group interests and social relations. Kotkin’s *Magnetic Mountain* brought ideology back but in a strange way. For Kotkin ideology came *a priori* to the Soviet state’s project and individuals reacted to it, learning to “speak Bolshevik” and thereby recasting themselves in the regime’s terms.³⁴ Kotkin’s critics are right to point out that Kotkin’s approach to Bolshevik language and

³³ Paul Gregory, *Behind the Facade of Stalin’s Command Economy: Evidence from the Soviet State and Party Archives*, (Stanford, Calif: Hoover Institution Press, 2001).

³⁴ Kotkin, *Magnetic Mountain: Stalinism as a Civilization*.

behavior is rigid and reduces ideological fervor to a “liberal” politics of choice.³⁵ However, none of these critiques have been able to address Kotkin’s ability to explain the relationship between ideology and state-building. *Magnetic Mountain* is a much larger project about the ways in which the state’s economic policies interacted with popular mobilization than discussions of “speaking Bolshevik” let on.

What Kotkin’s work doesn’t do is go far enough in historicizing the relationship between ideology and the construction of specific institutional arrangements. A gesture toward such a history can be found in the work of David Priestland, who has argued that Soviet Marxism, and Marxism as a whole, has three aspects which split it into a “romantic Marxism” that is characterized by an emphasis on solidarity, a “technocratic Marxism” which is more interested in modernization and rationalization, and a “radical Marxism” which emphasized action, violence, and mobilization.³⁶ I wish to expand Priestland’s framework to argue that the same holds for both formal and informal institutions and political groupings in Marxist systems by showing the relationship between ideology and state-building in the USSR. This dissertation will show that the various schools of thought it documents, and the institutions that they built, were deeply concerned with understanding how particular state practices could be understood within Marxist-Leninist thought. In other words, I argue that Soviet economic interest groups needed economic ideas to argue for and against reform and that those ideas necessarily reflected institutional differences about the future of Soviet socialism.

³⁵ Igal Halfin and Jochen Hellbeck, “Rethinking the Stalinist Subject: Stephen Kotkin’s ‘Magnetic Mountain and the State of Soviet Historical Studies,’” *Jahrbuch für Geschichte Osteuropas* 44, no. 3 (1996): 456–63.

³⁶ David Priestland, *Stalinism and the Politics of Mobilization: Ideas, Power, and Terror in Inter-War Russia* (Oxford: Oxford University Press, 2007); David Priestland, *The Red Flag: A History of Communism* (New York: Grove Press, 2010).

The post-Stalin period provides us with a special challenge since by the time of his death Stalin had become something of an arbiter of not only institutional interests but ideological truth in all areas. Alexei Yurchak argues that the removal of Stalin as “master editor” created a de-tethered ideology that on a discursive level became performativity rather than properly political.³⁷ While he is right that Stalin’s death and later symbolic displacement was very significant, it did not depoliticize ideology. The heated debates among technocrats, government officials, and party leaders over the future of the Soviet state were *prima facie* political. Indeed, this dissertation argues that it was not de-Stalinization alone that led to a reinvention of Soviet statehood and its ideological foundation but also that the geo-political environment of the Cold War changed the conditions in which the structures of the Stalinist state were supposed to work. A hegemon, guiding both the security and economic frameworks of Eurasia, had emerged.³⁸ Traditional Soviet ideas of the “national economy” as regulation of heavy industrial production, inspired by WWI-era German planning, could no longer respond to the new challenges of prosperity brought on by the Americanization of the European state system.³⁹ A set of institutions and practices that were good at steel and other heavy industrial production had to become efficient providers of other types of goods. For economic reformers, this new era required a change not only in the ideological self-definition of the state but in the total reconstruction of its institutions of governance along capital intensive lines. Thus, the

³⁷ Alexei Yurchak, *Everything Was Forever Until It Was No More: The Last Soviet Generation* (Princeton: Princeton University Press, 2006), 10-12.

³⁸ Adam Tooze, *The Deluge: The Great War, America and the Remaking of the Global Order, 1916-1931* (New York, New York: Penguin Books, 2015); Vojtech Mastny, *The Cold War and Soviet Insecurity: The Stalin Years* (New York: Oxford University Press, 1996).

³⁹ Stephen Kotkin, *Stalin: Paradoxes of Power, 1878-1928*, Reprint edition (New York: Penguin Books, 2015); Victoria de Grazia, *Irresistible Empire: America’s Advance through Twentieth-Century Europe* (Cambridge: Belknap Press, 2006).

debates over economic reform become a microcosm of the politics generated by divergent readings of old ideological positions by new political groupings and old political institutions. At its core this was about questions of the Soviet Union's role in the world as a revolutionary state and what that meant for the essence of the Soviet project inherited from Stalinism: the state-owned economy. It is difficult to imagine a topic or period shot through with more ideological and political meaning.

Sources, Data, and Methods

The bulk of this dissertation is based on sources found in Russian state archives in Moscow. This reflects the fact that most its subjects were both elite and Moscow-based and the fact that matters of high economic policy, even those that concerned local issues, were centralized. Indeed, what I found stunning in the course of conducting this research is how closely the organization and composition of the archives track the establishment and behavior of Soviet institutions themselves. For example, as Soviet policymaking became more regularized in the 1970s, the organization and composition of individual archival folders, or “dela” in Soviet and Post-Soviet archival parlance, also became more uniform across institutions and issues.

The archives I used for this dissertation reflect how institutional divisions have guided the organization of sources. The State Archive of the Russian Federation (GARF), was mostly used for research into the deliberations of the “Council of Ministers”—the Soviet government's highest administrative organ which not only was responsible for the implementation of state laws and Party priorities but, given the prevalence of administrative law in the Soviet system, drafted most policies under consideration in this period. As such, its holdings give us insight into how various interest groups deployed

ideas for influencing Soviet policymaking. The Russian State Archive for the Economy's (RGAE) holdings of the archives of major economic agencies including the State Planning Agency (Gosplan), The State Bank (Gosbank), and the State Committee on Science and Technology (GKNT), let us examine the operations of those groups and the intellectual loyalties of their personnel.

In addition to these state archives, which are relatively straight forward and bureaucratic, I made extensive use of Communist Party and academic archives. First, the Russian State Archive for Recent History (RGANI), which holds the papers of the Central Committee was important for several kinds of sources. First, I used its collection of unedited Central Committee Plenum stenographs to examine uncensored versions of Soviet elites' perceptions of pressing economic and political issues. Second, its holdings of various Central Committee "departments"—though often incomplete and still classified—offer a glimpse into the highest-level debates over science and economic activity in the USSR. To supplement these sources, I also conducted work in the Archives of the Gorbachev Foundation—a private archive that contains the former General Secretary's personal papers. I also did work in academic archives—primarily the Archive of the Russian Academy of Sciences (ARAN). ARAN's sources served several purposes and its rich collection of political documents is only now being discovered by historians of the USSR whose work is not explicitly concerned with the history of science. ARAN's holdings of research institutes' and sections' archives gives us a look at the internal workings and debates of Soviet economic science. However, and perhaps more importantly, ARAN provides us with a backdoor into the politics of the Central Committee as these institutes took on more direct roles in policy making and in advising Party leaders

overtime. ARAN's records contains reams of communications between the institutes and sections and officials in agencies, state bodies, and the Party *apparatus* on the most pressing issues in economic politics, giving the researcher not only an idea of the positions taken by individual researchers and their supporters but also the priorities of government actors. To supplement some gaps in the ARAN's holdings that are still classified, I used the holding of certain institute's Communist Party organizations held in the Central Archives of the City of Moscow (TsGA).

In addition to these Russian language archival sources, I also used several kinds of published primary sources. First, I have made extensive use of officially published Party Congress manuscripts. Rather than discounting these gatherings as symbolic, the Congresses of the Post-Stalin Soviet Communist Party can give us valuable insight into the "big picture" thinking of the USSR's highest elites—especially when we look at how they change overtime. Second, I have used several document collections of inaccessible RGANI and Presidential Archives documents published by the ROSSPEN publishing house as part of their work with these archives (some holdings of the Presidential Archives have been moved into RGANI in the past year and whatever holdings the author was able to see in person in the archives will be marked as such in the footnotes). Given my focus on academic economics, I have used a variety of printed sources, including academic journal articles and monographs and mass circulation publications. Finally, the recollections of the actors themselves are vital to understanding the often-opaque workings of the Soviet elite so autobiographies, published collections of personal notes, and several in person interviews were of great help.

In addition to Russian archives, I have also worked in repositories on the United States and Europe to track the interaction of Russian academics and policy makers with their Western Counterparts. This dissertation uses sources from the MIT's Institute Archives and Special Collections, the Harvard University Archives, the Lyndon Johnson Presidential Library, and the Rockefeller Archive sector to tell the story of East-West interaction on issues related to improving the "science" of economic planning. During my dissertation research, I was also able to work in the archives of the International Institute for Applied Systems Analysis (IIASA) in Laxenburg, Austria though, for reasons of length and focus, this work will mostly be represented in a stand-alone article on the Institute's role in the history of economic planning.

In addition to the use of traditional primary sources, this dissertation uses some quantitative data. This warrants some discussion due to the infamous unreliability of Soviet statistics. Thus, a small discussion of how to treat Soviet data is in order. The three major sets of data that are available to researchers are the official Soviet sources, the CIA estimates of Soviet GDP growth, and those of Soviet economist Gregorii Khanin who began a project of recalculating Soviet growth statistics in 1987. While the first two of these sets has been criticized by experts, a survey of them by Mark Harrison finds that they are generally consistent with one another on the matter of general trends differing only in relative magnitudes.⁴⁰ Thus, I have tried to use the official data—published and unpublished—knowing that it is probably the source most of my actors had access to, when I try to describe very general trends in Soviet growth and investment. Second, I have used balance sheet data published by the Central Bank of Russia including the volume of cash

⁴⁰ Mark Harrison, "Soviet Economic Growth since 1928: The Alternative Statistics of G. I. Khanin," *Europe-Asia Studies* 45, no. 1 (1993): 141–67.

in circulation, loans outstanding, and the holdings and expenses of households. My impression is that because of the lack of a private sector, the government balance sheet was an actual consolidated accounting of state expenses and thus presents us a picture of the governments assets as well as its liabilities to the population.

Finally, a methodological note on some of the theoretical assumptions implicit in this dissertation. I have drawn on several, very basic approaches to economics to help illustrate the dilemmas that faced the actors of this dissertation. I believe it is important to disclose to the reader that I have a background in so-called “Post-Keynesian” and “American Institutional” economic traditions. This means that I am extremely concerned about the structural features of institutions’ balance sheets and how these fit together over periods of time. I believe that such inductive methods are appropriate for the study of a state-led, planned economy as they force the researcher to start with the particular features of institutional fiscal behavior rather than general theories of behavior. Even Soviet institutions had a balance sheet of assets and liabilities and, as research by Yulia Vymyatnina and Mikhail Pakhanin shows, this meant that they were subjects to cycles of investment and overinvestment.⁴¹

Chapter Outline

This dissertation is organized into six chapters that span the years between 1955 and 1985—a period I argue is appropriate to understanding the rise and fall of the “Cold War Paradigm” in Soviet economic thinking and policymaking. The period between 1985 and

⁴¹ Yulia Vymyatnina and Mikhail Pakhnin, “The Application of Minsky’s Theory to State Dominated Economies” *European University at St. Petersburg Department of Economics Working Paper Series* no. Ec-03/14, (2014).

1993, which should be treated as distinct, will be briefly discussed in the conclusion and requires further research to fully document.

The first chapter of this dissertation discusses the emergence of Soviet economic debates in the final years of the Stalin-era and explains how Khrushchev's recasting of the Cold War into the "peaceful socio-economic co-existence of the two systems" allowed a set of largely disconnected, technical debates on accounting standards and inferential statistical techniques to become articulated in a new, more directly political ways. It argues that Khrushchev's articulation of "the peaceful competition of the two socio-economic systems" was influenced by the need to rectify competing imperatives between satisfying powerful interest groups and adopting the USSR to a system of international relations dominated by the nuclear bomb and America's "shadow empire." The Soviet Premier consciously took on the risk of creating a new kind of economic politics based on tying Soviet political international and domestic legitimacy to the creation of prosperity. This politics framed the emergence of different theoretical schools in Soviet economics which split on questions of how to measure value in a planned, socialist economy, and therefore how to best arrange the relationship between state institutions and production. I will focus on the clash between the mathematical-economists, the most Western-influenced and pro-planning camp of economics, and the *Tovarniks*, who remained orthodox Marxists but turned Marxism against central planning and toward a market socialist critique of state institutions.

The second chapter focuses on the policies of mobilization and investment that Khrushchev used to try to "win" his competition with the United States. I argue that his attempt to modify the USSR's vertical system of industrial management and replace it with

Party-directed local administration created a vacuum of authority which meant that the massive investment boost introduced in the same period was misspent, even by Soviet standards. The ensuing budgetary crisis led to the politicization of reformist economics, as formerly academic debates over value turned into political debates about concrete project of economic reform. These arguments moved from the pages of technical journals to the front page of dailies such as *Pravda* and *Izvestiia* setting the stage for a crisis of power that ended in Khrushchev's ouster in 1964.

The third chapter of this project will outline the political context of the 1965-1969 "Kosygin Reforms," an attempt to apply some of the period's reformist economic thought to the decentralization of the Soviet economy—to make enterprises more independent and fiscally disciplined. It shows that the realization that the USSR was losing "the competition of the two systems" in the wake of Khrushchev's removal opened the possibility for radical economic reform. It traces how the various camps of Soviet academic economists and their rivals in the more conservative planning agencies and production ministries attempted to draft the reforms and promote or subvert various aspects of their implementation. Ultimately, the Leninist "democratic-centralist model" limited the ability of the USSR's leadership to legislate and led to the creation of a self-contradictory administrative reform process. This meant that a program with radical pretensions eventually became half-hearted and was often not introduced at all.

The following chapter asks how Brezhnev and his allies in Gosplan successfully navigated the tensions opened by the Kosygin reforms by implementing a conservative program that allowed for the unification of many interest groups while foreclosing radical change. It examines how "developed socialism" and "the scientific-technical revolution"

became new ideological constructs used to postpone the triumph of Communism and to justify extreme incrementalism in economic policy. It also documents how these shifts ultimately led to a consolidation of reformist economics, with the mathematical school attempting to establish full hegemony and the radical *Tovarniks*, represented by the anti-Soviet Marxist Yakov Kronrod, purged from academia for their increasingly strident attacks on the practices of “existing socialism.”

The penultimate chapter begins to shift the project toward its conclusion by looking at how international engagement in development institutions between the 1960s and 1980s transformed Soviet views of global economic relationships from bi-polar to multipolar connections. This change the critique presented by mathematical economics and related social sciences related to it from one of specific planning practices to larger socio-economic trends in Soviet society. A newer generation of theorists was emerging that feared that the USSR’s society would not be ready for the massive changes implied by the Scientific Technical Revolution. The spread of “systems theory” to the USSR, initially meant to create a more flexible form of central planning that could respond to the “global scientific technical revolution,” instead led reformist Soviet elites to see the world in terms of nested socio-economic systems that were often global in nature. The Scientific Technical Revolution thus gradually transformed from a conservative ideological trope to the Soviet analogue of the “post-industrialism” and “interdependence” debates that were contemporaneously challenging embedded liberalism. Thus, Soviet social scientists formed alliances with their Western counterparts who were trying to invent a new theory of state planning that could face these challenges.

Finally, this dissertation concludes by tracing the attempt of Brezhnev and his cohort of Soviet leaders to legislate conservative economic reform, thereby building a state that could work on the basis of law as procedure, though not bound by law. It traces how the Khrushchev generation of economists who were initially open to working in this paradigm gradually began to become disillusioned with it as legislation after legislation failed. It culminates with the drafting and rapid collapse of the “Second Kosygin Reform” from 1977-1980 (adapted into law in 1979), which broke down the conservative consensus of the early 1970s and brought about the reintroduction of mobilization into Soviet economic politics. This was the moment when the new generation of economists entered politics, leveraging a fully socio-economic critique of the USSR based on systems theory.

I close this study by suggesting how the arguments developed in this dissertation could be used to understand the USSR’s ultimate end and how the legacies of the institutional and ideological struggles documented above can be useful for contextualizing contemporary post-Soviet politics. I engage with Neil Robinson’s work on the Soviet Union as a “neo-patrimonial state” by arguing that the period from 1988-1993 saw the embrace of liberal economic doctrines by illiberal political forces. The destruction of the Soviet fiscal state in the late 1980s led to a fundamental re-evaluation by even the most conservative wings of the Soviet power structure about the efficiency and desirability of markets. However, while adapting the rhetoric of Soviet and later Post-Soviet economic reformers, they explicitly maintained the goals of the conservative agenda of the 1970s—the stability of elite power. Instead of using Soviet planning institutions, Post-Soviet elites began to use informal control of firms to assert political control over the economy while taking advantage of efficiencies created by markets. As such, my dissertation helps set the

stage for a questioning of the neat division between so-called “neo-liberal” capitalism and state-led economies. This has resonance not only for the study of Russia and the former-USSR but also for other “kleptocratic” or state-capitalist economies such as China and Turkey.

Chapter 1

Making a Cold War Science: Khrushchev's Peaceful Co-Existence and the Creation of a Soviet Reformist Economics

In January 1941, Stalin gathered his economists. While the Second World War engulfed the Eurasian landmass and the USSR was positioning itself in a dangerous and indeterminate geo-political game, Stalin's mind had turned to academic economics. In 1938, on the heels of the issuance of the new official history of the USSR— *The Short Course*—the Central Committee commissioned a second textbook on economics. The task was vital: after all, it was the USSR's socio-economic system, its "scientific" planned economy, which would overcome the "anarchy of the market," and establish its claim to historical supersession vis-à-vis all other states. Surely then, with this radical new system, the USSR would no longer have use for the conventional categories of economic value that had arisen in capitalist economies. For Marxists, value has a specific meaning. In his critiques of political economy, Marx had expounded that in "commodity production," or the exchange of goods for money, the "exchange value" of a good or its money price is directly proportional to its cost in terms of labor hours (both in the production of the good itself and in the production of its inputs). Under capitalism, the profit motive caused a divergence between the real value of goods in terms of labor and their money price; this divergence defined the cycle of crises and drove the exploitation of workers. Under Communism, commodity production would be abolished and all goods would be defined by their "use values," or their fundamental usefulness to a certain task.⁴² Yet Marx did not explain how value or commodity production would operate under Socialism, the

⁴² Ethan Pollock, *Stalin and the Soviet Science Wars* (Princeton, NJ; Princeton University Press, 2008), 168–172.

intermediate step toward Communism that the USSR was in the process of building.⁴³ Indeed, in the early 1930s, a debate had broken out amongst the “Political Economists,” the high priests of economic dogma, about how an economy planned by human decisions could co-exist with the “objective” historical processes that supposedly guided history.⁴⁴

In 1941, Stalin dismissed these all these positions as academic nonsense. The “law of value,” what Marx had explained as the fact that the relative exchange values of goods—expressed in prices—and their labor values were not one in the same to operate in the USSR. Commodity continued even as the money prices of goods diverged from their labor values. “In order to be in control of prices you need tremendous reserves, an abundance of goods, and only then can we dictate our prices,” the dictator opined. Furthermore, as *kolkhoz* markets and underground markets still existed in the USSR, clearly the socialist sector of the economy was still not dominant enough to set prices in terms of labor values and the underlying productive relationships that they represented.⁴⁵

If the elimination of commodity production was not yet possible, what objective did planning serve? Stalin’s answer revealed not only his thoughts about political economy but its relationship to the larger problems of power in the Soviet state that he had built. “The planned economy is not our wish; it is unavoidable or else everything will collapse. We destroyed such bourgeois barometers as the market and trade, which help the bourgeoisie to correct disproportions,” he explained to his academics. “What is the main

⁴³ George Lichtheim, *A Short History of Socialism* (New York: Flamingo Press, 1983).

⁴⁴ R.W. Davies, *The Industrialization of Soviet Russia, Vol. 3: The Soviet Economy in Chaos* (London: Palgrave MacMillan, 1989), 145-165.

⁴⁵ ARAN F. 1705 O.1 D. 166 L. 14-26 Translated by Ethan Pollock for the Cold War International History Project Digital Archive <http://digitalarchive.wilsoncenter.org/document/110984> [accessed 9/6/2015].

task of planning?” he asked. “The main task of planning is to ensure the independence of the socialist economy from capitalist encirclement. This is absolutely the most important task. It is a type of battle with world capitalism. The basis of planning is to reach the point where metal and machines are in our hands and we are not dependent on the capitalist economy.”⁴⁶ Stalin’s statement reveals much about the logic of the Soviet state and its institutions: for the Stalinist system, the struggle with capitalism was violent, operating within the logic of the long nineteenth century’s world of constantly expanding and competing empires. In such a violent world, the economy must serve as an arsenal for a Socialist state that could compete and survive.⁴⁷

In 1956, Khrushchev mounted the podium of the XXth Party Congress. By then, the world looked very different: the USSR had won the Second World War and had emerged as the world’s second superpower, standing at the head of a bloc of like-minded governments. Khrushchev declared, “[Socialism] has spilled over the borders of one country and is now a world system. The existence of two global economic systems—socialism and capitalism—each with its own logic of development is now a fact.” The establishment of this “socialist world system,” with its rapidly growing economic might, had allowed for the creation of a “zone of peace” in world politics that included both socialist states and other countries opposed to imperialism. “A great mobilization of the masses against the threat of war” had blunted the threat of imperialist aggression. In such conditions, the USSR would fight its battle with imperialism through a policy of “peaceful

⁴⁶ Ibid.

⁴⁷ This characterization of Stalin can also be found in Steven Kotkin’s *Stalin: Paradoxes of Power, Vol. 1* (New York: Penguin Press, 2014). Pages?

co-existence.”⁴⁸ Thus, the collective might of the USSR and its socialist allies would serve to keep the world’s peace while the superiority of the socialist system would be achieved through “economic and social competition of the two systems.”

This chapter will argue that this shift helped turn academic economics into a “Cold War science.” It made its practitioners see themselves as not only re-enforcing and explaining official ideology, but also transforming domestic institutions to better fight the Cold War. Debates among academic economists from the mid-1950s to the mid-1960s thus serve as a lens through which we can observe how the USSR adapted itself to a change in international order from Stalin’s world of empires to “the liberal hegemony” associated with American power. As Adam Tooze has suggested, America’s rise as a “liberal hegemon” fundamentally changed the way sovereigns presented themselves by tying state power to economic performance.⁴⁹ Thus the economics profession, its organizations, and other closely related technical, political and scientific groups became a new cluster of “Cold War Institutions” whose *raison d’être* differed fundamentally from that of other centers of power in the Soviet hierarchy, such as the central planning agencies and production ministries, which remained, in many ways, Stalinist.

The more the USSR’s economists became embedded in the Cold War, the more their understanding of the ways in which the Soviet economy operated became liminal. The imperative to “catch up and overtake” the capitalist – and, more specifically, the American – economies led to the introduction of econometric techniques that would push the limits of doctrine on the “law of value” and the “labor theory of value” as a whole. By

⁴⁸ *XX S’ezd KPSS: Stenograficheskii Otchet* (Moscow: Gospolizdat, 1956), 12-26.

⁴⁹ Adam Tooze, *The Deluge: The Great War and the Remaking of Global Order* (New York: Viking Press, 2014).

the mid-1960s, these encounters and engagements with “the international sphere” would splinter ideas about reforming the Soviet economy, often in contradictory ways that blurred the lines between liberalism and Leninism, between markets and planning.

The Postwar Origins of Reformist Economics

Stalin’s 1941 thoughts betrayed a remarkably consistent worldview about the relationship between the Soviet state, the Soviet economy, and the larger world. As early as 1925, Stalin had told the Moscow Party Committee that

At the present we have about 4 million industrial proletarians. This is of course a small number, but nevertheless it is a start toward building socialism and completing the build-up of the defense of our country to the regrets of the enemies of the proletariat. But we cannot and must not stop at this point. We need 15-20 million industrial proletarians, the electrification of the main regions of our country, cooperative agriculture and highly developed metal industry. Then we shall not be afraid of any dangers. Then we shall conquer on an international scale.

Stalin’s “Socialism in one country” thus meant that the Soviet state had to use the economy as a basis to defend the USSR from inevitable challenges that would be fought in the international arena between great powers. Value and the price mechanism could still exist out of historical necessity, but they had to be regulated for the common good of arming the state with fighting steel and mobilizing the population.⁵⁰

What did this mean in practice? By 1938, when Nikolai Voznesensky came to head Gosplan, the Soviet planning agency had just seven departments, which he expanded to one hundred and thirty-three, while hiring a slew of new cadres, trained in finance and economics, recently graduated from newly-expanded institutions of higher education. Already in 1939, a discussion on the management of enterprises had been launched in *Pravda*, with several managers from Leningrad, Voznesensky’s power base, calling for a

⁵⁰Quoted in R.W. Davies, *The Soviet Economy in Turmoil, 1929-1930*, 46-47; see also Silvo Pons, *Stalin and the Inevitable War: 1936-1941* (New York: Routledge, 2014).

more decentralized planning system.⁵¹ Despite some green shoots in the late 1930s, it was the war that spurred the growth of new academic and administrative approaches to the Soviet economy which post-war Stalinism would struggle to address.

As Elena Zubkova has argued, wartime necessities led to a kind of “liberalization at the front.” This was true of economic management as much as it was of other aspects of Soviet life. Even though labor was completely militarized, the financial chaos and inflation that the war unleashed led to looser controls on industrial production and allowing individual enterprises to better control their individual balance sheets without the intervention of government agencies.⁵² Further, as with all other warring powers, the USSR’s scientists contributed to the cause of fighting the war. Economists were no exception. The most famous example of economics’ wartime applications was the case of a young Leningrad mathematician named Leonid Kantorovich, who in 1939 had developed a technique for maximizing the amount of output per expenditure in a wood-processing plant near the city. During the war, he applied his relatively unknown technique—later called linear programming—to find the optimal gap between trucks crossing the frozen Lake Ladoga, reportedly walking the dangerous route with a ruler to gather data. Kantorovich’s technique offered a powerful potential tool for planners. Using his case study of the plywood trust, Kantorovich showed that it was possible to calculate optimum levels for economizing on resources based on set financial or output target rather than

⁵¹ Iu.P. Bokarev “Aleksandr Mikhailovich Birman i ego model’ budushchego,” in Borakov et. al, eds. *A.M. Birman i ego vremia: k 100-letiiu so dnia rozhdeniia* (Moscow: Institut Ekonomiki RAN, 2010), 18-21.

⁵² Elena Zubkova, *Russia After the War: Hopes, Illusions and Disappointments 1945- 1957* (New York: M.E. Sharp, 1998); Kristy Ironside, "Rubles for Victory: The Social Dynamics of State Fundraising on the Soviet Home Front," *Kritika: Explorations in Russian and Eurasian History* vol. 15 no. 4 (Fall 2015), 799-727; Mark Harrison, “The Soviet Union After 1945: Economic Recovery and Political Repression,” *Past and Present* supplement no. 6 (2011), 103-120.

through direct orders, thereby simplifying the planning process.⁵³

Thus, after the war, the nascent economics profession faced the same tensions that all Soviet society did as the war's opening liberalization began to clash with the state's desire to restore "normality." Shortly after the war, a wide-ranging discussion on the use of economic techniques in planning began under tacit endorsement of Voznesensky, whose 1948 book, *The Soviet Economy during the Second World War*, devoted considerable attention to the objective operation of the law of value in the Soviet economy and its effects on pricing. The most consequential of the ideas developed in this period was presented in a 1947 paper by Leningrad State University (LGU) professor Nikolai Novozhilov called "Ways of Determining the Maximum Effectiveness of Capital Investments in the Socialist Economy," which posited the need to calculate the efficiency of an individual state-directed capital investment against a moving index of total capital investment effectiveness. Thus, Novozhilov, who had been trained in pre-revolutionary Kiev under the likes of ex-Imperial Finance Minister Nikolai Bunge, had tacitly introduced the concept of opportunity costs to capital into Soviet economic theory. His approach postulated that a calculation system similar to, or perhaps even derived from, Kantorovich's optimization problem could be used to establish this discount rate (or interest rate i.e. the cost of capital) not only for individual investments, but as a common comparative rate across the whole of the economy. Novozhilov's work earned praise from economists actually involved in planning, such as Nikolai Strumilin, the dean of Soviet applied economics, who believed that his work could be used to save the Soviet economy 1-2 billion rubles a year by giving planners

⁵³ On Soviet wartime mobilization of social sciences see Slava Gerovitch, *Newspeak to Cyberspeak: A History of Soviet Cybernetics* (Cambridge, MA: MIT Press, 2002), 11-14.

a way of evaluating the cost of investments against other, cheaper options.⁵⁴

However, Novozhilov met resistance from the “Political Economists” at the Institute of Economics, whose purview dealt with the economic theory of Marxism-Leninism, rather than theoretical issues of planning. Konstantine Ostrovitianov, who believed that economic theory could only be derived from the experience of the socialist state rather than from *a priori* calculation, led their response. In the pages of *Questions of Economics*, the USSR’s leading economics journal, he charged Novozhilov and his supporters with revisionism, explaining that their approach mirrored bourgeoisie “mathematical economics” in valuing the cost of capital. Because of this critique, Novozhilov temporarily lost his academic appointment at LGU.⁵⁵

Independently of the Novozhilov controversy, Voznesensky launched a study into the proper use of applied statistics in economic research in 1948. The report of the commission charged with the investigation, authored by economic statistician Vasily Nemchinov, echoed Voznesensky’s initial concerns. Nemchinov had come to fame earlier for publishing a paper, which used inferential statistics to argue for the existence of class struggle in the countryside in the late 1920s that Stalin had supposedly used in his debate with Bukharin and the “Right Opposition.” Stalin’s support meant that Nemchinov was allowed to remain one of the USSR’s few practitioners of inferential economic statistics while the founders of the approach, many of whom had been associated with the Moscow

⁵⁴ Michael Kaser, “The Debate on the Law of Value in the USSR 1941-1953,” in Vincent Barnett and Joachim Zweynert (eds.), *Economics in Russia: Studies in Intellectual History* (London: Ashgate Publishing, Ltd., 2008), 141–54; N.S. Kozerskaya, “Na trudnom puti vozrozhdeniia rossiiskoi ekonomicheskoi nauki” in *U Istokov podlinnoi ekonomicheskoi nauki* (Moscow: Rossiiskaia Akademia Nauk, 1995), 111-122.

⁵⁵ Pekka Sutela, *Economic Thought and Economic Reform in the Soviet Union* (Cambridge: Cambridge University Press, 1991), 32–34.

statistical school of the 1920s, found themselves out of a career, or worse.⁵⁶ In his 1948 report to Voznesensky, Nemchinov not only criticized Soviet economists, but also noted that the Central Statistical Administration (TsSU) simply gathered data without analyzing it. Nemchinov's critiques met with resistance from theoretical Political Economists like the young Yakov Kronrod and the famous Eugene Varga, who believed inferential statistics replaced "social relations" with mathematical inference as the basis for economic analysis.⁵⁷

In a fascinating parallel, and despite the late Stalinist isolation of Soviet science, the Soviet controversy took place contemporaneously with the "Measurement Without Theory" controversy in American academia which many scholars point to as the start of modern "neo-classical" hegemony. In his famous 1947 article, Dutch-American econometrician Tjalling Koopmans—who would later win a Nobel Prize with his Soviet friend, Kantorovich—critiqued the followers of Wesley Claire Mitchell and other "American Institutionalists" on the same ground that Nemchinov critiqued TsSU. It should not come as a surprise, then, that Varga and other traditional Soviet economists admired Mitchell and his colleagues for their historically grounded research and long-run, descriptive statistical analysis.⁵⁸ This Soviet "Measurement Without Theory Debate" was

⁵⁶ The use of correlation analysis and other types of deductive mathematics to interpret data. This differs from descriptive statistics, which only describes the data in terms of its properties, such as range of standard deviation.

⁵⁷ On the debate on Soviet statistics see Maya Haber, "Socialist Realist Science: Constructing Knowledge about Rural Life in the Soviet Union 1943-1958" (PhD Thesis, University of California, Los Angeles, 2003), 73-9.

⁵⁸ Tjalling C. Koopmans, "Measurement Without Theory," *The Review of Economics and Statistics* 29, no. 3 (August 1, 1947), 161-72; On Varga's connections with Wesley Claire Mitchell and the American Institutionalists see Kyung Deok Roh, "Stalin's Think Tank: The Varga Institute and the Making of the Stalinist Idea of the World Economy and Politics 1927-1953," (PhD Thesis, The University of Chicago, 2010), 155-196; Yakov Kronrod, "Problemy Statistiki (1948 g.) in *Iz Npublikovanogo* ed. T.E. Kuznechova (Moscow: Institut Ekonomiki RAN, 2002), 32-39.

independent of its Western counterpart. The simultaneous changing of the guard in economics, East and West, testifies to the impact of the Second World War on cultivating a new kind of economist with a background in “operations research”—a kind of investigative technique that used statistical inference to simplify such complex technical problems as aiming of anti-aircraft guns into a probabilistic “operation” whose outcomes could be easily optimized without reference to the actual workings of said gun.⁵⁹

In addition to the problems of mathematics, statistics, and efficiency, another strain in reform economics arose in the wake of the war within the work of some Political Economists interested in financial flow (what Marxists call “reproduction”), including some of the same figures opposed to mathematical methods. The relative financial independence of enterprises that arose as a consequence of the war contributed to the increased use of *khozraschet*, or cost accounting and financial independence, in Soviet industrial management as factories, farms, and other organizations became more cognizant of wasted resources. Economic theorists like Z.V. Atlas, A.M. Birman, and Yakov Kronrod all touted cost accounting’s potential to improve the efficiency of the Soviet economic system.⁶⁰ In his 1952 book, *The Basis of Cost Accounting: In the Context of Socialist Industry*, Kronrod argued that accurate cost accounting constituted a unique “category” of socialism, as only a socialist society could properly align price with the value of labor time thereby allowing for the calculation of losses and profits. Thus, socialist enterprise could be profitable within the context of the entire national economy by allowing each enterprise to devise and understand its production costs in current and past labor within the context

⁵⁹ Philip Mirowski, *Machine Dreams: Economics Becomes a Cyborg Science* (Cambridge: Cambridge University Press, 2001).

⁶⁰ Iu.P. Bokarev, “Aleksandr Mikhailovich Birman i ego model’ budushchego,” 21-24.

of the plan's overall goals.⁶¹

The subterranean and largely academic fractures in Soviet economics came to light in November 1951. Following Stalin's 1950 meeting with the editors of the 1941 textbook (whose publication had been delayed by the war), an all-Union meeting of economists was called to discuss the draft. The meeting included a series of debates among economists about the practice of pricing, planning, and the content of economic value in the USSR. Strumilin, for example, proposed that prices in the USSR be more strictly tied to the cost of production, or *sebestoimost'*, by aligning the price of a commodity to the cost of the wages paid while producing it. Nemchinov opposed this scheme, fearing it would financially disadvantage advanced and resource-intensive sectors of the economy with low labor costs. This opposition revealed Nemchinov's preoccupation with the costs associated with capital and the need for technological advancement which would become critical to the later development of his "mathematical" approach.⁶²

Against this background, the political ground was shifting. Voznesensky had already been executed in 1950, one of the victims of Stalin's deadly Leningrad Affair. Afterwards, Gregory Malenkov—one of the instigators of the affair—directed his efforts towards purging the economics profession. With so much discord over an ideologically vital area in science, Stalin decided to intervene. Upon reviewing the 1951 discussion, he issued a pronouncement that would be published as *Economic Problems of Socialism in the USSR* later that year.⁶³ Stalin foreclosed many of the debates at the conference by arguing for a "transformed law of value" under socialism due to the continued existence of

⁶¹ Yakov Kronrod, *Osnovy Khozaistvennogo Rascheta: Na Primery Sochialisicheskogo Promishlenosti* (Moscow: Gospolizdat, 1952).

⁶² Iu.P. Bokarev, "Aleksandr Mikhailovich Birman i ego model' budushchego," 20-28.

⁶³ Pollock, *Stalin and the Soviet Science Wars*, 208-211.

commodity production. However, he explained, this law did not fully regulate production in the USSR, as the state sector did not yet hold a monopoly over all forms of exchange.⁶⁴ Categories such as profit and production costs continued to function due to the existence of *kolkhozes* and “cooperative production,” but were neither the sole nor most important regulators of the economy. Stalin’s final word on the matter precluded discussions in economics to such an extent that one economist described economics seminars in his graduate training as a discussion of the placement of commas in Stalin’s text.⁶⁵

Reform as Management: The Roots of Khrushchev’s Political Economy

Stalin’s death in 1953 left the USSR in flux, not only in political leadership, but also in questions of doctrine. The growing militarization of the Cold War following the Korean stalemate led to the formation of a set of alliances that spanned the globe; the advent of nuclear weapons fundamentally challenged the imperial vision of world order under which Stalin had operated. Could socialism expand through the contradictions unleashed by imperialist military conflict if the result would be the end of all life on earth? For a fundamentally revolutionary state like the USSR, any shift to a new policy required a rereading of ideology that could meet these challenges while preserving the legitimacy of the institutions and interest groups that had emerged under Stalin and held power in the hierarchy. Following the elimination of Lavrentiy Beria, the competition between the two leading politicians in the Kremlin—Khrushchev and Malenkov—meant each would try to create a doctrine that would hold together a governing coalition based on these two requirements. Khrushchev’s successful formula tied domestic economic mobilization to

⁶⁴ J.V. Stalin, *The Economics of Socialism in the USSR* (Peking: Foreign Languages Press, 1972).

⁶⁵ Aron Katsenelinboigen, *Soviet Economic Thought and Political Power in the USSR*, (New York: Pergamon Policy Studies, 1980), 15.

the resolution of the Cold War through “the socio-economic competition of the two systems.” This new framework laid the groundwork for the establishment of economics as a science of the state dedicated to fighting the Cold War.⁶⁶

On January 1, 1955, an article by Khrushchev’s ally Dmitri Shepilov, entitled “The General Line of the Party and the Vulgarization of Marxism,” appeared in *Pravda*. Shepilov, who held a *Kandidat* degree in Political Economy and served as a leading ideologue, attacked the work of the Institute of Economics, singling out A. Palchev, who had argued that the Soviet industrialization process was complete and investment now needed to shift to light industry to expand consumption. Shepilov accused this position of reviving the logic of capitalism by positing that the productive and non-productive sectors competed for profits. Marx had postulated that capitalist development created a zero-sum game for profits between consumption and the “means of production,” or heavy industry. Palchev, Shepilov argued, had unjustly transferred this logic to socialist production, which, through planning, had overcome such contradictions. Furthermore, Shepilov argued that such a path to development would cause the USSR to disarm itself before hostile imperialist states, denying itself the fruits of modern science (inherently a knock-on effect of the development of the means of production), such as atomic bombs and jets, by shifting investment from heavy industry to consumer goods.⁶⁷

Shepilov’s article was not just a matter of academic debate; it represented a pointed ideological thrust that signaled Khrushchev’s attack on Malenkov’s industrial politics. At

⁶⁶ My interpretation of this period and the coalition making potential of ideology draws heavily on the framework developed in James G. Richter, *Khrushchev’s Double Bind: International Pressures and Domestic Coalition Politics* (Baltimore and London: Johns Hopkins University Press, 1994).

⁶⁷ Dmitri Shepilov, “General’naia liniia partii i vulgarizatsia marksizma” *Pravda* no. 24 (January 1, 1955), 2-3.

the September 1953 Party Plenum, Malenkov suggested that the USSR had finished its heavy industrialization and that state investments should move toward sector II of the economy (light industry) rather than sector I (heavy industry) to pave the way for the next phase of development. The precise influences on Malenkov's thinking remain unclear, but the memoirs of Khrushchev's son, Sergei Khrushchev, suggest that Malenkov's wife, Valeriya Golubstova, was a major inspiration. Golubstova was in a natural position to make this suggestion, since she served as Dean of the Moscow Energy Institute. Since the 1930s electrical engineers began to think about the problem of capital costs, which are an obvious problem when dealing with hydroelectric power. Hydropower has a very low production cost (the main criterion of economic efficiency in Soviet planning) but huge initial capital outlays. This brought the existence of the cost of capital, or interest rate—and thus the “opportunity cost”—into sharp relief.⁶⁸ The importance of opportunity costs—the cost of capital itself—had important implications for the larger economy. If, as Soviet practice dictated, the source of capital investments for heavy industry was the light industrial and household sector, the former was making losses while the latter was making the profits that funded those losses.

Thus, what Malenkov was proposing represented more than just a change in the allocation of state investments: it implied a wholesale overhaul of the Soviet growth model, shifting power to light industries and consumers.⁶⁹ The concern with what we would today

⁶⁸ Sergei Khrushchev, *Nikita Khrushchev: Reformer* (Moscow: Vremia, 2010), 140-1; Gregory Grossman, “Scarce Capital Goods and Soviet Doctrine,” *The Quarterly Journal of Economics*, vol. 67, no. 3 (1952), 311-343.

⁶⁹The distinction between economic and administrative reform will be further explored in Ch. 2. Economic rebalancing is a term now associated with the study of contemporary China and its need to move from an export- and investment-led growth model with diminishing returns to investment (and subsequently the creation of private asset bubbles) to consumption-led growth and lower nominal growth rates. This question will be explored further in Ch. 2. For a comprehensive discussion of this question, see Michael Pettis, *The*

call “rebalancing” away from a production- to a consumption-driven economy had implications for foreign affairs. To achieve an efficient distribution of capital, the USSR had to back away from confronting the United States and its allies and settle for a negotiated peace to save on scarce capital resources. Thus, Malenkov proposed a “great power” solution to the conflict with the United States by making concessions. At the February 1955 Party Plenum, Khrushchev hammered Malenkov for being soft on imperialism; this resulted in the latter resigning from his position as Chairman of the Council of Ministers.⁷⁰

Khrushchev and his surrogates’ assault on Malenkov had consequences for academic economics. A letter from a party member named Grigory Filipov, sent to Mikhail Suslov’s office, initiated a campaign to cleanse Soviet economics of Malenkov’s heresy. Filipov insisted that the writers of the Stalin-era textbook did not emphasize that “the expansion of heavy industrial production did not exclude greater investment in sector II.” Filipov claimed that its authors had used their academic connections to avoid owning up to their “grave theoretical mistakes” in this matter. For his efforts, Filipov was invited to Suslov’s office for further conversation and added to a guest list of future gatherings to discuss the contents of a new edition of the book.⁷¹ In a series of meetings across the USSR in 1955, attended by an estimated 1,800 economists, propagandists, and educators, the first edition of the textbook (published in 1954) met with criticism for failing to emphasize that “the general law of socialism is continual growth generated from the improvement of the means of production and the use of the most advanced technology” and for not clarifying

Great Rebalancing: Trade, Conflict and the Perilous Road Ahead for the World Economy (Princeton, NJ: Princeton University Press, 2013).

⁷⁰ William Taubman, *Nikita Khrushchev: The Man and His Era* (New York: W.W. Norton, 2003), 263-269.

⁷¹ RGANI F. 5 O. 17 D. 522 L. 60-61.

that the process of expanding heavy industry would lead to a consequent increase in consumer goods.⁷²

Individual economists felt the impact of the criticisms leveled against Malenkov. Yakov Kronrod found himself caught up in the campaign. Kronrod followed up his work on the political economy of cost accounting with a 1954 book titled *Socialist Reproduction* in which he attempted to create a descriptive theory of financial flows between the various sectors of the Soviet economy. Its central claim was that there were financial “elasticities” between sector I and sector II and thus they could not be understood as separate categories for planning. Kronrod justified this by showing that the circulation of financial instruments between sectors formed the basis of inter-sectoral proportions and that these were not planned but rather “determined by the objective laws of economic development” that could be derived from the classics of Marxism through the dialectical analysis of society. This meant that the plan would only be successful if it corresponded with the proportions that already existed, *a priori*, in the flows of the socialist economy. Therefore, society, rather than the state, determined the plan’s ultimate goals.⁷³

Kronrod’s draft was attacked in an issue of *Partiinaiia zhizn’* (Party Life), which noted that Palchev had used Kronrod’s work to justify his (and, by implication, Malenkov’s) deviations. Kronrod refused to take this attack lying down. In a letter to the Central Committee that March, he argued that he had been slandered and that he had distinguished himself from Palchev in a variety of debates, including at the 1954 meeting of the scientific council that discussed his draft. However, a review of Kronrod’s work by L.M. Gatovosky, A. Kursky, N. Vasiliev, and A. Bechin agreed with the assessment that

⁷² Ibid., 130-133.

⁷³ Yakov Kronrod. *Sotsialisticheskoe Vosproizvodstvo* (Moscow: Gospolizdat, 1955).

Kronrod had indeed committed ideological mistakes in his work by arguing for the existence of “objective factors for the slowdown in the development of the first sector of the economy” and of “reserves in the economy that from time to time had to be transferred to consumer goods production.” Despite Kronrod’s further protests, the Central Committee concluded that the book should be pulled from publication, even though most of its copies were already in circulation.⁷⁴

The 1955 assault on Malenkov and his supporters established the firm boundaries that economic thinking in the USSR could not cross. It also garnered Khrushchev support from Party hawks, such as Gregory Zhukov, who reportedly feared that Malenkov’s investment priorities would leave the USSR vulnerable to a catastrophic invasion like that in 1941 by inadequately marshalling new technology. Khrushchev’s attacks on Malenkov’s positions also drew support from the powerful heavy industrial ministries.⁷⁵ However, Khrushchev still had to solve the next half of the problem of building a doctrine: how to adapt to the challenges of the post-Stalin USSR.

Khrushchev hinted at his solution in his report to the September 1953 Central Committee Plenum on Agriculture. Under Stalin, the reference for Soviet achievements was imperial Russia in 1913. Yet, in an unpublished section of his speech to the plenum, Khrushchev broke a Soviet taboo by publically acknowledging that workers in the USSR were consuming less food than those of the United States. In Khrushchev’s assessment, despite increased investment in the agricultural sector in the form of Malenkov’s higher procurement prices, food production was not catching up to the ever-growing needs of the urban population. While he acknowledged Malenkov’s assessment that industrialization in

⁷⁴ RGANI f. 5 o. 17 d. 522 ll. 109-123.

⁷⁵ Khrushchev, *Nikita Khrushchev*, 166-167.

the USSR was complete, he did not think the expansion of consumer investment was enough to increase output. The problem, in his view, was not economic, but rather a matter of mismanagement. The other side of Malenkov's procurement price increases had to be the "lowering of costs of production and increases in output" of agricultural goods. This would depend not only "on increasing prices, but on the improved management of production." What Khrushchev meant was not just greater emphasis on efficiency but instilling an ethos in Party cadres to actively lead production by applying the lessons of Marxism-Leninism to the tasks at hand. While he did not yet say it out loud, the implied task was to beat the United States at agricultural output.⁷⁶

While the campaign to "catch up and overtake" still loomed ahead, Khrushchev's instinct to understand the Cold War as a competition over economic performance lined up with the ideas of a group of economic theorists in the Institute of Economics' section on Capitalist Economies led by Anoushavan Arzoumanian. Arzoumanian had come to Moscow from Baku in the mid-1940s under the patronage of his father-in-law, Anastas Mikoyan—the USSR's trade minister, Politburo member, and close Khrushchev ally. In the mid-1950s, Arzoumanian formulated the idea that the international situation was far more fluid than the orthodox "two camps" view of international relations, which argued that all politics was either socialist or opposed to it. At the October 1955 Plenary meeting of the Academy of Sciences, Arzoumanian argued that the Soviet research system needed to create a new institute for the study of global international relations and political economy. He explained that since the 1940s, the world had changed; the United Nations system and the emergence of "young" post-colonial states had created a certain fluidity in

⁷⁶ Ibid., 141-142; N.S. Khrushchev, *Stroitel'stvo kommunizma v SSSR i razvitie sel'skogo xoziaistva* (Moscow: Gospolizdat, 1962), 7-21.

world politics. Indeed, the political economy of capitalism had become increasingly multilateral. A new institute for international political economy would have to study not only individual capitalist states but also “the function of the United Nations and its many organs, especially economic, as well as those organizations unrelated to it that contribute to economic and technical growth in highly developed states.”⁷⁷

This fluid conception of international politics informed a memorandum to Khrushchev on the politics of the United States that was compiled by Arzoumanian’s team. The note argued that instead of viewing capitalist states as ruled by a unitary cabal of monopolists, the USSR had to see them as politically heterogeneous. It explained that American political groups ranged from the mainstream, which wished to dictate terms to the socialist bloc from “a position of power” without resorting to war, to a fringe hyper-militarist group that wished to fight the USSR now rather than later, when it became too strong, to a potentially influential group of “isolationists,” who were determined to withdraw from international alliances. Critiquing many Soviet studies of American politics, the note explained, “it is taboo to even mention the word ‘isolationism’ in the press when discussing the politics of the United States.” Arzoumanian’s team contended that this omission reflected the primitive state of Soviet research on foreign politics. The Soviet Union, the memo argued, could exploit economic slowdowns inherent to capitalism, its own economic successes, and inter-alliance conflicts within NATO to influence the course of American policy toward a more isolationist direction. Closing with a plea for further research on the politics and economics of the United States and other foreign states, the note had an unstated but obvious implication that would become extremely important for

⁷⁷ Petr Cherkasov, *MEMO: Portret na fone epokhi* (Moscow: Ves’ Mir, 2004), 90-98.

Soviet political-economic strategy in the coming years. It implicitly argued that the domestic economic success of the Soviet Union could be used as a tool in international politics by convincing anti-Soviet elements in the United States that their position of “strength” did not exist and to convince post-colonial states to move toward neutrality or outright alliance with the USSR, thereby encouraging American isolationism.⁷⁸

Arzoumanian’s thinking appealed to Khrushchev’s belief that the core problem the Soviet economy faced was a lack of “technical progress” as compared to the leading capitalist states. According to Sergei Khrushchev’s memoirs, the notion that “[the USSR] still chasing the West’s tail” after having spent so much time and money on the purchase of licenses and equipment in the 1930s had deeply bothered his father ever since his tenure as a party official in the Donbas. The problem, the elder Khrushchev believed, lay in the lack of proper management and in the “overcentralization” that had restrained the initiative of individual Soviet enterprises to introduce new techniques and technologies. Indeed, Khrushchev’s first initiative in industrial policy was a May 1955 mobilization campaign in favor of innovation featuring boisterous meetings of engineers across the country and in the Kremlin.⁷⁹

This focus on technical problems allowed for the reinstatement of broad economic questions into the more restricted language of management and industrial practice. For example, a note from the chair of the Central Committee’s Department for Science and Culture, Nikolai Rumiiantsev (a reform-minded economist and the future father of Soviet sociology), pointed out that one of the main problems facing the USSR’s enterprises was a

⁷⁸ RGANI f. 5 op. 30 d. 75 ll. 27-49.

⁷⁹ Khrushchev, *Nikita Khrushchev*, 211-214; V.L. Nekrasov, “Reforma gosplana SSR 1955g: razrabotka novoi modeli planirovaniia ekonomiki,” *Vestnik Tomskogo gosudarstvennogo universiteta*, no. 368 (2013), 99-103.

complete lack of conception of what Marx called “the moral depreciation of technology.” For Marx, moral depreciation describes the moment when the exchange-value (money price) of a piece of machinery is lost, due to it no longer being the best on the market. Marx warned that this occurs irrespective of the actual use-value and age of equipment, and pointed out that this might constitute an inefficiency in capitalist production.⁸⁰ Rumiantsev, however, warned that the introduction of new technologies required enterprises to be able to amortize the cost of obsolescence for machinery. In the USSR, the rules of enterprise accounting only allowed for the “physical depreciation” of fixed assets rather than their “moral depreciation,” or purely technical obsolescence. As a result, Soviet factories and enterprises had no incentive to replace obsolete equipment and thus would often run older and newer technologies in parallel. Soviet economic sciences had no answer for how to achieve these standards as “no research on moral depreciation had been conducted in the last 10-15 years.” Worse still, Soviet economists had (in line with Stalin’s teachings), denied the importance of technical obsolescence by arguing that because the state controlled the operation of the law of value within the socialist industrial sector, the discount rate that allowed for the replacement of old technology under capitalism did not exist. Rumiantsev assailed this thinking as “both false and harmful to practice” and claimed that while it may have made sense “when industry was in its infancy,” it now held back technical development. Gosplan and the Academy of Sciences had to change their position on the matter and begin to take the problem of obsolescence seriously. Rumiantsev had reintroduced some concerns about the effective use of capital through the back door. To

⁸⁰ See chapter 15 of Karl Marx’s *Capital Vol 1* available at <https://www.marxists.org/archive/marx/works/1867-c1/> [accessed 11/21/2015].

understand how two pieces of equipment compared in their efficiency, an implicit discount rate on capital had to be introduced.⁸¹

Another important reworking of economic thinking into the realm of management was a 1955 article by Evsei Liberman in *Questions of Economics* entitled “Cost Accounting and the Rewarding of Workers in Industry.” Liberman argued that because Kronrod’s 1953 conception of socialist cost accounting was restricted to a single enterprise, it was too narrow. Instead, Liberman proposed that cost accounting should operate from the point of view of managing the relationship between enterprises and the state’s contributions to its various investment funds through capital expenditures (also termed “capital investments”). Effectively, this meant that cost accounting could be used as a means of managing the entire economy as one large accounting system by tying savings costs related to production with individual workers’ “material self-interest” through additional deposits into an enterprise’s wage fund. This would incentivize more effective uses of resources through the introduction of advanced technology at the plant level and would simplify planning by allowing central planners to “focus on more key areas of the plan while leaving the details to the enterprises.”⁸²

Another important development in the wake of Stalin’s death was the restarting of the mathematical debate in Soviet economics. Prompted by complaints from academic groups and individual members of the TsSU that Soviet statistics had stagnated under what one agency staffer, I. Pisarov, called “a liquidationalist tendency” that restricted statistics only to measurement, the Institute of Economics began planning a conference on revisiting

⁸¹ f. 5 op. 17 d. 522 ll. 164-176.

⁸² E.G. Liberman, “Khoziaistvennyi raschet i material’noe pooshchrenie rabotnikov promyshlennosti,” *Voprosy Ekonomiki* no.6 (June 1955), 34-44.

statistical education in March 1954.⁸³ At the conference, the majority of participants, led by legendary Soviet mathematician Andrei Kolmogorov, argued for the restoration of statistics as a freestanding discipline. In his report, Rumiantsev noted that the future of Soviet economic statistics lay not only in pointing out the achievements of the Soviet economy “but also its shortcomings” and that statistics “should be used to find new reserves within the socialist economy.”⁸⁴

Thus, advocates of a mathematical economics began to petition the Soviet government again. On July 9, 1954, S.M. Valander, the prorector (equivalent of a deputy rector in the English-speaking world) of Leningrad State University (LGU), wrote to Malenkov to address a “matter of the highest importance to the state” which could only be resolved “at the level of the Council of Ministers.” The problem, that state agencies “had no method of evaluating the vast number of tasks needed for production, planning and distribution,” could be solved using the “latest advances of applied mathematics.” State planning agencies and many economists often rejected the use of these advanced mathematical methods. Valander pointed to the work of LGU professor Leonid Kantorovich as immediately useful for planners. The agencies were less enthusiastic. G. Sorkin, a member of Gosplan’s staff, responded to Valandar’s letter by accusing Kantorovich of “rejecting the labor theory of value” and adopting “the subjective,” “marginalist” methodology found in Western economics, a charge that representatives from state agencies would continue to make for decades.⁸⁵ Kantorovich’s work explicitly did what Rumiantsev was only proposing: it placed the scarcity of resources, including

⁸³ RGANI f. 5 op. 17 d. 423 ll. 23-26.

⁸⁴ RGANI f. 5 op. 17 d. 466 ll. 8-14.

⁸⁵ GARF f. 5446 op. 88 d. 1 ll. 132-151

capital, as the major criterion for making economic decisions, and thus implicitly of economic value. On January 8, 1956, Vasily Nemchinov wrote to Khrushchev on the state of economic statistics in the USSR. In his letter, he lamented that young economists were “totally isolated from practical work” due to their lack of access to up-to-date published data. This presented a problem not just for economic science, but for the economy: without statistical inference, planning could not be rationalized, and the rate of technical progress would remain low.⁸⁶

Thus, by early 1956, the major intellectual camps of reformist economic thought had passed through the crucible of 1953-1955 by couching their proposals in the language of “management.” Yet they lacked a means of applying these technocratic ideas to the policy of a Party-State still largely dedicated to mobilization as the main tool of economic policy. Soviet economics was not yet “Cold War Science”—its vision remained domestic, without linkages to a larger international Communist project. Khrushchev’s next move would provide the opportunity to link the issue of domestic management with mobilization both at home and abroad and cast economics into the Cold War mold.

Mobilization as Management: Peaceful Co-Existence and the Making of a Cold War Economics

When Khrushchev took the speaker’s podium to report to the XXth Party Congress in February 1956, many battle lines within Soviet economics were already drawn. However, it would take the events of 1956 to turn them into the “Cold War” form that they

⁸⁶ RGANI f. 5 op. 35 d. 25 ll. 1-6.

took in the mid-1960s, by blending the economic development of the USSR with its international commitments as a Communist superpower.

The XXth Party Congress is most often associated with Khrushchev's famous "Secret Speech," in which he assailed Stalin's "cult of personality." That speech had profound long-term and short-term policy effects: one can understand neither the revolutions of 1956 nor the Sino-Soviet split without it.⁸⁷ As Polly Jones has shown, de-Stalinization had profound mobilizing and personal effects on wide segments of society both high and low.⁸⁸ However, recent literature has very little to say about the other key innovation of the XXth Party Congress: "peaceful co-existence."⁸⁹ Khrushchev's new doctrine emphasized that the Soviet Union would face imperialist powers not through a purely geo-political confrontation, but rather through "a competition of the two systems," in which the domestic achievements of socialism would neutralize the advantages held by the imperialist center, the United States, thereby bringing to power progressive forces around the world. Khrushchev argued that as the might of the socialist world increased, the ability of the United States to "negotiate from a position of strength" would fade away. This would allow for the creation of larger "anti-imperialist" coalitions in what Khrushchev termed the "zone of peace," made up of newly de-colonized states (the so called "national liberation movements") and with "forces that have different ideas about the transition from capitalism to socialism from us." Explaining that "socialism cannot be brought at the point

⁸⁷ Lorenz Luthi, *The Sino-Soviet Split: Cold War in the Communist World* (Princeton, NJ: Princeton University Press, 2008).

⁸⁸ Polly Jones, "From Secret Speech to the Burial of Stalin: Real and Ideal Responses to de-Stalinization," in *The Dilemmas of De-Stalinization: Negotiating Cultural and Political Change in the Khrushchev Era* (London: Routledge, 2007), 41–63.

⁸⁹ Exceptions are Richter, *Khrushchev's Double Bind*, 45-60; David Priestland, "Cold War Mobilization and Domestic Politics" in Arne Wested and Marvin Leffler (eds.), *The Cambridge History of the Cold War Vol. I Origins* (Cambridge: Cambridge University Press, 2009).

of a bayonet,” Khrushchev’s new formulation of international politics made the domestic achievements of the Soviet economy inherently revolutionary on the international stage.⁹⁰ At the head of a socialist camp, or “socialist world system,” the USSR could prevent imperialist war instead of accepting its eventuality, a pleasant thought in the age of nuclear weapons. Effectively, the new doctrine did away with Stalin’s conception of planning as defending the USSR from “capitalist encirclement,” and instead positioned “superiority of the socialist economy, with its higher rates of productive growth,” at the heart of the “competition of the two systems.”⁹¹

For all his optimism, Khrushchev acknowledged that many problems plagued the Soviet economy. He zeroed in on the problem of “capital investments,” or central budgetary outlays to enterprises for new construction and technology. His new Five-Year plan allocated 200 billion rubles in capital investment a year which meant that the party “had to carefully monitor that they were being used effectively.” Improper management of state funds meant that planning “was not yet firmly using the laws of planned, proportional development,” leading to “temporary disproportions and bottlenecks in production.” A blend of mobilization and management could answer this problem. “The party must not shy away from admitting to the people the problems we encounter on our way forward,” he exclaimed. Honesty would “encourage the people to struggle against these problems.”⁹² Yet Khrushchev also acknowledged problems in identifying the very laws that needed to be followed. In the section of his report on ideology, Khrushchev observed “poor conditions in our economic sciences.” Economists “were not producing works on many

⁹⁰ *XX S'ezd*, 12-15.

⁹¹ *Ibid.*

⁹² *Ibid.*, 93-101.

critical questions of the Soviet economy and not participating in the discussion of important questions related to the development of industry and agriculture.” This reflected poorly on the party’s managerial and propagandistic role, as activists in turn “believed that by simply reading some lectures on Communism, they would be doing their duty to the party.” It was not enough to read the classics of Marxism: communist agitators had to “explain how they [the core ideas of Marxism-Leninism] applied to real practices.”⁹³ In his speech, Mikoyan admitted that Stalin’s thesis on the transformed law of value “was in all likelihood incorrect.” He also lamented that while in the United States, “more than a dozen and a half institutes [were] devoted to studying the Soviet economy,” the Soviet Union lacked any analogous organization.⁹⁴

The XXth Party Congress played a critical role in the reorganization of Soviet economics. After a year of planning, Arzoumanian’s Institute of World Economy and International Relations (IMEMO) was founded to serve as a clearing house for the study of international economics.⁹⁵ This led the director of the Institute of Economics, V. Diachenko, to suggest that a similar central institution be created to study the domestic economy of the USSR and other socialist states. Just as IMEMO’s goal would be to provide information to party cadres on international political and economic developments, the other institute would focus on producing solutions for the Soviet economy.⁹⁶ By the end of 1956, party intellectuals began conversations on organizing Soviet economic science in a more pragmatic fashion. A letter from the editorial board of *Kommunist* noted the lack of an

⁹³ Ibid., 116.

⁹⁴ A.N. Mikoyan, *Speech at the Twentieth Party Congress of the CPSU* (Moscow: Foreign Languages Publishing House, 1956), 12.

⁹⁵ Cherkasov, *IMEMO*, 58-61.

⁹⁶ RGANI f. 5 op. 35 d. 24 ll. 58- 61.

institute that would study the productivity of labor, to which the committee responded that the newly-planned Siberian branch of the Academy of Sciences would house an institute designed to study the economics of industrial production; this would later become the Institute for the Study of Economic and Industrial Organization (IEOPP) led by Abel Aganbegian.⁹⁷ That same year, the Scientific Institute of Gosplan (NII), an economic research body established in 1955, called for an all-Union conference of economic institutions from the local and all-Union levels in order to clarify the division of labor within the Soviet economics community and improve the process that would turn theory into practice.⁹⁸

Nemchinov took the idea of economics as a tool of state policy to its most radical conclusion. In a letter to Shepilov, who was now the head of the Central Committee's Department of Science, Education and Culture, Nemchinov argued that "even in capitalist states governments are actively engaging with scientists, through parliamentary committees which exploit the knowledge of universities and research centers." He suggested that the state give direct instructions to Soviet researchers so that "the problems brought up at the XXth Party Congress" could be solved through social science and "government policy [could] operate on a scientific basis." Nemchinov contended that the USSR's inherently more scientific social order already provided significant advantages over the chaos of a market economy and held all the prerequisites for bringing together science and policy making.⁹⁹

Soldiers of the State: "Catch Up and Overtake" and the Internationalization of Soviet Economic Thought

⁹⁷ RGANI f. 5 op. 35 d. 54 ll. 91-93.

⁹⁸ RGANI f. op. 35 d. 34 ll. 102- 104

⁹⁹ Ibid., 1-5.

The mobilization of economics as a “Cold War Science” in line with the “doctrine of peaceful co-existence” implied a rethinking of the place of the Soviet state and its economy vis-à-vis the West and other socialist states. While the Soviet Union was always supposed to “catch up and overtake” the West, political figures considered the economy as, fundamentally, an arsenal for the new society. Khrushchev’s revision of the Soviet project meant that the USSR accepted a new approach to international legitimacy associated with American global dominance: the economy would be the instrument through which great power status was projected rather than an auxiliary to military might.¹⁰⁰

On May 22, 1957, Khrushchev proclaimed that the USSR would catch up to the United States in meat and milk production by 1960, breaking the Stalinist taboo against comparing the USSR to its capitalist rivals.¹⁰¹ While some experts at the time believed that the USSR could accomplish this by 1975 at the earliest, Khrushchev dismissed these numbers as meaningless in the context of the USSR’s ability to mobilize its population and thus expand the productivity of labor. Mikoyan recalled that Khrushchev had always doubted data and instead believed that output could be changed through heroic acts of production.¹⁰² Indeed, Fedor Burlatsky recalled that during the drafting of the “Third Party Program,” professional economists had cautioned Khrushchev’s representative, Petr Pomerantsev, that it was inadvisable to promise to overtake the United States in agricultural and per capita industrial output by a fixed date; however, he rejected their advice. What

¹⁰⁰ See Adam Tooze, *The Deluge*, 3-35.

¹⁰¹ On the significance of taboos see Oleg Troyanovsky, “The Making of Soviet Foreign Policy,” in William Taubman (ed.), *Nikita Khrushchev* (New Haven, CT: Yale University Press, 2000), 209-242.

¹⁰² Taubman, *Khrushchev*, 305-7.

was more important in creating these goals was not actually reaching them but that they helped mobilize the population.¹⁰³

Yet, if Khrushchev regarded the new goals as purely political tools, the structure of the Marxist-Leninist state, which attempted to implement the Party's announced goals, meant that state policy reflected ideological goals, as did the actions and priorities of economic research and planning bodies. If the USSR was to beat the United States at its own game, it not only had to figure out the rules of the game but also how the other side played it. In a September 1956 note to Bulganin, the Institute of Economics explained that to fulfill "the main economic task" set by the party at the XXth Party Congress, to win the competition of the two systems, studies needed to be conducted "comparing the levels and prospects of the production of the most important types of goods per capita" in the USSR and the leading capitalist economies. This work had "the highest level of importance in light of the competition of the two systems." To fulfill these goals, institutes of the Academy of Sciences engaged in economic and social scientific research needed not only more literature on "both capitalist economies and the economies of the People's Democracies" but also accurate data with which to compare Soviet and Western performance.¹⁰⁴

In 1956, Gosplan's Institute for Scientific Research (NII) established a "sector for the competition of the two systems" to develop tools to measure the progress of the socioeconomic contest with the capitalist economies. The main problem this new team encountered was that despite a wealth of data on national incomes coming from the United

¹⁰³ Fedor Burlatsky, *Nikita Khrushchev i ego sovetniki: krasnye, chernye, belye* (Moscow: Eksmo Press, 2002), 80-83.

¹⁰⁴ ARAN f. 1877 op. 1 d. 1085 ll. 1-13.

States and Western Europe, none of these could be adapted to the conventions of Soviet accounting. National Income and Product Accounting, the basis of Gross Domestic Product, assumed services as value-added sectors whereas Soviet accounts did not.¹⁰⁵ By 1958, the institute acknowledged that despite the fact that overtaking the United States in “aggregate and later in per capita production” was vital to accomplishing the goals of the XXth Party Congress, the differing social structures and climatic conditions of the two countries made direct comparison of the economies impossible. Instead they suggested that planners pick one or two areas in which the USSR could conceivably compete with the United States and base their measurements on those.¹⁰⁶

Similar discussions were happening in IMEMO. Despite having a great number of statistics, economists had not produced a consensus on how to use them to predict the course of capitalism toward the “crisis” that would surely come. In 1958, A.I. Bechin, the institute’s deputy director and head of the section on “Imperialist Economies” (as well as a former student of Arzoumanian at the Institute of Economics), proposed a radical rereading of how the USSR should deal with this trove of information. While dismissing claims that Keynesian policy had eliminated the inevitability of capitalist crises, Bechin admitted that technological change had indeed transformed the capitalist system: the rate of mechanization meant that aggregate investment theories developed from the business cycle research so beloved by older generations of Soviet economists could no longer reliably predict future moments of overproduction associated with the Marxist theory of crisis.¹⁰⁷ Bechin drew on a potential solution to this problem of aggregate dates using what

¹⁰⁵ RGAE f. 99 op. 1 d. 668 ll. 20.

¹⁰⁶ RGAE f. 99 op. 1 d. 673 ll. 16-18.

¹⁰⁷ ARAN f. 1978 op. 1 d. 43 ll. 3-8.

he called “bourgeois econometrics.” Instead of measuring gross investments, he suggested paying more attention to “the relationship between the yearly return of a unit of production and the cost of capital needed to build it,” as was common in Western practice. While dismissing most of econometrics as “something we don’t often study and something that, for the most part, has little to offer,” Bechin admitted that “from the point of view of a Marxist-Leninist there is indeed something there” in this particular approach.¹⁰⁸ What Bechin was describing was the aforementioned “opportunity cost of capital.”

Tethering the Soviet revolutionary project to catching up and overtaking the West, and the United States in particular, thus allowed the USSR’s economic cadres to begin thinking about using the practical aspects of Western economics. At the XXth Party Congress, Khrushchev explicitly called for expanded cultural-scientific exchanges to improve relations with the United States and other Western powers and to increase the prestige of socialism. This shift formalized the end of the Stalinist “two camps” doctrine and ushered the USSR into political and scientific multilateral bodies.¹⁰⁹ In 1959, the Institute of Economics sent its first official institutional delegation to the United States. The mission approvingly noted that most American businessmen seemed to be interested in peace, but was disappointed that the majority of them believed that the USSR offered few opportunities for trade. The delegation was impressed by the rapid introduction of computers into economic research and the American graduate training system: the single PhD degree, they argued, offered a much more efficient and shorter form of training than the Soviet *Kandidat* and *Doktor* degrees.¹¹⁰

¹⁰⁸ Ibid. 10-11.

¹⁰⁹ Yale Richmond, *Cultural Exchange and the Cold War: Raising the Iron Curtain* (University Park: Pennsylvania State University Press, 2003).

¹¹⁰ ARAN f. 1877 op. 1 d. 1353 ll. 4-27

Multilateral contacts through the UN system offered a much more promising and interesting area of cooperation. In June 1956, in Geneva, UNESCO hosted a meeting between a small group of economists from both East and West; Aboltin and the director of the Institute of Economics, Diachenko, represented the USSR as they met with representatives from the United States, United Kingdom and Poland. There they agreed to hold a larger session in April 1957 in Vienna, as part of the World Economics Association conference. They agreed upon a theme, “The Level and Structure of National/Social Production and its Determining Factors,” and decided that all papers would be exchanged between representatives of the “capitalist” and “socialist” groups. Diachenko would organize contributing papers from the socialist bloc and the British economist Eric Robinson would organize contributions from capitalist economies.¹¹¹ This immediately produced both complications and opportunities. Neither the GDR nor the PRC could be invited officially through UNESCO channels because they were not recognized by the United Nations and thus were not UNESCO members. However, representatives of those countries could join the World Economics Association, which would then invite them as participants to the larger conference in Austria in 1957, which would host the East-West forum. Both UNESCO and the World Economics Association supported this solution as a means of incorporating the two states into the global scientific community.¹¹²

The negotiations with UNESCO testified to the role that East Europeans were rapidly taking on as go-betweens in bringing Soviet economists into international organizations. The Poles’ leading role in this effort was showcased when the conference of socialist economists that would prepare materials for the Vienna forum took place in

¹¹¹ RGANI f. 5 op. 35 d. 37 ll. 16-18.

¹¹² Ibid, L. 19-21.

Warsaw in October 1956. In its report, the department of Science, Culture, and Higher Education hinted that the organization of the conference was the initiative of the Polish representative, Tadeusz Lychowski.¹¹³ Lychowski was an ideal intermediary, as he was not a Communist, nor did he ever become one. In fact, he had started his career as a loyalist for the London government working in the early wartime United Nations system as the Polish representative to the UN Economic and Social Council (ECOSOC). From there, he made his way into the Communist Polish bureaucracy, where he became an advisor to the Ministry of Foreign Trade and the Ministry of International Affairs. In 1957, he entered academia, becoming Poland's preeminent expert on East-West trade, penning tracts on possible areas of economic collaboration between different types of social systems.¹¹⁴

Though the role Soviet economists played in the United Nations system and their relationship to their East European colleagues is the subject of Chapter V, the events described above demonstrate that Khrushchev's opening facilitated new opportunities and networks for the dissemination of knowledge and economic norms throughout the Eastern Bloc.

Value: Soviet, Economic and Otherwise

If the new imperative for Soviet economics was to bring theory into practice in order to prove the superiority of socialism, no consensus on what the theory of economic value entailed yet existed. The rejection of Stalin's "transformed law of value" in the USSR had left a hole in the central question of economic sciences: what determines the value of

¹¹³ Ibid, L 34.

¹¹⁴ "Tadeusz Lychowski (Bernstein)" in the *Online Polish Encyclopedia* <http://www.ipsb.nina.gov.pl/index.php/a/tadeusz-lychowski-bornstein> [accessed 09/11/2015]. I thank professor Malgorzata Mazurek for her help in explaining Lychowski's significance.

a given thing. What would fill the void? Marx had left a general formula for understanding the components of commodity value under capitalism, which was generally interpreted in the formula “C+V+M,” where C represented constant capital (or past labor embodied in machinery, land, and raw materials), V represented variable capital (as represented in the wage bill), and M represented surplus value (or the markup taken by the capitalist). Under conditions of socialism, M was understood to be a price markup that reflected the “social cost” of production. The devil in the details was that, in practice, the social cost was, by default, a decision of the state. Thus, when discussing the formation of prices that were supposed to align with value and reflect the social cost (rather than the exploitative markup of the capitalist in a market system), the “M” term was taken as given by the Soviet Union’s economists. Because the USSR was seen to be moving toward Communism, thus gradually erasing the line between use value and price, discussing the best way to evaluate M was inherently a political act as it would mean using a scientific theory to determine the course of state action.¹¹⁵

The debate over value had kicked into gear in the late forties and early fifties when Nemchinov, Strumilin, and Novozhilov sparred over the role of mathematical calculation, statistics, and numeraires (a good or currency that is used as a unit of account) in understanding value. With the official rejection of Stalin’s *Economic Problems* in 1956, the debate began again in earnest. However, unlike in the 1940s, the couching of the Cold War in direct, socio-economic terms led to a gradual shift in which the debate not only addressed the function of the Soviet state in the planning process, but extended to the Soviet Union’s position in both the “Socialist World System” and the world at large. Following

¹¹⁵ Morris Bornstein, “The Soviet Price Reform Discussion,” *Quarterly Journal of Economics* vol. 78 no. 1 (February 1964), 20-21.

the XXth Party Congress and the Hungarian and Polish uprisings, a debate emerged across the Eastern Bloc about the state's proper role in determining prices and directing planning. The East German and Polish debates of 1956, in particular, began to flow back into the USSR, prompting anxieties in conservative economic cadres and providing new challengers with ammunition to rethink economics.¹¹⁶

In June 1956, the Party organization of the Institute of Economics sent a report to the Central Committee describing its discussions in response to the criticism it had received at the XXth Party Congress. It highlighted the lack of a proper theoretical basis in economic discussions, which it blamed on the cult of Stalin, noting that after the publication of *The Economic Problems of Socialism in the USSR*, the institute only engaged in “highly abstract discussions” which “forced economic theory to be completely disassociated from reality.” It also complained that *The Problems of Economics* would not publish anything that did not simply regurgitate dogma, and especially ignored writing about the lack of access to statistics. The report attacked the weak connections between the state and social sciences and the lack of information provided to the institute, explaining that “it is not normal that economists must find out about the important questions of economics from the Central Committee's press.” The party collective asked that “economists be granted expert information and data on the decisions and development of the national economy,” and urged the party's policy makers to engage with economists for their specialist knowledge. Finally, it suggested that to improve the situation, Soviet economics should be more open to new ideas, including foreign research both from capitalist and socialist states that would

¹¹⁶ Andre Steiner, *Die DDR Wirtschaft Reform der Sechziger Jahre* (Oldenburg: Akademieverlag, 1999), 49-60; John M. Montias, *Central Planning in Poland* (Westport, CT: Greenwood Press, 1963), 272-324.

be published in a special journal.¹¹⁷

The discussion in June did not quiet complaints against *Problems of Economics*. In November of that year, M.V. Breev, the chairman of the department of economic planning at MGU, wrote to Suslov, complaining that both *Kommunist* and *Problems of Economics* had rejected his article on the problem of “Commodity Production and the Question of Value,” which he admitted “strayed from the accepted point of view.” *Kommunist* had suggested that the work was too technical and speculative for the journal’s general readership and proposed that it be sent to *Questions*. Yet the article remained unpublished for reasons Breev suspected had to do with the unorthodox and innovative nature of his work. Breev invoked Suslov’s own speech at the XXth Party Congress, which had castigated economists for “not understanding the role of value in production.” Breev argued that economists needed “to ask questions in new ways.” Suslov’s office responded positively to the request, noting that Breev’s work was both “interesting” and “deserved greater attention” from the field. Breev and the editorial staff of *Questions of Economics* were called in for “consultation” with the Central Committee, after which all parties agreed that Breev’s article would enter review at *Questions* and be published.¹¹⁸ As Breev’s experience encapsulates, after 1956, the great defender of Soviet ideological orthodoxy would actively support heterodox economic thought in the USSR due to its potential for addressing the problems of economic research highlighted at the XXth Party Congress.

Breev’s work, though in hindsight not innovative in its own right, was one of many attempts to break the mold of Soviet economics. Breev’s department at MGU became a breeding ground for many of the younger, more radical economic thinkers who emerged in

¹¹⁷ RGANI f. 5 o. 35 d. 24, ll. 145- 157.

¹¹⁸ RGANI f. 5 o. 35 d. 37 ll. 46-7.

the 1960s. Indeed, Aron Katsenelinboigen, a founding member of the cohort of economists who would develop a mathematical approach to socialist planning that will be discussed below (and subsequently a professor at the University of Pennsylvania), remembered that Breev was instrumental in establishing a small, elite group at Moscow State University to study mathematical methods in economics. Like Breev, Nemchinov began to lobby Khrushchev to release mathematical economic literature dating to the 1920s that had been banned “for right deviationism.”¹¹⁹

The debate over value in a socialist society began in earnest in the fall of 1956. In November, the long-silent Strumilin published his article “On the Question of Accounting for Cost under Socialism” in *Problems of Economics*, which postulated the existence of profit and excess value under socialism as a separate category from capitalist profit, since the elimination of class contradictions meant that true labor values could be deduced as a central element of price formation and thus profitability.¹²⁰ Strumilin in essence restated his 1951 position, but now found it safe to publish in the pages of *Problems*. One month later, *Problems of Economics* featured a discussion of Yakov Kronrod’s paper “The Role of Prices and Price Formation under Socialism,” which recast his earlier—then heretical—remarks on the relationship of heavy and light industry into the more neutral language of price setting. If heavy industry had less profitability—defined by the ratio of C+V to the state-determined M—than light industry, then one sector was subsidizing the other. Kronrod argued that this created problems for the ruble as an accurate unit of account since

¹¹⁹ Aron Katsenelinboigen, *Soviet Economic Thought*, 54-6.

¹²⁰ S. Strumilin, “Voprosy ob uchety stoimosti produktstie” in *Voprosy Ekonomiki* no. 10 (November 1956), 96- 113.

it purchased more “labor hours” in one industry than another.¹²¹ Kronrod had effectively translated his earlier concept of elasticity between sectors, which implied that financial flows, and thus, institutions, needed to be reorganized, into the abstract language of value. He could now claim to be making a more politically neutral intervention into the question of properly aligning purchasing power with the value of commodities.

Kronrod’s article reflected the position of the economists who would become known as the *Tovarniks*: literally, the commodity school. These theorists—including Kronrod, finance theorist A.A. Belkin, and possibly Strumilin—believed that the economy should be organized on the basis of commodity exchange to the largest extent possible. This meant the introduction of a theory of money as a mediator for commodity exchange under socialism, a task to which Kronrod would dedicate his career. Extending his elasticity analysis from 1955, Kronrod argued that the Soviet economy’s problem was that the ruble was not acting as a socialist “universal equivalent,” since the implicit subsidy to heavy industry meant that labor hours did not have equivalence across different sectors. The fundamental belief belying this analysis held that socialism existed because of the state ownership of property and as a result, commodity production, if aligned with labor value, would automatically correspond to the “laws of socialist development.” For many contemporary observers, this circular reasoning obfuscated the *Tovarnik’s* true conclusion: that a developed socialist society would move beyond planning toward a socialist market economy like Yugoslavia’s.¹²²

¹²¹ Y. Kronrad. “Zakon stoimosti i tseno-obrazovanie v SSSR” in *Voprosy Ekonomiki* no.2 (February 1957), 79- 93.

¹²² Voenkov, “Y.A. Kronrod I delema soveitskii polit-ekonomiki: K sto-letiiu ego den’ rozhdenie” *Terra ekonomika* vol 12. no. 2, (2012): 54-65; Iu. P. Bokarev, “Aleksandr Mikhailovich Birman i ego model’ budushchego,” 24-8.

The contrast between the *Tovarniki* and other camps of reformism was already evident in 1957. Responding to Kronrod's article, his once and future rival, Nemchinov, praised Kronrod for tackling the question of the relationship between price and value. However, he lamented that Kronrod had not taken the next step by postulating a correct proportion that would allow for the use of price as a lever for planning.¹²³ For Nemchinov, this question was vital, concerned as he was with making sure development was proportional and goal-directed. Kronrod, on the other hand, believed that development need not be directed so long as the financial flows of the economy were aligned with the *a priori* laws of socialism. Despite, or perhaps because of his more orthodox Marxism, he was far more skeptical of the state's ability to direct society, even with better economic modelling techniques.

Leonid Gatovsky moderated the exchange between the two reformist theorists. He warned that the papers expressed just one position and would start a much more wide-ranging discussion in the Institute on the matter of prices and value.¹²⁴ Gatovsky became the flag-bearer of Soviet conservative economic thinking. As he explained in a 1957 *Kommunist* article, the law of value was part of socialist planning, yet "could not play the role it plays under capitalism, as collectively owned property means that management has other priorities than to maintain monopoly prices." The state could manipulate the law of value to its needs to build socialism by giving preference to some industries over others despite their unprofitability, if they corresponded to other necessities, such as technical

¹²³ Obsuzhdenie o zakone stoiimosti i tseno-obrazhavanje v SSR v institute ekonomiki akademii nauk SSR" in *Voprosy ekonomiki*, no. 2 (February 1957), 73.

¹²⁴ Ibid. 72.

progress.¹²⁵ Gatovsky's article was a rearguard maneuver against the increasingly loud voices that were beginning to call for an open discussion on the role of value and pricing in a socialist economy. In March 1957, the Institute of Economics proposed a conference to study problems of value that would deal with issues involving "commodity production and circulation, the setting of prices, and the use of price mechanisms to improve the construction of socialism." The conference would focus on "strengthening cost accounting, lowering the cost of production, and increasing the profitability of enterprises."¹²⁶ The conference materials, which were printed as a volume in 1959, featured the most heated combat between Soviet economists since 1951. In his introduction, Ostrovitianov, on one hand, attacked Stalin's "cult of personality for stifling the discussion of value," but on the other, condemned "excesses" that some had taken in the wake of the XXth Party Congress. Value could not be separated from its roots in property relations and, because of this, the "law of value" could not operate in the USSR or in any other socialist state in the same unconstrained manner that it did in a market economy.¹²⁷

Conservatives were also anxious about the influence of reform debates in the "People's Republics" on Soviet researchers. In his paper at the aforementioned conference, Gatovsky expressed horror that, at a similar conference in the GDR, "Prof. Berenz and Benary attacked central planning by arguing that only the law of value should regulate the economy," and that "instead of the state planning [Berenz and Benary] proposed a 'decentralized' system that worked through an investment bank regulated by the

¹²⁵ L.M. Gatovsky, "Ob ispol'zovanii zakona stoimosti v sotsialisticheskom khoziaistve" *Kommunist* no. 9, (September 1957): 40-53.

¹²⁶ RGANI f. 5 op. 35 d. 54 ll. 53.

¹²⁷ K.V. Ostrovitianov, "Tovarnoe proizvodstvo i ego osobnosti v usloviakh sotsializma" in Yakov Kronrod (ed.), *Zakon stoimosti: i ego ispol'zovaniia v narodnom khoziaistve SSR* (Moscow: Gospolizdat, 1959), 7-30.

speculative laws of supply and demand.” Another foreign economist who came under attack was Wlodzimierz Brus, a Polish economist who, Gatovsky argued, “while not eliminating central planning, would reduce it to a passive system” by forcing prices to be regulated by supply and demand conditions. Gatovsky proclaimed these ideas anti-socialist: “planning and the fluctuations of the market are incompatible.”¹²⁸ However, while the old guard tried to adapt orthodoxy to the new environment, they found themselves challenged at the 1957 conference. L.A. Vaag of the Moscow Energy Institute attacked the economics profession for using abstract theoretical language to cover up concrete pricing inefficiencies that drove down returns on capital investment.¹²⁹ Kantorovich critiqued the papers presented for ignoring the work being done in mathematics to set more effective price incentives for Soviet industry.¹³⁰ The economic debates of 1947 had reignited, but the proponents of alternative Soviet economics were no longer alone: they now formed part of a larger network across the socialist world that was actively debating the applicability of new economic theories to planned economies.

The growing dominance of new economic thinking in Soviet academia became evident by 1958. That year, a second conference on the law of value completely rejected Stalin’s theory that commodity production only existed in socialism by virtue of the fact that the state sector did not encompass the kolkhoz or cooperative sector. Rather, the participants concluded that commodity production continued to exist even within the state sector itself because of the existence of “economic relationships between the branches of

¹²⁸ L.M. Gatovsky, “Rol’ zakona stoimosti v narodnom khoziaistve SSR” in Yakov Kronrod (ed.), *Zakon stoimosti: i ego ispol’zovaniia v narodnom khoziaistve SSR* (Moscow: Gospolizdat, 1959), 31-64.

¹²⁹ L.A. Vaag “Vystupleniia” in *Zakon stoimosti: i ego ispol’zovaniia v narodnom khoziaistve SSR* ed. Yakov Kronrod (Moscow: Gospolizdat, 1959), 421-426.

¹³⁰ L.V. Kantorovich “Vystupleniia” in *Zakon stoimosti: i ego ispol’zovaniia v narodnom khoziaistve SSR* ed. Yakov Kronrod (Moscow: Gospolizdat, 1959), 289-398.

the state economy.” This meant that value judgment, and thus price relationships, still governed the “commanding heights” of state-owned industry. One paper at that conference called Stalinist theories of “pure socialism” an “unfounded abstract conception which only leads to confusion” because they ignored “the division of labor” that existed even within the socialist state sector of the economy. A socialist theory of value needed to strive to create a means by which to compare various kinds of labor hours across sectors with one numeraire that would then guide the formation of prices, leading to a rationalized distribution of resources.¹³¹

But how to achieve such a goal? Many of the conference participants argued that the system of pricing in the USSR had to be reorganized on the basis of an average cost of production across various branches of the economy. Under this conception of “even prices,” all goods would be priced based an average cost of production. Having such a reference point would allow the identification of the best-run farms and enterprises due to their above-average profitability. Z.V. Atlas of the Moscow Financial Academy and L.A. Vaag of the Moscow Energy Institute made the most argument for profitability’s role in comparing Socialist value most directly. Atlas approached this question historically. The problem of economic analysis in the USSR was that practitioners did not distinguish between the “law of value’s function in early capitalism, dominated by its small firms, and advanced capitalism characterized by complex divisions of labor and centralized, monopoly, production which is closer to socialism.” This analysis implied that the socialist order must eliminate such profit-maximizing practices as monopoly pricing and financial speculation but that it should not destroy other, legitimate forms of profitability associated

¹³¹ F.P. Koshelov, “Chisty sotsializm- nobosnovanaya abstraktsia vedushie k zabluzhdeniiu” in *Zakon stoimosti i ego rol’ pri sotsializme* ed. N.A. Tsagalov (Moscow: Gospolizdat, 1959).

with large, hierarchical production. This confusion of categories created a system of planning that did not weigh profitability sufficiently vis-à-vis other performance indicators. Initially, Atlas argued, the USSR successfully overcame the resulting inefficiencies, due to “socialist enthusiasm” and the relatively primitive state of the early Soviet economy which meant any improvement would yield results. However, the government did not undertake long-term measures that would establish the “stimulation of labor through financial resources,” leading to a situation in which “the budget did not play a role in constraining enterprises.” This resulted not only in the over-accumulation and hoarding of both material and financial resources, but also losses to the state budget. Thus, the further the USSR’s economy advanced, the more it would have to rely on profit as the central and sole measure of industrial performance.¹³²

Vaag echoed these opinions, suggesting that economists consider the work done in engineering on returns on capital investment. In practice, engineers not only looked at the cheapest option (defined by cost of production), but also at returns on investments over a given period versus other potential uses of capital: in other words, setting a net present value with an opportunity cost of capital in mind. Vaag translated this idea into the language of Marxism by arguing that the opportunity cost implied in his analysis measured the labor costs of a project in a way that was not limited to the individual enterprise or branch, but rather to society as a whole. Vaag meant that any investment in a specific project needed to be compared to the return of an equivalent outlay in the entire economy. Thus, he argued that “it [was] time to abandon the idea that ‘the cost of production’ was only a category of

¹³² Z.V. Atlas, “Zakon stoimosti i problemy rentabel’nosti i khozrazshota pri sotsializme” in *Zakon stoimosti i ego rol’ pri sotsializme* ed. N.A. Tsagolov (Moscow: Gospolizdat, 1959), 269-286.

capitalism.”¹³³

Vaag’s ideas flowed naturally from his specialization in the economics of hydroelectric dams which, as discussed earlier, provide the perfect case study for the cost of capital. Vaag would formalize this theory of project evaluation in his work as a consultant for the State Committee for Science and Technology (GKNT), which resulted in the issuance of that body’s “general guidelines for the evaluation of technological-economic costs in energy” in 1959. The guidelines contained an explicit eight-year time frame for the return on any capital investment that would serve as a single discount rate for the sector.¹³⁴

Vaag and Atlas presented a critique similar to that of the Tovarniki. They identified the Soviet economy’s critical problem as the dysfunction of its financial system due to the fact that prices did not reflect true costs. However, the “Price of Production School” differed by focusing on the cost of capital rather than that of labor, which they justified by arguing that capital reflected the cost of machinery and thus formed part of labor’s productivity.¹³⁵

Vaag and Atlas’ arguments were opposed by A.B. Bachurin, who was a member of the Ministry of Finance’s in-house research institute and later became Gosplan’s point man on economic reform. Speaking as representative of the Ministry of Finance, Bachurin noted that “practical workers engaged in price setting cannot agree that pricing must be based on costs when some organizations have worse productive conditions than others.” This

¹³³ L.A. Vaag, “Praktiki proektirovskiki davno operiruiut katagoriej cheny proizvodstva, kotoryu teoretiki ekonomisty prodolzhaiut otvergat” in *Zakon stoimosti i ego rol’ pri sotsializme* ed. N.A. Tsagalov (Moscow: Gospolizdat, 1959), 309-316.

¹³⁴ L.A. Vaag and S.N. Zakharov, *Metody ekonomicheskoi ochenki v energetike* (Moscow: Gosudarstvennoe energicheskoe izdatel’stvo, 1962).

¹³⁵ Bornstein, “The Soviet Price Reform Discussion,” 30-36.

informed his doubts that profitability would serve as the most reliable indicator for the effective use of state investments since some technology-intensive industries were, by nature, not profitable, but had a high social value due to their use of the latest productive techniques. He blamed the tendency of some economists to think the opposite on “mechanically applying Marx’s statements about a capitalist economy to socialist production.” Bachurin instead advocated a mix of indicators amongst which profitability would be only one of many targets.¹³⁶

Building Whose Communism?: The New Mathematical Economics

While conservatives like Gatovsky and Bachurin were concerned about Kronrod’s ideas of value through labor or Atlas’s and Vaag’s desire to factor in the opportunity cost of capital in production, these disputes had not prepared them for the thunderbolt that was coming: a school of economic theory that emphasized not only the cost of capital but also argued for the application of Western-style econometric analysis to the Soviet economy as a scientific criterion for making decisions on the distribution of goods. What would be called “mathematical economics” challenged the way in which the USSR’s economists juxtaposed socialism and capitalism by arguing that mathematics could serve as an ideologically neutral means of optimizing Soviet planning. Mathematical economics took the Cold War project to conclusion, using Western-inspired econometric analysis and deploying it to analyze the Soviet economy from an ostensibly scientific, constructive position. This meant that economics did not necessarily imply a liberal challenge to the USSR’s hierarchical system of governance; in fact, economists used their “neutral language” to prove the superiority of the Soviet system. Indeed, mathematical economics,

¹³⁶ A.V. Bachurin, “Zakon stoimosti i voprosy chenobrazovania” in *Zakon stoimosti i ego rol’ pri sotsializme* ed. N.A. Tsagalov (Moscow: Gospolizdat, 1959), 265-267.

particularly in its early guises, offered a much more hierarchical, state-driven vision of a reformed economy than some of its more Marxism-grounded reformist counterparts.

The emergence of mathematical economics not only as a set of techniques but also as a separate school of economic thought sits at the intersection of a long history of Russian and Soviet economic thinking, international exchange, and Cold War mobilization. Kantorovich and Novozhilov's work in the 1940s developed many of the school's foundational ideas, but its research agenda was controversial and thus largely suppressed. Significantly, Soviet research into mathematical economics was growing in parallel to (rather than behind) its Western counterparts. For example the leap from economic statistics to econometrics— whose key new assumption was that risks and future events can be understood as a matter of probability and thus analyzed deductively (the “ergodic theory” most famously described by Paul Samuelson), drew heavily on the work of the “Moscow School” of statistics.¹³⁷ Consequently, in 1953, the newly formed International Econometric Society sent a letter to the Soviet Embassy in Stockholm inviting Soviet economists to its 1954 meeting in Uppsala to discuss how international exchanges of data could be organized and standardized. In a mark of the extent to which the Soviet economic community had become isolated from its global counterparts, the society asked if A.A. Konus, a leading Soviet economic statistician of the 1920s, was still alive. The embassy forwarded the letter to the Institute of Economics, which responded that the invitation had to be rejected, since “the Soviet Union did not recognize the positions of the econometric school.”¹³⁸

¹³⁷ Paul Davidson, *Post-Keynesian Macro-Economic Theory: A Foundation for Successful Economic Policies for the Twenty-First Century* (Northampton, MA: Edward Elgar, 2011), 38-9.

¹³⁸ RGANI f. 5 op. 17 d. 446 ll. 15-16.

However, by the late 1950s, attitudes surrounding econometrics gradually had begun to soften. Bechin's 1958 assessment of the "usefulness" of some Western economics at IMEMO was affirmed by *Questions of Economics*, which that same year had published an article by I. Blumin and V. Shlapentokh arguing that econometrics should be interpreted as a heterogeneous movement and that Western theorists could present interesting contributions to the Soviet profession. The article explained that the academics in Western universities formed a subgroup of the bourgeoisie that believed that its work was objective and thus their output could be read as technocratic and not value-laden. Blumin and Shlapentokh were most interested in Wassily Leontief's input-output model of the American economy. Leontief, an émigré who left the USSR in the 1920s due to his opposition to Party attacks on academic autonomy, would become not only a major influence on Soviet planning techniques but also an interlocutor between East and West.¹³⁹

In addition to Western literature, influences from Eastern Europe began to flow into the USSR. The most important Eastern European to influence Soviet mathematical economists was Poland's Oscar Lange. Lange, who was born in Poland and later became a die-hard Communist, was also a skilled mathematician and economist who quickly took up the neoclassical economics which grew out of the work of late nineteenth-century economists like Swiss engineer Leon Walras. Walras has been associated with an anti-Marxist tradition stemming from Bohem-Bawerk's critique of Marx's labor theory of value and the subsequent invention of marginal utility theory. However, Walras's major contribution was not a critique of Marxism but the introduction of the "auctioneer function" and the supply and demand curves. The auctioneer solved the pesky problem of

¹³⁹ I. Blumin and V. Shlapentokh. "Ob ekonometricheskom napravlenii v burzhuaznoi politicheskoi ekonomiki" *Voprosy Ekonomiki* no. 11 (November 1958): 79-83.

proving the existence of a supply and demand equilibrium and thus the price level by acting as a black box that allowed prices to reach the intersection of the supply and demand curves without the details of real, money prices getting in the way.¹⁴⁰ As the “auctioneer” was a neutral agent, he did not need to be a market: for many European socialists, he could be a central planner sitting at the top of a hierarchy that absorbed information and set rate targets which would automatically direct the preferences of units below thereby eliminating the need for direct planning.¹⁴¹

In 1934, Lange, along with many other European economists, came to the University of Chicago, where he not only worked with the Cowles Foundation, which in its Yale incarnation would become the leading econometric research organization in the world (and play an important role in this narrative), but also taught both Milton Friedman and Hyman Minsky, economic luminaries of the American right and left, respectively. By 1936, he had entered a debate with Hayek—the infamous “socialist calculation debate”—in which he proposed that a central planner armed with the correct information and technology could solve equilibrium equations more efficiently than a “anarchic” market. When WWII broke out, he became an American citizen and a consultant to the State Department. However, in 1945, when the Communist government came to power in Poland, he renounced his citizenship and became Poland’s ambassador to the United States and, later, the United Nations. Soon afterwards, he returned to academic life in Poland, where he began expanding his ideas into the dimensions of cybernetics—with the computer

¹⁴⁰ In reality, “the auctioneer” is an analogue to “Laplace’s Demon,” a concept in thermodynamics—Walras’s first field—that allowed the laws of thermodynamics to function without precise understanding of the conservation of energy. This is explored at length in Philip Mirowski’s *More Heat than Light: Economics as Social Physics, Physics as Nature’s Economics* (Cambridge: Cambridge University Press, 1989).

¹⁴¹ Johanna Bockman, *Markets in the Name of Socialism: The Left Wing Origins of Neoliberalism* (Stanford: Stanford University Press, 2011), 3-12.

now taking the place of the auctioneer in the idealized, planned economy.¹⁴² Lange's influence on young Soviet practitioners cannot be overstated. Kantorovich, the godfather of Soviet mathematical economics, acknowledged that Lange was his main influence during his transition from applied mathematics to economics.¹⁴³

Scholars often date the birth of Soviet Mathematical Economics as a full-fledged “school” to the 1959 publication of Kantorovich's *The Best Use of Economic Resources*. The book had undergone many revisions since Kantorovich had published his original pamphlet in 1948. With Nemchinov's sponsorship, the book was finally published a decade after it had been conceived. It hit the profession like a storm and its radical methodological propositions provoked widespread controversy. Even Nemchinov, who wrote the introduction, admitted that some similarities existed between Kantorovich's work and Western neoclassical economics. Nemchinov defended his colleague, stating that Kantorovich's approach to value “related to objectively determined valuations, not to the categories of demand but to the labor theory of value.” However, he conceded “that while disassociating himself from the concepts of bourgeois economists, he [Kantorovich] nevertheless introduces into his structure, to a certain degree, a dependence on subjectively determined valuations of demand, though the role which this author assigns to demand remains unclear.”¹⁴⁴

Nemchinov was correct. A specter was haunting Kantorovich's work: the specter of the demand curve—the key innovation of neo-classical economics. Kantorovich's work

¹⁴² Kowalik Tadeusz, “Lange, Oskar Ryszard (1904–1965),” in *The Palgrave Dictionary of Economics Online* eds. Steven N. Durlauf and Lawrence E. Blume (London: Palgrave-MacMillan, 2008) [http://www.dictionaryofeconomics.com/article?id=pde2008_L000024] accessed 10/8/15.

¹⁴³ Leonid Kantorovich. “O Oskare Lange,” in *Leonid Kantorovich: chelovek i pesania tom. II* (Novosibirsk: Gran, 2004), 229-230.

¹⁴⁴ L.V. Kantorovich. *The Best Use of Economic Resources* (Cambridge, MA: Harvard University Press, 1965), xiv-xv.

provided economists in both East and West with a powerful tool, one which would later win him the Nobel Prize: linear programming, an approach to determining the optimal distribution of resources by assigning a set of restricted algebraic conditions. In Western economics, particularly as practiced at MIT, linear programming models (derived independently) became a key step toward the of general equilibrium theory (though the Arrow-Debreu general equilibrium model would supersede linear programming with fixed-point style topographic equations in proving these models). Without it, neo-Keynesian models could not unite Keynes's short run disturbances with the with long run frictionless auction mechanisms of Walras's neoclassical equilibrium theory.¹⁴⁵

Kantorovich's formulation of the application of linear programming, however, did not explicitly mention the auction mechanism—and thus demand schedule—as economics in the USSR could not yet openly acknowledge that a “subjective preference” rather than “objective” labor determined value. Kantorovich tried to solve the problem by sneaking the demand function in through the back door, through “shadow pricing” (expressed through LaGrange Multipliers), which he referred to as “objectively determined valuations.” These would determine the price of a commodity (including labor) based on its scarcity in relation to the needs of the plan. Thus, Kantorovich snuck in the marginalist argument that certain goods could have a lower “use value” but higher “marginal value” because producing additional units of such a good (or its substitute) would fetch a higher price due to its scarcity relative to the demand for its use. This clearly was skirting close to

¹⁴⁵ Philip Mirowski, *Machine Dreams*, 220-231; The classic (if very dated) text on linear programming in the West was written by the founders of the American neo-Keynesian tradition associated with MIT, Robert Dorfman, Paul Samuelson, and Robert Solow, *Linear Programming and Economic Analysis* (McGraw Hill Books: New York, 1958). Like their Soviet counterparts, American linear programming was a Cold War project as testified by the Dorfman, Samuelson, and Solow book being published in a series commissioned by the RAND Corporation.

replacing Marx's classical "labor theory of value" with marginal utility. Novozhilov introduced a weaker version of this analysis in his *Applications of Mathematics in Economic Research*, published that same year, which maintained labor as a numeraire rather than as a commodity.¹⁴⁶

Though Kantorovich took great pains avoid an explicitly politically message, his book came at an important political moment. 1959 was a watershed for Khrushchev. The January 1959 XXIst Party Congress, labeled "extraordinary" because it was not regularly scheduled, solidified Khrushchev's position as sole head of the party after the elimination of his rivals in 1957. It was also unusual because it issued a Seven-Year Plan, rather than the standard Five-Year Plan. At the Congress, Khrushchev announced that the USSR was entering a new period of "actively constructing the basis of a Communist society." In practical terms, "the building of a technical basis for a Communist society" meant "fulfilling the historical task of catching up with and overtaking the advanced capitalist economies" in order to win the peaceful competition of the two systems. Khrushchev defined catching up and overtaking as "the main task" of the Soviet economy in the Seven-Year Plan.¹⁴⁷

On the fiscal side, this meant that the Seven-Year Plan would have "as much capital invested as all the previous years of Soviet power combined" to expand housing and new industrial construction and to move away from the manual labor that still characterized much of Soviet industrial practice. This work required a careful approach to the management of financial resources in order "to avoid what economists called

¹⁴⁶ Bornstein, "The Soviet Price Reform Discussion," 36-45.

¹⁴⁷ *XXI S"ezd KPSS: Stenographicheskii Otchet Tom I* (Moscow: Gospolizdat, 1959), 12-15

disproportion.”¹⁴⁸ In his speech, Nikolai Kuzminin, the chair of Gosplan, noted that “while the USSR has many people employed as economists and more than enough economic research institutes,” “academic economists still stand outside the realm of practical questions,” which he believed constituted a problem for academic research.¹⁴⁹

In response to the Congress, the Institute of Economics began working with Gosplan on a long-term program for economic development that would run from 1959 to 1975. The Institute would attempt to address how new, more intensive conditions could be managed through cost accounting and the “labor stimulus” it provided. The research plan also suggested the expansion of horizontal ties between enterprises using liquid funds.¹⁵⁰ These latter propositions allowed for the use of bank-issued credit financing and profitability measures at an enterprise level. The 1959 proposal thus contained all the common elements of a program that all camps of reformist economics would pursue up until the final years of *perestroika*.

In March 1959, a special joint meeting of the Collegium of Gosplan, the Presidium of the Academy of Sciences, and the Section on Law, Philosophy, and Economics began discussing the problems of economic research related to the issues that had emerged at the Congress. A commission consisting of members of the Institutes, TsSU, Gosplan, the State Commission on Science and Technology (GKNT), and the Commission on Cultural Ties with Foreign Governments was formed to discuss the question on a regular basis. At the March meeting, Kuzminin observed that the “main task of economic research was to increase the productivity of labor in all sectors and regions of the USSR.” He emphasized

¹⁴⁸ Ibid., 46.

¹⁴⁹ *XXI S"ezd KPSS: Stenographicheskii Otchet Tom II* (Moscow: Gospolizdat, 1959), 206-207.

¹⁵⁰ ARAN F. 1877 O. 1 D 1380 L. 62-63.

the need for more research into “the interrelation between the development of metallurgical and productive industries, the circulation of goods and money, the international socialist division of labor, and aid to developing countries.” These interdependencies, he admitted, were the source of “many unanswered questions in the practice of state planning that require more academic research.” Furthermore, he suggested that economics move away from the fields of law and philosophy in the Academy of Science system and instead be coordinated through a freestanding “Section,” which would remain in close contact with Gosplan and work toward making economics an applied science.¹⁵¹

Nemchinov, speaking as the head of the section of Law, Philosophy, and Economics made a deeper epistemological point: “The time has come,” he declared, “for economics to become an exact science that gives not only qualitative but also quantitative assessment of phenomena.” By this, he meant the introduction of mathematical methods and increased use of modern computing technology. Nemchinov met with opposition from Varga, who represented the older school and argued that mathematics, though a useful tool, could not offer much to the political-economic foundations of economic research. The Soviet version of the “Measurement without Theory” debate had reignited.¹⁵²

Nemchinov tried to resolve the debate between the old-style “Political Economy” and the new “Mathematical Economics” to the mutual satisfaction of both camps in a 1959 *Questions of Economics* article in which he proposed a division of labor. Mathematical economics would pursue applications necessary to manage the vast capital expenditures of the Seven-Year Plan. Political Economy, on the other hand, would treat meta-questions of

¹⁵¹ RGANI f. 5 o. 35 d. 115 ll. 12-13.

¹⁵² Ibid., 13-15.

the trajectory and historical stages of the construction of Communism.¹⁵³ Although Nemchinov pursued compromise, his article accepted a disconnect between Political Economy and Mathematical Economics. This division hardened when the USSR held its first national meeting on the use of mathematical methods in planning and economics on April 4-8, 1960 which would form the nucleus of researchers working on the development of mathematical economics in the USSR.¹⁵⁴

The split between the Political Economists and the Mathematical Economists became further formalized in 1963, when, with the support of Arzoumanian, who by then had been promoted to chairman of the freestanding Section on Economics of the Academy of Sciences, Nemchinov elevated the status of his laboratory for economic-mathematical methods to an independent institute: the Central Economic Mathematical Institute (CEMI).¹⁵⁵ The ailing Nemchinov appointed Nikolai Fedorenko, a specialist in oil and gas economics, as his deputy and anointed successor. This appointment rested less on Fedorenko's distinguishing qualities as an economist than on his political savvy: he would be able to defend the institute effectively. Fedorenko proved an extremely effective and, at times, ruthless political operator who would assume Arzoumanian's position as the head of the Section on Economics after the latter's death.¹⁵⁶

While most of his prodigious publishing in the late 1960s and 1970s was ghostwritten by his CEMI colleagues, Fedorenko proved a brilliant publicist and organizer. Already in 1964 CEMI began formulating a project of moving past the "cost of production"

¹⁵³ V.S. Nemchinov, "Sovremennye problemy sovetskoi nauki" *Voprosy Ekonomiki* no.4 (April 1959), 18-34.

¹⁵⁴ RGANI F. 5 O. 35 D. 135 L. 1-2; S.O. Kalendizhan, *O razvitii ekonomiko matematicheskikh issledovaniy v 60e gody* (Moscow: CEMI 1990), 5-10.

¹⁵⁵ N.P. Fedorenko, *Vospomeniia proshloe, zagladevaiu v budushchee* (Moscow: Nauka, 1999), 143-145.

¹⁵⁶ Sutela, *Soviet Economic Thought*, 36-40.

problems that had dominated the debates of the late 1950s, instead insisting that the aim of economic theory, and thus economic reform, should be to find “optimal solutions” to the organization of industrial practice in an advanced economy.¹⁵⁷ Due to this focus, CEMI’s solutions were far more hierarchical than those of the *Tovarniks* or the Cost of Production theorists. Fedorenko supported the 1962 proposals of cybernetician Viktor Glushkov to create a vast system of computing centers to capture economic data and thus calculate the optimal level of wholesale prices in real time. In fact, CEMI was designated as the institution that would develop the macroeconomic model that would be used in Glushkov’s vast network.¹⁵⁸

Fedorenko’s paradigm-building resulted in CEMI’s signature model: the System of an Optimally Functioning Economy (SOFE). The SOFE model, in its late-1960s to mid-1970s iteration, imagined the economy as a hierarchical system directed by central task at its apex. CEMI theorists began their work with four axioms: 1) The economy is made up of a set of complex systems; 2) the economy functions in conditions of incomplete information; 3) the economy has an inherent macroeconomic goal and limited resources with which to achieve it; and 4) the economy is hierarchical. Of the four axioms, the first two were shared by all complex economies, socialist or capitalist, while the latter two could only apply to socialist economies. SOFE aimed to build a framework in which the socialist economy could create a hierarchy of systems, to achieve the “goal,” during conditions of scarce resources and incomplete information.¹⁵⁹

¹⁵⁷ ARAN f. 1959 op. 1 d. 55 ll. 1-8.

¹⁵⁸ For background on Glushkov’s project see Slava Gerovitch, *New Speak to Cyberspeak*, 168-182; RGAE f. 9480 op. 7 d. 126 ll. 43-8.

¹⁵⁹ Pekka Sutela, *Soviet Economic Thought*, 41-42.

This, of course, reintroduced the problem of demand and the evaluation of values. The young Nikolai Petrakov, a future post-Soviet liberal who later in his career critiqued early SOFE models, summed up the problem as follows: “how to find the balance between the often contradictory demand for consumption and the needs of society as a whole to make investments for future growth.” Though they started with Kantorovich’s work, CEMI’s SOFE theorists, led by Aron Katsenelinboigen, took a different approach to solving the demand problem. Instead of using Kantorovich’s system of shadow prices as the determinants of demand, the CEMI team applied Dutch economist Jan Tinbergen’s approach to welfare economics (the branch of economics dealing with the macroeconomic effects of the microeconomic distribution of resources) to argue that the distribution of resources could be arranged top down, with the optimal planner manipulating a few key rates as policy levers to make the economy adjust automatically. If this ideal planner had the necessary information, he could act as Walras’s auctioneer. Thus, SOFE proposed that the state determine the direction of economic development rationally, and use economic rather than administrative tools to convince consumers and enterprises to follow along. SOFE solved the problem of demand, with its “subjective” multiple preferences, by substituting them for one “objective” preference: the state’s.¹⁶⁰ Despite Nemchinov’s 1959 division of labor, SOFE was becoming an alternate framework for understanding the elements of political economy that turned the state into large information processor.

SOFE did not represent the entire field of Mathematical Economics in the USSR. CEMI itself was such a large and diverse organization, whose staff often combined

¹⁶⁰ Ibid., 42-45; N. Ia. Petrakov, “Printsipi planomernogo razvitiia sotsialisticheskoi ekonomiki i optimal’noe planirovaniia” in *Sotsialisticheskie Printsipy khoziaistvovanie i effektivnost’ obshchestvenogo proizvodstva* eds. N.P. Federenko, C.C. Shatalin et. al., (Moscow: Ekonomika, 1970), 69-101.

sympathies to the Cost of Production and *Tovarnik* schools with intensive mathematical modeling. At Abel Aganbegian's institute in Novosibirsk, economists employed a far less ambitious approach to mathematical modeling through the study of regional development in the tradition of Wassily Leontief's input-output analysis. Indeed, by the late 1960s, Novozhilov began to argue that Mathematical Economics had gone too far in ignoring "historical and institutional factors."¹⁶¹

A Cold War in Economics

SOFE's explicit reference not only to Tinbergen's work, but also to the fact that the Soviet Union's socialist economy shared at least some features with other, market-based, "complex economies," showed the extent to which economic analysis had begun to blur the borders between social systems. In just over a decade, the discipline had moved away from Stalin's axiom that "commodity production" existed in the USSR only because the state sector did not (yet) dominate all forms of production, to some members of the profession using neo-classical analysis to the production of commodities in the USSR. These tensions thrust the debate over value and methodology that had persisted since the late 1940s into the terms of the Cold War: the debate touched on the existential question of what made the USSR unique vis-à-vis its adversaries.

Conservatives had begun grumbling over the currents of economic thought entering from Eastern Europe and the West as early as 1957. However, the rise of Mathematical Economics upped the ante. In 1960, a group of economists from the Institute of Economics, including Gatovsky, wrote a long letter to Suslov. The concerned conservatives argued that

¹⁶¹ Pekka Stutella, *Soviet Economic Thought*, 45-7; V.D. Belkin, *Ekonomicheskaja upravlenija i bank* (Moscow: Ekonomika, 1969); I.A. Birman, *Ia Ekonomist: o sebe ljubimom* (Moscow: Vremia, 2001), 219-223.

Kantorovich's work posed a threat to the USSR's position in the Cold War. With the publication of this work, Kantorovich not only displayed a dangerous "anti-Marxist relativism" (by replacing Marx's concept of the labor theory of value with valuation based on measures of scarcity), but also was "lowering the prestige of Soviet science around the world," as the Western press pointed to Kantorovich's work as proof that the USSR was moving toward the acceptance of neoclassical economic models and thus would soon abandon state socialism. The letter demonstrated how porous the intellectual world of Soviet economics had become: Western press coverage was driving traditionalists to classify Kantorovich and his followers as "capitalists." The authors of the letter did not stop with Kantorovich; they also decried the influence of East European economists, noting that "it was only recently in 1957 and 1958 that Soviet economists had lent a helping hand to their colleagues in the GDR, Poland, and Hungary to correct ideological mistakes." Yet in 1960, they lamented, Oscar Lange's work was read across economics departments, spreading the notion that capitalist and socialist economies could be analyzed with the same set of mathematical tools, distorting the "class and party basis of economics as a historical science."¹⁶² The memo was published in modified form as a *Kommunist* article in 1961, sparking a reaction among defenders of mathematical economics. Kantorovich and his supporters attacked Political Economists such as Gatovsky and Kronrod for failing to contribute to Soviet development and instead just parroting old positions and thus jeopardizing the "practical work" being done in mathematical economics.¹⁶³ This new cohort, often trained in mathematics instead of economics, argued that economic calculation could be used to find a more objective basis for state action. Proponents of

¹⁶² RGANI f. 5 op. 55 d. 133 ll. 130-155.

¹⁶³ "Letters to the Central Committee" in *Leonid Kantorovich: chelovek i pesaniia*, 189-211.

mathematical economics were not disturbed by the insinuations of treason leveled against them: they believed that their methods would not subvert the Soviet project, but rather help it develop to its full potential. Engagement with Western science was just part of this effort.

The arguments between Mathematical Economists and their opponents demonstrated how the crucible of the Cold War had changed the terms of Soviet economics. Whereas in 1947, the debate over inferential statistics and Novozhilov's work had been largely cast in domestic ideological terms, the controversy of the early 1960s played out in reference to an "international public sphere" of scientific exchange and prestige. Indeed, by 1962, Arzoumanian, who supported mathematical methods, petitioned the Central Committee to translate Paul Samuelson's textbook, *Economics: An Introduction*, into Russian. Arzoumanian argued that Samuelson's influence on the Kennedy administration meant that the book "could become a critical part of any scientific library in the USSR, if published with care." The book would "supply ideological cadres and Political Economists with a primary source that described the leading system of thought amongst bourgeois economic theorists," allowing the USSR to advance its criticism of Western economics in international forums by addressing the latest forms of contemporary, Keynesian economics, rather than making the same tired abstract attacks on Capitalism. However, Arzoumanian wanted Samuelson translated into Russian for other reasons. Despite its ideological distortions, if given a proper preface, the textbook could help introduce Soviet practitioners to "a variety of important mathematical methods."¹⁶⁴

Thus to its supporters, the adoption of mathematical economics did not represent a Cold War surrender, but served as a practical tool to advance the main task of the economy.

¹⁶⁴ RGANI f. 5 op. 55 d. 5 ll. 125-127

Arzoumanian made this clear in an undated note to Khrushchev from some time in the mid-1960s. He complained that Stalin's legacy had "torn economics away from practical work" and the "needs of economic planning and management." This left the USSR catching up to the United States in the employment of economists in enterprises and conglomerates with dire consequences for efficiency. While economics had made strides to overcome Stalin's distortions, there were still not enough cadres with the post-graduate and practical training needed to guide the Soviet economy. These deficiencies meant that most Soviet organizations were still run by engineers focused on output rather than on economic efficiency. Arzoumanian proposed not only expanding "practical training" but also establishing an official "scientific council of economic advisors" to accelerate the implementation of economic policy necessary to build Communism and win the competition between the two systems.¹⁶⁵

In 1964, Novozhilov, Kantorovich, and Nemchinov (posthumously) were awarded the Lenin Prize, the Soviet Union's highest civilian honor, for their contribution to the establishment of Mathematical Economics in the USSR. Mathematical Economics had officially earned state approval. Not everyone agreed with these. A group from the Institute of Economics expressed their disdain that Kantorovich was awarded the Lenin Prize at the same time he was being lauded in the Western press for bringing Soviet economics in line with its Western counterparts.¹⁶⁶

One of the fiercest opponents of the new mathematical trend was Yakov Kronrod. The economist accused of economic heresy in 1955 was now making common cause with his former attackers, such as Gatovsky. At a January 1965 meeting of the Section on

¹⁶⁵ ARAN f. 1978 o. 1 d. 29 ll. 71-2.

¹⁶⁶ ARAN f. 1877 op. 8 d. 454 ll. 5-9.

Economics to discuss the joint Lenin Prize, Kronrod expressed his grave disappointment that the late Nemchinov, whose own approach to economics was far more conservative than Kantorovich's or Novozhilov, was awarded the prize jointly with his Leningrad colleagues. This claim initiated a shouting match with Fedorenko. Kronrod goaded Fedorenko, exclaiming that despite belonging to those that the new generation labeled "not mathematically literate," he could easily see that Kantorovich was dancing around the issue of the labor theory of value. Kronrod then made another claim; the neo-classical assumptions of Kantorovich and his followers made them jump from a theory of value to a theory "optimal prices" without taking into account the problem of "reproduction," or circulation of capital in an economy.¹⁶⁷ Kronrod would later write that conflating price and value without taking account of monetary circulation meant accepting the conclusions of "the Austrian school."¹⁶⁸ Kronrod was no simple reactionary: he was presenting a critique of moneyless econometric analysis that post-Keynesians and, to an extent, monetarists in American academia, would make during the late 1970s. For Kronrod, such a schema could not serve as the basis of economic reform as it papered over the vital matter of institutions.¹⁶⁹

Conclusion: What Was Reformist Economics in the Khrushchev Era?

¹⁶⁷ ARAN f. 1877 op. 8 d. 442 ll. 80-91.

¹⁶⁸ Mozhaiskova et. al. *Sudba Uchenogo I Tragediia Nauki: K 80 Letiu Rozhdenia Y.A. Kronroda* (Moscow: Nauka, 1992), 113-114.

¹⁶⁹ Hyman Minsky. *Stabilizing an Unstable Economy* (New York: McGraw Hill, 2008); Robert Leeson, "The Ghosts I Called I Cannot Get Rid Of Now: The Keynes-Tinbergen-Friedman-Phillips Critique of Keynesian Macroeconometrics," *History of Political Economy* vol. 30 no. 1 (1998), 51-94.

Intellectual historians of “the thaw,” such as Vladislav Zubok and Slava Gerovitch, have characterized economic reformists as technical or cybernetic utopians.¹⁷⁰ This claim has merit: certainly the “cyberspeak” both authors identify appeared in the dreams of CEMI’s optimal planners and others. However, the focus on cybernetics and on “Zhivago’s children” has obscured the fact that reformist economics was an incredibly intellectually diverse movement with roots in multiple intellectual and political contexts. While they often agreed on certain policy prescriptions, the schools of Soviet economics competed fiercely over issues of principle. Understanding how these economic doctrines played out and evolved within the context of Cold War state-building accords us a better understanding of how each of these groups would approach the problem of turning theory into economic practice and, as we shall see, what opportunities they would have.

Comparing these various approaches, one can observe a strange continuum. On one end, the *Tovarniki*—steeped in the traditions of Marxism—had the least hierarchical vision of a reformed economy and tended towards market socialism. On the other end, the Mathematical Economists—especially CEMI’s Optimal Planners—the most internationalized of the schools, were also the most hierarchical. This presents an interesting parallel with scholarship on American Cold War economics, which has noted that practitioners most invested in the Cold War state saw their work as part of rationalizing the American state in an era of thermonuclear war and existential, ideological competition.¹⁷¹ Furthermore, such a continuum helps us begin to understand how these intellectual groups began to put down roots and create institutional bases whose practices

¹⁷⁰ Slava Gerovitch, *New Speak to Cyber Speak*, 267-278; Vladislav Zubok, *Zhivago’s Children: The Last Russian Intelligentsia* (Cambridge, MA: Belknap Press, 2009), 211- 215.

¹⁷¹ S.M. Amadae, *Rationalizing Liberal-Democracy: The Cold War Origins of Rational Choice Liberalism* (Chicago: Chicago University Press, 2003).

would reflect their particular understanding of the Soviet state's economic development, its ideology, and its place in the larger world.

These cleavages aside, by the late 1960s, a certain consensus-based reform program began to emerge; even the most conservative economists began to agree on the increased use of profitability in enterprises' plan targets, a reform of wholesale prices, and more aggressive uses of bonuses and wage incentives. However, details of this policy's implementation remained to be determined; no one yet knew which institutions would benefit most. Nor, most importantly, was there yet political support from those in power to implement these reforms.

Chapter 2

From the Political Economy of Socialism to Economic Policy-Making: Khrushchev's Balance Sheet Recession and the Domestic Deployment of Economic Thought, 1957-1964

The United States Congress was worried. A report presented by the staff experts of the Joint Economic Committee said that the US would soon be in danger of eclipse by a military and economic rival that, despite a still yawning margin between it and the United States, was experiencing remarkable rates of growth. This rival's statistical data was not to be trusted but was rapidly improving in the quality of its reporting, only exacerbating the concerns of the report's authors.¹⁷² To today's reader, this fear echoes the alarmist reporting on China often found in the press. However, the report to Congress was written about the Soviet Union in 1957. Another report, issued by the National Planning Association in 1959, warned that the USSR would soon be able to spend more on building its national economy than the United States and would take Canada's place as the world's main exporter of wood, pulp, and paper goods.¹⁷³

Like contemporary China (especially in the period after 2007 when income from exports began to fall in relative terms), the USSR's rapid growth was driven by massive state investments generated at the expense of its own population's nominal financial position (while creating very significant short term gains due to a low base) and accompanied by a huge extension of internal debt on the balance sheets of enterprises and by extension local and central state budgets. This chapter will argue that it was these dynamics that drove the debate about economic reform from the pages of obscure,

¹⁷² Edwin L. Dale. "US Said to Top Soviet Economy: Report to Congress Says Gap is Still Widening, Warns of Complacency" *The New York Times*, July 11, 1957:2.

¹⁷³ "Soviet Economy Shows Rapid Gain" *The New York Times*, November 2, 1959, 8.

specialist journals such as *Questions of Economics* onto the front pages of mass publications such as *Pravda*, and thus, into political discourses around which party factions organized. In fact, it will show that deepening mismatches on the Soviet balance sheet drove state officials away from the model of mobilization that anchored the coalition Khrushchev assembled in 1954. This deepening fiscal crisis opened the room for a variety of interest groups to rally around different, more technocratic, visions of economic governance.

By the end of 1963, discontent with the course of the Soviet economy's ability to deliver on Khrushchev's ambitious promises contributed to clear political divisions in both academic economics and the *apparat*. Bureaucrats in the ministries and the central planning agencies yearned to see central control restored to the Soviet economy, after Khrushchev's decentralization. Within economics, the various camps outlined in Chapter 1—the labor value *Tovarniks*, the cost of production school, and the mathematical economists—began to formalize their debates not just as a scholarly matter with political overtones but as policy positions advocated in the popular press and in policy making bodies. Various intellectual groupings and political factions rallied around economic ideas to form institutions within the party-state that could serve as bases for policymaking and political discussion. Such groupings testify to the fact that Khrushchev's dual strategy of increased central state investments into capital projects and using mobilization as a form of management by driving enterprise directors to deliver more and more output was not just creating economic difficulties but also breeding political tensions in a party-state that ostensibly could not have any. The fact that the Soviet Union was designed along Lenin and Kautsky's vision of the state and its economy as "one big factory," meant that there

was no way to separate the economic problems of falling output and high levels of intra-institutional debt from more fundamental, political questions of the organization and legitimacy of the state.¹⁷⁴

To tell the story of how economics was deployed in domestic, rather than academic politics, through what was essentially a fiscal crisis, it is necessary to outline the connection between debt, balance sheets and economic growth. As with the American fear of the USSR's economic potential, the contemporary literature on predominantly East Asian, export-led, "tiger economies" is a useful starting place to build a generalized theoretical approach to the Soviet economy, and particularly the ties between its fiscal/financial system, the real-side economy, and political institutions. Like the "tigers," the USSR was a backward economy that experienced rapid growth through "financial (and real) repression"—a term used by economists to describe holding down the purchasing power of its population compared to its productivity to fund investments into industrial infrastructure.¹⁷⁵ In Marxian terms, exports and collectivization served as the engines of "primitive capital accumulation" that was necessary for a "backward" economy to transition between labor intensive production, associated with a large rural population, to more capital intensive production and an urbanized society.¹⁷⁶

The term "middle-income trap" was popularized by Barry Eichengreen, Donghyun Park, and Kwanho Shin in a series of publications between 2011 and 2013 historicizing the

¹⁷⁴ For a discussion of the "Lenin-Kautsky model" see Peka Sutella, *Soviet Economic Thought and Economic Reform* (Cambridge: Cambridge University Press, 1990).

¹⁷⁵ See Fredrick Shaw's *Financial Deepening in Economic Development* (Oxford: Oxford University Press, 1973) for the first use of the term.

¹⁷⁶ For an example of an author working in such a tradition see Thomas Palley "The Rise and Fall of Export Led Growth" *Levy Center for Economics Working Paper Series* no. 675, July, 2011. As Paul Gregory has pointed out, Stalin and the Soviet economists working in the late 1920s had exactly this Marxian vision in mind when advocating collectivization. See Paul Gregory, *The Political-Economy of Stalinism: Evidence from Soviet Secret Archives* (Cambridge: Cambridge University Press, 2004), 43-48.

growth strategy of the “East Asian Tigers” and China. The team’s survey of growth rates and slowdowns from 1945 onward found that there was a statistically significant correlation between a slowdown in growth in countries with rapid “catch-up growth” and the moment such a country’s per-capita income reached around \$17,000 in 2005 trade-adjusted, on-shore US dollars. Such a slowdown in growth rates and an increase in per capita income also corresponds to the moment at which a country reaches about 57% of the “technological frontier” (or the global average capital-labor substitution ratio) and must switch from labor- to capital-intensive production to maintain a steady rate of growth. This is not so difficult for very small, densely populated, and open economies, such as Singapore and Israel, which can continue to export their way out of a slowdown without distorting their trading partners’ own economies. The population profiles of such economies also mean that they receive the maximum “bang for the buck” for investments in education.¹⁷⁷ Furthermore, Eichengreen, Park and Shin found that slowdowns do not happen in “big bangs” but rather that they are gradual, often with two distinct peaks as the export-led “capital accumulation” stage is replaced by the greater use of private debt to maintain growth.¹⁷⁸

The implications of Eichengreen, Park, and Shin present us with a useful framework for thinking about the long-run history of Soviet economic growth. The USSR was able to use its excess, underproductive, agriculturally employed labor to achieve huge growth rates but eventually hit a point of diminishing returns sometime in the early 1960s

¹⁷⁷ Barry Eichengreen, Donghyun Park and Kwanho Shin, “When Fast Growing Economies Slow Down: International Evidence and Implications for China” *NBER Working Paper Series* no. 16919 (2011); Barry Eichengreen, Donghyun Park and Kwanho Shin, “Growth Slows Down Redux: New Evidence on the Middle Income Trap” *NBER Working Paper Series* no. 18673 (2013).

¹⁷⁸ A finding that they explain by contrasting the year of slow down in GDP defined by their data set’s “Chow test statistic”—a method used to find structural breaks in time series—with recorded perceptions of growth slowdowns by the press.

and then had to rely on its central state balance sheet to generate sources for investment—in other words, debt. These conclusions are similar to those drawn by Martin Weitzman in 1970 and updated by William Easterly and Stanley Fisher in 1995 based on new, Republic level micro-data.¹⁷⁹ This narrative has been criticized by Robert Allen, who claims that the Soviet model of growth (first presented in 1928 by G.A. Feldman)—the idea that investments in heavy industry, or what Soviet planners understood as “the means of production,” would eventually lead to growth in consumer spending and the quality of life—was fundamentally sound. Allen’s critique rests on the fact that when brought into comparison with other states that adapted a rapid, investment-heavy industrialization—Japan in particular—there is nothing inevitable about the Soviet Union’s eventual low rate of capital-labor substitution. Rather, Allen suggests that the drop in Soviet economic performance was caused by misallocation of resources into upgrading old factories and into Siberian gas.¹⁸⁰ There is something to Allen’s critique: other investment-led economies indeed achieved greater capital-labor elasticities than the USSR, which implies that a solution to the puzzle of Soviet growth has something to do with the preferences of central planners. Yet Allen’s account is hindered by the fact that his comparative case, Japan, suffered two decades of lost growth, with falling capital-labor substitution ratios, whose magnitude has only been softened by its extensive social welfare system, relatively small, concentrated, wealthy population, and flexible legislative institutions. While the USSR had an extensive welfare system, benefits were mostly issued at the enterprise level,

¹⁷⁹ Martin Weitzman, “Soviet Post-War Economic Growth and Capital Labor Substitution” *The American Economic Review* Vol. 60, No. 4 (Sep., 1970), 676-692; William Easterly and Stanley Fisher “The Soviet Economic Decline: Historical and Republican Data” *The World Bank Economic Review* Vol. 9 No. 2 (1971), 341-371.

¹⁸⁰ Robert Allen, *From Farm to Factory: A Reinterpretation of the Soviet Industrial Revolution* (Princeton: Princeton University Press, 2005), 211-271.

which meant that falling rates of economic growth could not be offset by the state's increased, countercyclical investments, placing the onus of funding low productivity on the firm itself. Indeed, without a private sector, countercyclical spending by a welfare system has no effect as spending from the government's budget would not create room for deleveraging by other, independent, balance sheets.

However, Japan's economic history, the economic bogeyman that followed the USSR and preceded China in the American imagination, might give us some clues for a theoretical framework within which to understand Soviet economic history. Richard Koo's *Balance Sheet Recession* shows that it was the investment-led strategy of growth that eventually burdened Japanese firms with credit buildups that made them maximize debt repayments rather than profitability. Koo thus encourages us to prioritize the financial side, balance-sheet structure dynamics of an economy in which "one asset is implicitly another person's liability" as a cash inflow to one agent's balance sheet must be accompanied by a cash outflow from another's. This lets us conceptualize economic resources not just as a set of investible funds on the asset side of the ledger leading to continuous long-run growth, as postulated in the neo-classical growth model that underpins the studies described above, but also to introduce the long run impact of debts on the liability side of the ledger.¹⁸¹

A similar point was made by the legendary economist and ally of John Maynard Keynes, Michal Kalecki, in a critique of the planning authorities of his native Poland.¹⁸² The problem with Soviet-inspired planning practices, Kalecki explained, was that they did

¹⁸¹ Richard Koo, *Balance Sheet Recession: Japan's Struggle with Uncharted Economics and Its Global Implications* (New York: Wiley, 2003); also see Michael Pettis, *The Great Rebalancing: Trade Conflict and Perilous the Road Ahead for The World Economy* (Princeton: Princeton University Press, 2013).

¹⁸² It should be noted that Kalecki was a supporter of central planning in principle and consultant to Poland's planning agency until his politically motivated removal in 1959)

not offset each increase in investment made at the expense of the consumer with a subsequent increase in consumption in the future. This would cause a long term slow-down in growth as aggregate demand for goods would no longer drive profits back into the state's investment funds, causing a buildup of debt to the consumer sector as expressed in ever increasing holdings of cash by workers in their capacity as consumers. Kalecki understood that without consumption, the investments made by the state would just turn into the state's *de facto* debt to the goods-starved, cash-rich consumer sector which would, in turn, slow the rate of returns on capital and thus lower the rate of real economic growth in the medium and long runs.¹⁸³

To make it clearer, differences among the above theorists stem from their assumptions. Eichengreen et al., Easterly and Fisher, and Allen, despite their differences, make the neo-classical assumption that, in the long run, the supply of savings will always translate into demand for investment.¹⁸⁴ This means that the source of economic growth is the *stock* of assets—or their net sum versus liabilities. Thus, even Allen, who is sympathetic to the Soviet experience, argues that its main problem was the mismanagement of assets. This argument mirrors a teleological story told as far back as Hayek's entry in the "Socialist Calculation Debate" which explains that a central planner does not have the total knowledge (or information) to invest effectively and would thus fall victim to exogenous political problems. On the other hand, Kaleckian economics (including Koo as a reader of Kalecki), like its Keynesian sibling, is interested in showing that the equivalence between

¹⁸³ Michal Kalecki, *Collected Works of Michal Kalecki Vol. 4: Socialism, Economic Growth and the Efficiency of Investment* eds. Jerzy Osiatynski (Oxford: Clarendon Press, 1993); Malcolm C. Sawyer "The Economics of Michal Kalecki" *Eastern European Economics* vol. 23, no. 3-4 (Spring-Summer, 1985), 230-268.

¹⁸⁴ This stems from the Solow-Swan neo-classical growth model.

savings and investment is, at best, a very particular equilibrium solution to a system with many unsteady states. To understand such a complex system, Kalecki and his followers focus on both stocks and inter-temporal *flows*— or the ability of an entity to balance its asset inflows and liability outflows over time in *gross* terms. The Kaleckian world places private or institutional debt at the center of growth. In contemporary financial practice, this is the ability of an entity to roll-over its financing to “live to fight another day.” This means that Kaleckian economics is inherently contingent and is thus a natural ally of the historian interested in changes over time in economic policies and their consequences.

Soviet-style planning did the exact opposite of what Kalecki advised. In keeping with G.A. Feldman’s 1928, classically founded model, it assumed that increases in investments in the heavy industrial sector would lead to a lagged increase in consumption through technological development and increased output.¹⁸⁵ The problem was that even if that were true in the short run, the lack of a mechanism to assess consumer demand would always lead to investment cycles that could not then be “deleveraged,” or rebalanced, through consumer spending. This problem was picked up by Yulia Vymyatnina and Mikhail Pakhnin who, in a 2014 paper, argue that the Soviet economy was prone to cycles of over-investment that paralleled those identified by Hyman Minsky (himself a reader of Kalecki) in a capitalist economy. In a state-driven economy, institutional interests rather than the profit motive drives investment decisions.¹⁸⁶ Thus, a serious consideration of how

¹⁸⁵ Implicitly Feldman assumed the classical assumptions of Say’s law. The increased supply savings on the state balance sheet would automatically lead to increased demand for the use of such savings. For a discussion of how Marxism biased conventional Soviet economics toward a classical, and later neo-classical interpretation of the world, see Chapter 1.

¹⁸⁶ Yulia Vymyatnina and Mikhail Pakhnin, “The Application of Minsky’s Theory to State Dominated Economies” *European University at St. Petersburg Department of Economics Working Paper Series* no. Ec-03/14, (2014).

investment cycles operated under the Soviet economy necessarily means a study of how various interest groups fought over the direction of the Soviet economy.

Using this theoretical base, this chapter will ask how the expansion of investment associated with the Sixth Five-Year and Seven-Year plans slowly built a need to create a new way of administering the economy as the return on the state's central investments fell. It will tie the increasingly complex dilemmas of the Soviet fiscal state to a gradual move on the part of many members of the Soviet elite to advocating economic over administrative reform. I define administrative reform as a change in the administration of economic resources, and investments in particular, without a fundamental change in their distribution, and economic reform as a quantitative or qualitative change in the way that these resources are used and issued. In the final years of Khrushchev's reign, his preference for administration and mobilization began to compete with an agenda based on improving the economic rationality of the Soviet system through structural changes in investment. It was this process that caused the academic divisions discussed in the first chapter to become explicitly political ones associated with specific policy agendas.

Mobilizing Capital: The "Honest Plan" and State Investment-Driven Socialism

What kind of economy did Stalin's successors inherit? A September 1953 report from Gosplan to Khrushchev and Malenkov did not offer good news about the results of Soviet post-war planning. While "production in the first quarter of 1953 was up, compared to the first quarter of 1952," a variety of "vital goods" ranging from paper to pipes had been under-produced, resulting in missed deliveries to many key sectors of the economy. In addition to the failure to meet output targets, average labor productivity had increased

over the previous period by 5% while fulfilling the overall five-year plan required an annual increase of 8.5%. The same was true for the cost of goods produced [*sebestoimost*] which had fallen only 3.9% whereas the plan had envisioned a decrease of 4.5%. The report placed the blame for the situation at the feet of industrial management cadres, explaining that despite the resolutions of the XVIII and XIX Party Congresses to eliminate the “storming practices” that led to a “lack of planning,” “many enterprise managers have not taken the necessary steps to eliminate ‘un-rhythmic’ production.” Underperforming enterprises continued to function in many branches of industry and had increased their proportion in the metallurgical and coal mining sectors. The construction of new plants and housing was in an especially dire state, with many ministries not able to deliver necessary equipment and technical documentation in time, causing projects to roll over into the next budget period and centrally issued state funds to be hoarded and wasted.¹⁸⁷

Something needed to be done. As already discussed in chapter 1, Khrushchev’s solution to the economic problems facing the USSR in the mid-1950s relied on a combination of administrative reform, mobilization and large increases in centralized state investments. Sergei Khrushchev recalled that his father dreamed of an “honest plan”: one that would not have to be constantly corrected and re-written and reflected the real possibilities of the Soviet economy. To the elder Khrushchev, the horizons for economic development in the USSR were unlimited and only held back by bureaucratic over-centralization and lazy cadres whose elimination would lead to genuine planning and economic democracy. There was no fundamental issue with the Soviet economic model and the way it distributed central funds; the problem lay in its execution—in

¹⁸⁷ RGANI f. 5 op. 30 d. 15 ll. 1-44.

administration. Khrushchev also believed that the ministries in Moscow had little information about what was going on at the plant level and that inter-ministry competition led to overly-redundant production. Thus, better management through the mobilization of managing cadres achieved by administrative reform—not planning changes or economic reform—was at the core of Khrushchev’s economic worldview.¹⁸⁸

The administrative reforms began shortly after Stalin’s death. In 1953, an effort to consolidate Republic-level production ministries began and almost immediately ran into trouble. Republican governments did not have guidance as to how to reassign their personnel, resulting in the replication of many of the duties. Officials temporarily removed from their posts also required severance payments necessitating more money from central funds to be spent to fund the idle cadres. A newly created Ministry of Automobile and Road Transport was organized and quickly ran into the problem that its existence was not foreseen by the annual plan for 1954 and thus it lacked access to cars and buses: again, more funds needed to be issued.¹⁸⁹

In May 1955, following a conference on technical progress organized by Khrushchev,¹⁹⁰ a second major reform was undertaken. Gosplan was split into two parts. A new organization, confusingly given the old name Gosplan, was established to develop Five-Year Plans. The old body was renamed “The State Economic Commission of the Council of Ministers for Ongoing Plans,” or Gosekonommissiia for short, and given responsibility for annual and continuous planning. Splitting Gosplan into two would help create more regularity in management and allow the state to focus on Khrushchev’s dream

¹⁸⁸ Sergei Khrushchev, *Nikita Khrushchev: Reformer* (Moscow: Vremia, 2010), 385-9.

¹⁸⁹ RGANI f. 5 op. 30 d. 14 ll. 1-6.

¹⁹⁰ For more on the concept of “technical progress” in Khrushchev’s thinking see Chapter 1.

of continual growth through “technical progress” instead of Malenkov’s proposal of boosting investment in consumer goods at the expense of heavy industry.¹⁹¹ Nikolai Baibakov, the Minister of the Oil Industry, was promoted to head the new Gosplan. The person most shocked by Baibakov’s appointment was Baibakov himself, who recalled that when told of the appointment he recoiled at the idea due to his “complete lack of experience in planning.” Baibakov recalled that the Soviet leader convinced him to take the post by arguing that what was important was not his technical knowledge of planning and economics but rather his proven leadership of the oil ministry—which he had mobilized with great success in the Second World War.¹⁹²

The second component of Khrushchev’s plan to accelerate growth in the USSR was an increase in “capital investments” in the “means of production.” In Soviet parlance, this meant the construction of new plants, the installation of new equipment in existing enterprises or in research projects. These expenditures came from the *Fond Nakoplenia*, the part of the state budget (the yearly income of the state) dedicated to the expansion of fixed capital and new construction. The state recouped its investment through the turnover tax paid on goods by the consumer or the receiving party of wholesale goods. According to the ideological orthodoxy, while the Capitalist economy suffered from an endemic tendency toward a lower return on capital, the Socialist, planned economy would not suffer this problem because it could make unprofitable investments based on scientific planning (*planomernost*). This meant that instead of charging interest on lent funds (giving capital a cost), a practice associated with Capitalism, the state would recoup its investment through

¹⁹¹ S. Khrushchev, *Nikita Khrushchev*, 228-234; V.L. Nekrasov, “Reforma Gosplana 1955ogo Goda: Razrabotka novoi modeli planirovaniia ekonomiki” *Vestnik Tomskogo Gosudarstvennogo Universiteta* No. 368, (2013), 99–103.

¹⁹² Nikolai Baibakov, *Sorok Let v Pravitelstve* (Moscow: Respublika, 1993), 62-65.

the continual expansion of the economy generated by the ever-growing productivity of labor (a view consistent with the labor theory of value). The turnover tax was justified as a practical expression of this theoretical postulate: it was a markup on the price of goods that theoretically corresponded to the surplus, or capitalist profit, M of Marx's $C+V+M$ formula.¹⁹³

Between 1954 and 1961 Khrushchev advocated massive increases in capital investments from the state budget. Indeed, one of the major objections to the “Virgin Lands” initiative was how to find the sources for the large investments necessary to fund the improvement of the nutrient-poor, steppe soil. A Ministry of Finance report noted that adopting the program would cause budget overruns of 1.2 billion rubles just in the cost of wages and travel expenses for the 1954 fiscal year. These wage overruns, combined with the higher prices being paid for agricultural deliveries, meant that the population would have more cash-in-hand than had been predicted by the fiscal plan, meaning more goods would have to be added to market for the new demand to be satiated and the tax base (which was largely comprised of a turnover tax on goods sold) maintained. The report concluded that, because of this feedback loop, the USSR had to match its investments in agriculture, agricultural equipment and heavy industry with an increase of 2 billion rubles in the provision of marketable goods and would be required to sell 60-70 tons of gold from its reserves to facilitate 3 billion rubles of imports.¹⁹⁴

The report illustrated the dilemma that the Soviet system of financing production created. As Kalecki pointed out, without adjusting the expansion of state investment in

¹⁹³ David Dyker, *The Process of Investment in the Soviet Union* (Cambridge: Cambridge University Press, 1983), 29-31; Raymond Hutchins, *The Soviet Budget* (Albany: SUNY Press, 1983), 15-29; V.D. Belkin, *Trenistnyii Put' Ekonomista* (Moscow: CEMI, 2003), 44-46.

¹⁹⁴ RGANI f. 5 op. 30 d. 56 ll. 2-5.

production to a concurrent expansion in consumption, the state would, in effect, go into debt to its own population through the increased holding of unspent cash in the hands of the consumer. In a capitalist economy, the existence of an extensive private sector, and of a private banking system—which can issue credit-based means of payment, or essentially privately issued cash substitutes—in particular, makes such an expansion of investment easier to implement by having investments from the state create future expectations of increased spending, thereby incentivizing private enterprises to hire, banks to expand balance sheets, and consumers to spend: Keynes’ “Animal Spirits.” Yet the Soviet economy, organized on the Lenin-Kautsky ideal of the economy as “one big factory” with the central state issuing orders to its various “shops,” had neither a way of insulating the state budget from its enterprises’ budget nor a way to translate the demand from the consumer sector into incentives to produce consumer goods. In effect then, the USSR’s consumer base would stockpile cash it could not spend on goods, which is implicitly a claim against the state. Today, economists call this phenomenon “financial repression.” Under a financially repressed economy, the state restrains the available investment alternatives for its population in order to channel funds toward the budget or privileged industries—usually to fund export-driven growth.¹⁹⁵ Yet, with a relatively closed economy, the USSR could not export its demand as, for example, the East Asian Tiger economies did. Initially, this was not a problem as the low industrial base of the Soviet Union made practically any investment in heavy industry yield returns. However, as the Ministry of Finance report pointed out, to achieve continual returns, the state had to keep money flowing back into the state budget. For Malenkov, this dilemma meant that the USSR

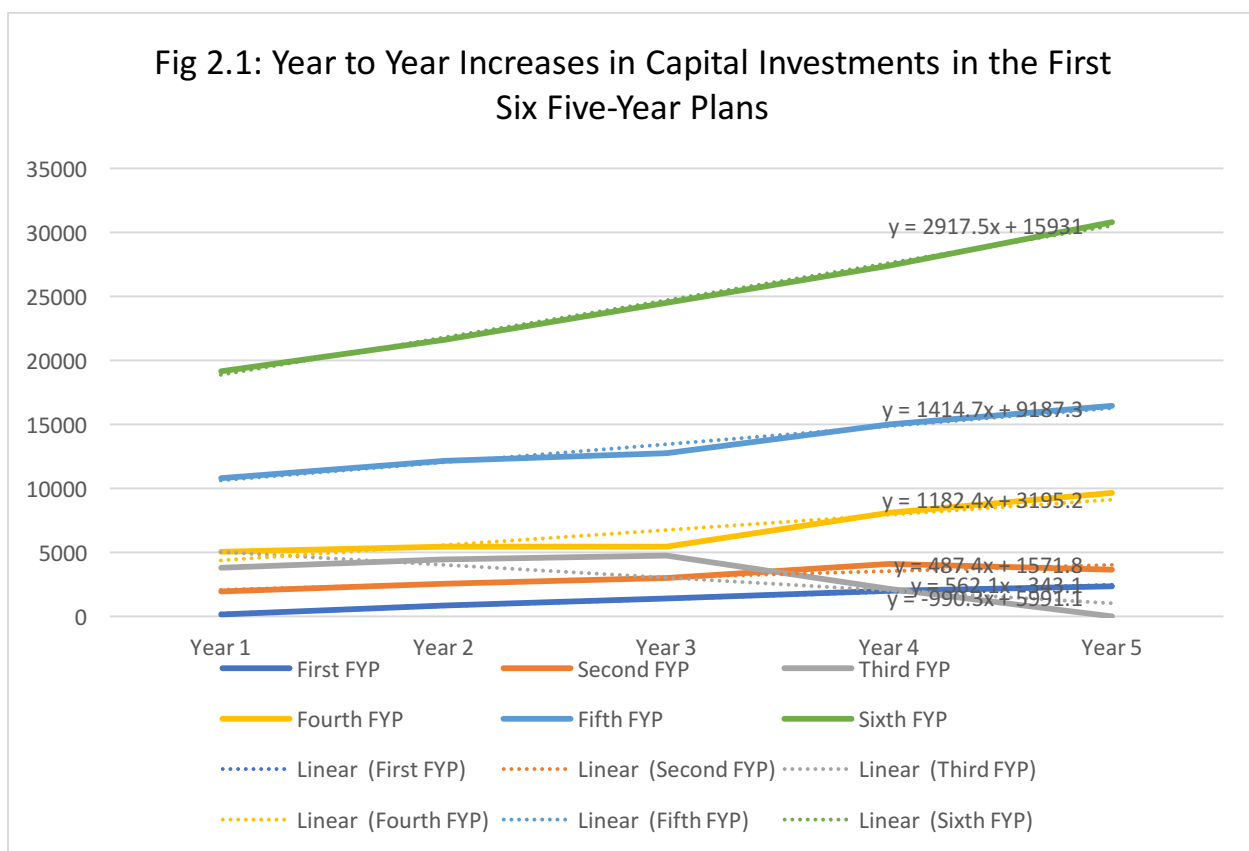
¹⁹⁵ Pettis, *The Great Rebalancing*, 48-69.

would have to reallocate investment in consumer goods to take advantage of untapped domestic demand while simultaneously decreasing unprofitable, loss-leading, investments in heavy industry to rebalance the economy away from investment-driven growth. This meant ending the implicit subsidy the Soviet consumer paid to the heavy industrial sector through forced savings. For Khrushchev, future growth would come from “technical progress,” the advance and integration of science into production, that would create an ever-expanding horizon for economic growth and new investment opportunities. As described in chapter 1, Khrushchev’s vision won the political struggle by mobilizing the key interest groups in the Communist party behind it.

To make this dream a reality, the Sixth Five-Year Plan, launched in December 1956, would be an “honest plan” unencumbered by the storming, mismanagement, and unrealistic expectations characteristic of the previous plans. The term “honesty” was telling: for Khrushchev, these symptoms were not inherent in the Soviet system but rather a result of the perversion of the pure Communist spirit. Khrushchev’s plan would see a new era of the Soviet economy that was accompanied by massive increases in capital investments.¹⁹⁶ At the XXth Party Congress, Khrushchev promised increases in the gross amount of capital investments and indeed between 1956 and 1959, capital investment increased by 25,453 million rubles, exceeding the entirety of the previous five-year plan’s investments within three years.¹⁹⁷ As Figure 2.1 demonstrates, the Sixth Five-Year Plan featured a rate of capital investment twice that of the plan that preceded it.

¹⁹⁶ S. Khrushchev, *Nikita Khrushchev*, 385-389.

¹⁹⁷ *XX S‘ezd: Stenograficheski Otchet* (Moscow: Gospolizdat, 1956), 58-9.



Source: *Narodnaia Khozaistvo SSSR v 1960 godu* (Moscow: Gospolitdat, 1960)¹⁹⁸

The scope of the plan's ambitions was evident in the Central Committee's response to the proposal of the Gosekonomkomissii's 1957 yearly capital investment plan. The Central Committee, dominated by Khrushchev's allies, proposed adding 300 million rubles in new spending to upgrade metallurgical plants to more specialized production and to increase spending on the chemical industry to 670 million rubles versus the planned 330 million rubles. Overall, the Central Committee criticized the spending plan for being unresponsive to the goals set out at the XXth Party congress and advocated an increase of 8,100 billion

¹⁹⁸ While official Soviet data is not accurate, it is useful in illustrating a general trend. Note that the first year of the First Five-Year Plan is the last quarter of 1928 and the Third Five Year Plan was canceled due to the Second World War.

rubles in spending over the initial proposals for the Five-Year Plan presented by the state apparatus.¹⁹⁹

Yet if the new plan would boost investment, its “honesty” would come from a new focus on using capital investments effectively—to mobilize Party cadres to not waste the state’s money. At the XXth Party Congress, Khrushchev emphasized that better management would allow enterprises to “increase their output” without many new investments if their staffs exercised “vigilance” over their use of investment funds. In Sergei Khrushchev’s recollections, his father was convinced that regional Party leaders, “like he had been himself,” knew how to use their resources better than the ministries in the center and were the key to maintaining the plan’s “honesty” if they were given the opportunity to display their Communist spirit.²⁰⁰

Khrushchev’s beliefs were the basis for his signature reform in economic management—the “Sovnarkhoz” reform of 1957, which abolished the central production ministries and replaced them with local economic councils or “Sovnarkhozes.” The councils were supposed to be coordinated at the center by a “Supreme Council of National Economy.” Gosplan and the Gosekonommissia retained their roles in formulating the Five-Year Plan and the yearly plans respectively. Khrushchev’s proposals were outlined in a January 1957 note entitled “Some Thoughts on Improving the Management of Production and Construction.” The note explained that the first steps of management reform had been accomplished in 1955 with the reorganization of planning agencies but that this was only a “surface level change that did not involve any real production.” Over-centralization was causing the Soviet economy to be divided along ministerial lines, resulting in redundancies

¹⁹⁹ RGANI f. 5 op. 30 d. 102 ll. 1-18.

²⁰⁰ S. Khrushchev, *Nikita Khrushchev*, 385-389.

and clannish behavior. The note explained that “talented people with good education and advanced skills [were] kept away from practical work,” staying in the central ministries in Moscow instead of being sent back to the factories and shops “that had nurtured them in the first place.” Khrushchev also blamed the slow pace of implementing the XXth Party’s commitment to radically increasing production and investment on the bad habits of the ministries. He justifiably complained that ministries “pil[ed] onto the Central Committee and the Council of Ministers [asking] for more investment every time a new plan was being proposed.” Finally, Khrushchev argued for establishing a State Commission on Science and Technology (the GKNT created later that year) to coordinate the introduction of new productive techniques across the regional councils and thus coordinate “technical progress.”²⁰¹

Yet if Khrushchev’s January note provided the overview for his new administrative vision, it had very few details for how to turn it into a reality. This became obvious when the project was discussed at a meeting of a special commission of the Central Committee in February 1957. Certain members of the commission, such as Nuritdin Mukhitdinov and Alexander Zasiadko, insisted that the USSR’s territorial divisions were not a good basis for economic districts. Khrushchev dismissed these concerns, stating that, while “certain corrections might have to be made,” the complexity of such a reorganization would take away from the reform’s momentum.²⁰² Another concern was raised by Alexei Kosygin. Kosygin, a former protégé of executed Gosplan chief Voznesensky and a longtime industrial official, insisted that the problem of the Soviet economy lay not in its

²⁰¹ “Zapiska N.S. Khrushcheva ‘Nekotorye Sobrazheniya ob Uluchenie Organizatchye Rukovodstva Poryshelenostii i Stroitelstvom’” in *Protokoly Presidiuma KPSS: Tom 1 1954-1958* eds., A.A. Frusenko, V.U. Afinanni, et al (Moscow: Rosspen, 2006), 522-539.

²⁰² RGANI f. 5 op. 30 d. 196 ll. 65-78.

organization, but rather, in its “extremely low level of planning” which resulted in “huge losses to the economy.” The reason for this, Kosygin explained, was that there was “no serious economic work being done in the Gosekonommissia.” The directives of the XXth Party Congress were being implemented in an unsatisfactory matter, with major unresolved “disproportions” within the energy, metallurgical and transportation sectors. The yearly plans were too rigid to properly distribute financial resources to new construction sites and investment projects. This led to badly designed targets and a generally slow pace of construction. Kosygin proposed that yearly plans be scrapped and more flexible “two year plans” be introduced in which capital expenditures could be judged by their returns over longer periods rather than rolled over year to year. Here, Khrushchev seemed taken aback, responding that “he had thought a lot about planning” and conceded that Kosygin was right about the need to reform the ways in which the timeframes for capital investments were set. Kosygin’s points were seconded by other agency heads, including Gosplan’s Baibakov and the Finance Minister Nikolai Zverev.²⁰³

Kosygin’s speech at the meeting triggered a ministerial resistance to Khrushchev’s project. The most aggressive of these was Minister of Heavy Metallurgy, Alexander Sheremetiev, who insisted that Khrushchev’s plan would not only have disastrous economic effects but also threaten Soviet national security by lowering the center’s ability to coordinate the defense industry. In his concluding speech, Khrushchev ridiculed Sheremetiev by exclaiming that “in 1955 we had a little experiment; we sent Minister Matchkevitch to the United States and Minister Benadictov to England and no one noticed. Let’s send comrade Sheremetiev anywhere he wants and show that nothing will change in

²⁰³ Ibid., ll. 97-105, 164-169.

metallurgy.” Indeed, Shermetiev was soon shuffled off to the State Commission on Foreign Trade while Baibakov was dismissed from Gosplan and replaced by Iosif Kuzmin—one of the speakers at the meeting who led the charge in supporting Khrushchev’s plan.²⁰⁴

Capital Returns: Laying the Institutional Foundations for Economic Reform 1957-1960

In 1960, a special investigative team from the Central Committee arrived in Ryazan province to examine what was going on with cattle deliveries. A year earlier the province’s party boss, Aleksei Larionov, had promised to triple the region’s meat production. Despite reticence from his aides, Khrushchev seemed taken with the young, ambitious local party organizer—perhaps recognizing in Larionov all the qualities he himself wished to project. By the end of the year, Larionov had been awarded the title “Hero of Socialist Labor.” Yet, all was not well in Ryazan. To meet his lofty goals, Larionov had to resort to some truly absurd acts of fraud. At collective farms, all cattle—including breeding stock and dairy cows—were slaughtered. When this wasn’t enough, agents moved to purchase cattle from other provinces and marched them across provincial boundaries to create the illusion of livestock being sent outward. Taxes payable in meat were levied on individuals and institutions, causing Ryazan’s residents to go to state stores to purchase meat to hand it back to the state. Despite all this, the province delivered just one-sixth of its promised goods. After an investigation was announced, Larionov shot himself.²⁰⁵

²⁰⁴ Ibid., ll. 105-115, 171-174; S. Khrushchev, *Nikita Khrushchev*, 421; Baibakov, *Sorok Let*, 73-80.

²⁰⁵ William Taubman, *Nikita Khrushchev: The Man and His Era* (New York: W.W. Norton, 2003), 376-378.

The “Ryazan Incident” was more than a display of Khrushchev’s hubris or yet another example of the USSR’s unrealistic goals: it reflected both the systematic inability of the Soviet state to regulate its economic activity and the perverse incentives that came with the Soviet growth strategy and the Sovnarkhoz reforms. Overcoming these problems would stimulate the emergence of political groupings with competing plans for reforming the Soviet economy. As the Sovnarkhoz reform was implemented, and capital investments were ramped up in the Sixth Five-Year Plan—and later the “Seven-Year Plan”—problems like those in Ryazan forced discussions about not only how to restructure the planning institutions but the economics of planning itself.

At the heart of Kosygin’s 1957 comments was the problem of planning capital investments over the life of a long-term project. Even if enterprises used their budget allocations effectively, planning over the course of a year with no information about a longer horizon made any kind of long-term capital planning difficult. This insight was particularly important as allocations from the central budget for major new construction projects increased. The quest to “catch up and overtake the United States” meant that investments in the building of new chemical processing plants, oil extraction sites, housing and agriculture grew in the 1956-1960 Five-Year Plan and increased even further in the 1959-1965 Seven-Year Plan that replaced it.²⁰⁶

Khrushchev’s note on *Sovnarkhozy* did not exclude the establishment of new central regulations. In fact, Khrushchev explicitly proposed organizing a parallel body to Gosplan that would be responsible for the implementation of technical upgrades and

²⁰⁶ “Protokol No. 129 Postanovleniia TsK KPSS i Soveta Ministrov SSSR O Razrabotke Plana Razvitiia Narodnogo Khoziaistva SSSR na 1959-1965 goda” in *Protokoly Presidiuma KPSS: Tom 1 1954-1958* eds., A.A. Frusenko, V.U. Afinanni, et al (Moscow: Rosspen, 2006), 689-691.

scientific advances in industry. The State Commission on Science and Technology (GKNT) was formally established in 1957, on the foundations of the State Technological Commission, a smaller body with a much more limited jurisdiction. Its purview was upgraded to reviewing five-year plans issued by Gosplan, and yearly plans issued by Gosekonomkomissiiia and issuing its own parallel “technological plans.” The GKNT was explicitly given the mandate of reviewing both domestic and international technological advances and “productive techniques.” In fact, it was explicitly charged with taking information from the “technical-informational bodies of the UN” and the State Commission on International Economic Cooperation and “propagandizing” them throughout the USSR. An important part of this new body’s responsibilities would be to issue guidelines on capital investments in upgrading technology and equipment used in production.²⁰⁷ Indeed, the GKNT would very quickly become involved in importing Western management techniques as part of its mission of raising productivity. Another new body established in the wake of the *Sovnarkhoz* reforms was the State Economic Advisory Commission [Gosudarstvennyi Ekonomicheskii Sovet] or Gosekonomsovet. The commission was meant to be a coordinating body for economic information and hired many of the leading economic thinkers in the USSR including L.A. Vaag . These bodies would become key nodes in the discussion of economic reform in the USSR.²⁰⁸

The problem of capital investments and their planning almost immediately became a matter of discussion amongst Soviet technical experts in the wake of the *Sovnarkhoz* reforms as the problem of implementing Khrushchev’s vision arose. V. Cheriabinsky, the head of the Economics Department of the State Institute for the Planning of Metallurgical

²⁰⁷ RGANI f. 5 op. 30 d. 195 ll. 71-84.

²⁰⁸ S. Khrushchev, *Nikita Khrushchev*, 561-562.

Factories, wrote to A.B. Aristov, the powerful First Secretary in charge of industry, about the need to introduce a measurement of return on capital into the planning of new construction. The letter echoed Kosygin's concerns, arguing that the planning of new investments should be no longer be done on a yearly or even rolling basis but on a multi-year program. Cheriabinsky went further, arguing that instead of the yearly schema of capital allocations that resulted in wasted resources and huge delays, planning should be based on an average rate of return over a longer period of time on each unit of capital invested: a proposition that replicated the concerns of the "cost of production school" who were searching for an interest rate in the context of a planned economy.²⁰⁹ That same year, the Legal Commission of the Council of Ministers began working on a draft of a "Law on State Enterprises" which would spell out the responsibilities and rights of individual industrial enterprises across various sectors and geographical organizations, establishing them as the basic legal units of the Soviet economy.²¹⁰

The discussions of 1957-1958 testify to the permeability of Khrushchev's program due to its very vagueness. Even if Khrushchev's instincts pointed to solely administrative changes and decentralization, the state apparatus, by necessity, was grappling with problems of investment. Indeed, in late 1957, the Gosekonommissia was abolished, as part of a drive to give more authority for day to day planning to the Republics, but Gosplan itself was given more authority over the issuance and planning of Republic level funds as a balance on regional interests.²¹¹ This coincided with a drive to start reworking the planning system. In September 1957, the Sixth Five-Year Plan was axed in favor of a

²⁰⁹ RGANI f. 5 op. 30 d. 195 ll. 88-104.

²¹⁰ Ibid., ll. 39-59.

²¹¹ Natalya Kibita, *Soviet Economic Management Under Khrushchev: The Sovnarkhoz Reform* (London: Routledge, 2013), 55-56.

Seven-Year Plan to run between 1959 and 1965. The official reason for this decision was the sudden and unexpected discovery of oil in Siberia which would be an impetus for the long-term restructuring of the Soviet economy toward the expansion of the chemical industry. However, coming in the wake of the defeat of the so-called anti-Party group, the Seven-Year Plan reflected the priorities of Khrushchev's rule. An expansion of consumer goods would be driven by the new technologies, such as plastics, stemming from the chemical sector rather than a shift in the proportions of investment. Outlays to the construction of housing were to be increased, and meat production was to be increased. Discussing these initiatives at the Presidium, Khrushchev accused Gosplan of "illiterately approaching planning" and blamed the agency for the underdevelopment of the petrochemical industry in the years after Stalin's death.²¹²

Khrushchev's drive to establish a new, signature policy, was also probably motivated by the fact that the 1958 plan had drastically underperformed not only because of Gosplan's failures, but also because the decentralization of planning to the Republics and administration to the Sovnarkhozes had caused coordination problems as the local authorities acted just like the ministries and hoarded financial and physical resources. It was probably this that led to Khrushchev's criticisms of Gosplan at the XXI Party Congress. In Sergei Khrushchev's recollections, one of Gosplan's major problems was that its chair, Kuzminin, though an earnest Khrushchev ally and supporter of the Sovnarkhoz reform, had little experience running a state agency and could not coordinate the local interest groups that had proliferated after 1957. Indeed, the younger Khrushchev described

²¹² Protocol No. 129 Postanovlenia TsK KPSS i Soveta Ministrov SSSR O Razrabotke Plana Razvitiia Narodnogo Khozaistva SSSR na 1959-1965 goda" in *Protkoly Presidiuma KPSS: Tom 1*, 689-691; William Taubman, *Khrushchev the Man and His Era*, 364-365.

Kuzminin as “suffering Gosplan” rather than running it. A different set of hands was needed and they belonged to Kosygin. While not formally marking a step away from decentralization, as Nataliya Kibita has pointed out in her monograph, the appointment of a champion of improving central administration marked a turning point in Soviet economic administration. Indeed, by the end of 1959, the number of Sovnarkhozes was cut dramatically.²¹³

After the XXI Party Congress, in January 1959, the Presidium of the Academy of Sciences established a special commission on “the calculation of cost in the Socialist economy.” The commission was headed by Vassily Nemchinov, who told the assembled group that “in the course of discussing the best way to integrate the advances of science into production, the question of developing criteria of economic profitability has become paramount.” “In discussions on the effectiveness of capital investments,” he continued, “it has become obvious that the existing system of prices carries no scientific basis for the determination of economic efficiency.” The Nemchinov Commission’s assessment was that the problem of “technological progress” was not one of organization and administration, but fundamentally an economic one of profitability and price. Nemchinov and his colleagues on the commission—including luminaries such as Strumilian and Kantorovich—argued that inaccurately determined prices were leading to the ineffectiveness of capital investments, thus destroying the state budget and slowing overall economic growth.²¹⁴ As has been argued in the first chapter of this dissertation, economists had dreamt of participating in the policymaking process since the XXth Party Congress.

²¹³ Kibita, *Soviet Economic Management under Khrushchev*, 92-5; Sergei Khrushchev, *Nikita Khrushchev*, 422-423.

²¹⁴ Belkin, *Trenistnyii Put' Ekonomista*, 44-47.

The Nemchinov commission was a watershed as it was an official body from the academic community that was recommending state policy to the Party and Council of Ministers. This was possible because Khrushchev's own administrative-mobilizational campaign generated the need for policy advice due to the sudden increase in the rate of capital investment and the tasks it placed on management cadres.

The problem of pricing and the effectiveness of capital investments did not stay in the confines of the Academy of Sciences. At the July 1960 Central Committee Plenum—a session dedicated to the “Fulfilment of the Orders of the XXI Congress and the Development of Industry, Transportation and the Introduction of New Scientific Advances into Production”—the matter of prices was brought up. The resolution of the July Plenum called for “the increase in the level of economic research to improve planning indicators across industry and transportation.” To fulfill such a mission, the Central Committee called on “academic economists” to pay more attention to the “problems of economic planning; especially questions of improving the efficiency of capital investments, the better usage of main and circulating funds and other questions related to industrial practice.” The resolution further demanded that Gosplan, the Academy of Sciences and the Gosekonomsovet prepare a report to the Council of Ministers on improving plan indicators to “increase the self-interest of enterprises and Sovnarkhozes in effectively using financial resources and to improve the production of higher quality goods” by March 1, 1961. These same bodies were called on to develop a new methodology for the setting of prices based on a scientific method in preparation for a “unification” of wholesale prices onto a “single basis” (in other words, replacing the variety of markups and prices set arbitrarily by

Gosplan's Price Section by considering what they assumed to be the most strategic industries and discounting prices on the goods that they needed).²¹⁵

The July Plenum capped a process that moved economic reforms to the forefront of the conversation, a process that had begun almost as soon as the Sovnarkhoz reforms were started. While most of the Plenum was dedicated to the usual rhetoric of mobilization, with regional and Republican officials as the main speakers, the groundwork for the recentralization of administration and the introduction of economic reform had been laid. As the documents of the Plenum plainly showed, the problem of "the efficiency of capital investments" was giving the technocrats and experts a new, more prominent seat at the table.

The Soviet Fiscal Quandary and the Rise of Economics as a Policy Science, 1961-1962

When Khrushchev took the stage at the XXII Party Congress in October 1961, it looked like the General Secretary was full of vigor. The new "Third Party Program," with its promises of "building Communism by 1980," was formally approved. After retreating from his attacks on Stalin following the Polish and Hungarian uprisings, Khrushchev again fired away at his predecessor with a new intensity. Yet, when speaking about the Soviet economy, the problem of capital investments and weak cadres tempered the triumphalism. While praising the high rate of industrial construction and the expansion of new housing stock, Khrushchev berated construction managers for not matching their work to the fiscal calendar.

²¹⁵ RGANI f. 1 op. 2 d. 484 ll. 84-88.

With so many new projects starting, “funds are scattered and many projects go into construction two or three years later than technically feasible. Funds expended are frozen over a long period and the state cannot get its investments back.” He continued:

Is it because our desire to achieve great things militates against a reasonable and realistic approach? It frequently happens that plausible excuses for state aid are covers for parochial interests. To put it crudely, they are acts of hoarding on a regional, territorial and at times republican scale. Republican Councils of Ministers, economic councils, ministries and local party organs try to get funds to initiate the greatest number of projects possible without considering the necessary building material, manpower and equipment needed to achieve them. The planning bodies do not prevent these acts which contradict the interest of the state.

Khrushchev singled out the Perm Regional Council for having every third enterprise in the region “fail to profitably fulfill the plan,” meeting their production goals but using more resources than those that had been assigned to them. He finished by pleading for “stricter financial control at all levels of production.” “Circulatory funds (or those funds used for settlements of enterprise payments) could be built up at the enterprises themselves” he suggested, seemingly taking on board much of the rhetoric that was coming from the economic reform discussions.²¹⁶

Khrushchev was not wrong to be worried about the state’s finances and monetary issues. As Kristy Ironside points out, Khrushchev’s 1959 program to eliminate taxes from the population—with the exception of the turnover (sales) tax which made up the majority of state income, but was not formally considered a tax—had collapsed by 1961. Despite the small portion of the budget that came from direct taxation, these funds were dear

²¹⁶ N. Khrushchev *Documents of the 22nd Congress of the CPSU* (New York: Crosscurrents Press, 1961), 83-84.

enough that the attempt to eliminate them would mean losing precious central funds. Indeed, this, combined with the growing income of the population due to wage raises and tax reductions, was causing inflationary pressures to build up in the USSR's economy. Without a fear of bankruptcy, the planned economic system did not respond to changes in increased spending power, and thus aggregate demand, by increasing production, causing an expanding pool of cash to chase a relatively constant set of goods: a classical inflationary scenario. Because of the administrative nature of the Soviet economy, these pressures were not reflected in higher prices (as these were set by the state) but rather in shortages of goods (except for collective farm market prices which did go up).²¹⁷ The increasing amount of cash-in-hand amongst Soviet citizens meant a greater set of financial claims against the state. Cash is, by definition, a circulating liability of the central bank or monetary authority. What makes cash different from other forms of debt is that it is unredeemable for a final set of goods because it is the liability of the highest form of domestic authority and thus can be traded for any other commodity. Yet, from the point of view of the state, it is part of its debt.²¹⁸ This had consequences for the rate of return on the state's capital investments. As consumers found more and more money in their hands, they had to spend it on an inelastic, fixed supply of goods, or store it in state retail banks (*Sverkassa*), which would then be used as part of the state budget with the depositor receiving a low fixed-interest payment, or place it under their mattress, effectively causing the state's debt to increase. Soviet citizens increasingly took this third option.

²¹⁷ Kristy Ironside, "The Value of a Ruble: A Social History of Money in the Post War USSR" (PhD Diss, The University of Chicago, 2014), 250-263.

²¹⁸ See John Hicks, *A Market Theory of Money* (Oxford: Oxford University Press, 1989). To make the above clearer, if one imagines a "gold standard system" in which the ultimate money is gold, a banknote is simply a promise by the central bank to pay gold.

As Kronrod pointed out in his 1955 text, the priority of largely unprofitable heavy industry meant that it was consumer spending on light industrial goods that was subsidizing the former sector—the proceeds from the turnover tax and forced savings being transferred through the budget to the heavy industrial sector. According to orthodox Soviet theory, this expansion of heavy industrial production would eventually roll over into consumer production—an approach which had been developed by Soviet economist G.A. Feldman in 1928 and was re-enshrined by Khrushchev in his victory over Malenkov. However, by the early 1960s, whatever gains the Feldman growth model had produced were becoming more and more negligible as the burden of obligations between the state and the population began to overwhelm even the extremely financially repressed Soviet system. Most Soviet enterprises were in arrears to the state which in turn, through over-issuance of cash (which is a liability of the state through its Central Bank), was itself effectively in debt to its population. While a full, detailed, accounting framework for the interaction of central, industrial and household balance sheets is best left for Appendix A at the end of this dissertation, the results of this very Soviet fiscal predicament are evident in the data produced by the Institute of Economics in 1963 and shown in figure 2.2 below:

Fig 2.2: Moving Average of the Rate of Return on Central Capital Investments 1950-1962

	Gross Production Per Ruble	In % of 1950	% of 1955	% of 1958	% of previous year
1950	2.19	100			
1955	2.34	106.9	100		
1958	2.23	101.8	95.3	100	

1959	2.21	102.1	94.4	99.1	99.1
1960	2.15	98.2	91.9	96.4	97.3
1961	2.09	95.4	89.3	93.7	97.2
1962	2.05	93.6	87.6	91.9	98.1

Source: ARAN f. 1877 op. 8 d. 390 l. 55, 1964

As the data shows, when taking 1950 as the base year, the economists found that the return for each ruble spent in capital investment went up until 1959, and then began to fall. When taking 1955, or the start of the increasing investment associated with Khrushchev, as the base year the results were even more dramatic with the return on investment being 87.6% of 1955. In other words, while one ruble invested in 1955 would yield RUB 2.34 of production, in 1962 it yielded RUB 2.05—not yet a full-blown recession but a trend toward falling returns when the promises of the XXIIInd Congress demanded greater results.

These lowering rates of return were accompanied by an increasing amount of money in the hands of the population. A 1965 analysis of the previous decade by Gosbank concluded that “Since 1961, the yearly rate of the growth of money in circulation has increased. The divide between the rate of increase in the turnover of personal funds and sum of cash in circulation has led to the need to issue more cash and the slowing of the velocity of money.” This was connected to the increasing gap between the growth of Group A consumer products such as refrigerators and Group B producer products such as steel. While between 1951 and 1955 the gap in relative output between the two groups was 19.7%, in 1956-1961 it increased to 42% and in 1961-65 to 68%. For this reason, the tax returns to the state’s budget fell at an average of 2.7% per annum between 1961 and 1965.²¹⁹ What Khrushchev was facing after 1961-2 was the problem of

²¹⁹ RGAE f. 2324 op. 28 d. 2427 ll. 32-43.

a contemporary investment-led “tiger” economy with a large population—of shifting an economy whose extremely high growth was created by high investment into producer goods at the expense of the population to one in which consumer spending would provide more balanced growth, albeit at a slower nominal rate.²²⁰

To make matters worse, agriculture, the millstone of the Soviet economy that Khrushchev had attempted to reform over and over, was not doing well. Though expectations for the summer 1961 harvest were high, output increased by only 0.7% over the previous year while meat and milk production fell below the previous two years. Yet instead of pumping more funds into the agricultural sector, as had been his previous policy, Khrushchev suddenly turned into a “fiscal conservative.” Two weeks after the XXII Party Congress, he told an audience of agricultural workers in Tashkent: “What are we supposed to do now? Turn our pockets inside out and count our money? I could turn my pockets inside out now and show you that they are empty... I don’t have anything for you but good wishes.”²²¹

The March 1962 Central Committee Plenum reflected the tension between expectations and economic reality. The first section of the Plenum, dedicated to the discussion of the “Third Party Program,” presented the new document as the next step of the economic program of the USSR that traced its roots to the GORELO plan of Lenin for electrifying the countryside. The development of productive forces in the USSR and “the construction of the material prerequisites of Communism” were “the fulfillment of our internationalist duty before the rest of the world.” Khrushchev exclaimed that “it was not by chance the imperialists of the United States are worried that our program has set the

²²⁰ Pettis, *The Great Rebalancing*, 74-100.

²²¹ Taubman, *Khrushchev*, 516-519.

task of building Communism. When the USSR and other socialist states overtake the economies of the leading countries of the Capitalist world, no power of imperialism could stop the advance of Communist ideas.” Yet, despite the usual slew of statistics about increased outputs of steel that touted the huge percentage of increases of Soviet production compared to the United States (which ignored the inconvenient facts about the USSR’s low relative base), things did not sound as sunny when Khrushchev got down to discussing agriculture. “We have to admit,” he explained, “that we have fewer heads of cattle than our potential.” The problem was that “the demands on agriculture were no longer the same as we imagined” due to increased urbanization, which meant that a “few percentages of increase” in agricultural output were no longer enough to supply the population of the cities. While making some gestures toward a long-run increase in investments in the production of agricultural machinery at the plenum, he told farmers and collective farm managers to make do with what they had, as heavy industry and the military could not spare resources.²²²

The strange mix of triumphalism and economic retreat evident after the XXII Party Congress is consistent with what other scholars have argued about the general political timeline of the Khrushchev era. Michael Sandl’s careful reading of ideological texts, including the Third Party Program, has found that while maintaining a rhetoric of hope and growth, many of the more fantastical political and democratic claims of the XXI Congress began to be tempered after 1961.²²³ Polly Jones has also argued that the while Khrushchev resumed his attacks on Stalin with a new fury at the XXIIInd Congress, the ideological

²²² Ibid.; RGANI f. 1. op. 1 d. 582 ll. 4-7.

²²³ Mark Sandle, “Brezhnev and Developed Socialism: The Ideology of Zastoi,” in *Brezhnev Reconsidered*, ed. Edwin Bacon and Mark Sandle (London: Palgrave Macmillan, 2002), 166-179.

campaign that followed was far more regulated and centralized than the events of 1956.²²⁴ In William Taubman's encyclopedic biography of Khrushchev and his political career, late 1961 and 1962 appear to be a critical inflection point, marking a series of failures that began the road to the October 1964 Party Plenum during which Khrushchev was removed.²²⁵

Examining the economy and economic policy validates this timeline and helps clarify exactly what was happening to the USSR through Khrushchev's rule. By 1961, the Soviet Union was suffering a crisis of overinvestment (in Marxist parlance a crisis of overproduction)—ironically the very thing Marxists had believed would affect capitalist economies—resulting in slower growth rates. In effect, by taking markups on goods from its population and profitable enterprises, offering them low interest rates and constraining investment options, the state transferred the surplus to unprofitable industries. Consistent with Lenin's vision of the economy as one large factory enterprise, the state's consolidated budget functioned as a giant industrial development bank. The problem was that the loans were no longer performing well and society at large was calling in its margin through inflationary pressure. The first action available to a failing bank is to economize on its assets to maintain collateral. On May 17, 1962, the Council of Ministers approved price increases of up to 25% on milk products and 35% on meat and poultry. According to interviews conducted by Taubman, Khrushchev initially resisted these increases but was eventually persuaded by Kosygin. The price increases were “good economics”: by increasing the price of scarce goods, demand would fall be reduced and, as the hidden

²²⁴ Polly Jones, “From Secret Speech to the Burial of Stalin: Real and Ideal Responses to de-Stalinization,” in *The Dilemmas of De-Stalinization: Negotiating Cultural and Political Change in the Khrushchev Era* (London: Routledge, 2007), 41–63.

²²⁵ Taubman, *Khrushchev*, 520-524.

inflation in the Soviet economy translated into prices rather than shortages and falling capital intensity. When the price increases came into effect in June 1962, a population that was promised abundance was shocked. Pamphlets and graffiti denouncing Khrushchev appeared in the major industrial cities of the USSR threatening to “ground up Khrushchev for sausages.” The worst of these disturbances happened in the Urals city of Novocherkassk where striking workers and security forces clashed, resulting in twenty-three protestors dying on the spot.²²⁶

The Novocherkassk massacre appears to have left an impression on both Khrushchev, who was haunted by it until his death, and future Soviet officials who resisted any cuts to social services or price increases on consumer products for the next decades of Soviet power.²²⁷ More harvest failures in 1963 pressed the USSR to import grain from capitalist countries to avoid a repeat of 1962. In August 1963, a secret letter to local party officials ordered them to begin actions to “economize on bread” and increase coercive measures to extract grain from the collective farms.²²⁸ The Soviet Union had adopted an austerity program. The fact that the money supply in the Soviet Union was tightly controlled by the state and the state budget encompassed the entire economy just meant that unlike in today’s Eurozone economies like Greece, it was scarce food and consumer goods rather than state spending that was cut (with the welfare effects being the same). Much as the Euro restricted the Greek state’s ability to isolate its budget from its German counterparts, the Lenin-Kautsky model of the economy as one large factory gave the USSR less room to maneuver than a market economy issuing its own currency in which a state’s

²²⁶ Ibid., 520-523.

²²⁷ Ibid.

²²⁸ RGANI f. 5 op. 32 d. 225 ll. 1-16.

balance sheet, through welfare functions and devaluation, could act as a countercyclical policy tool. This analogy to contemporary economics helps us understand why the USSR launched a currency reform in 1961. The currency reform, in which money denominations were adjusted at a 10:1 rate, should be understood as a devaluation to lower the value of the ruble *vis-a-vis* the USSR's main creditor—its own population.²²⁹

Another way that a state can respond to a fiscal crisis is to begin structural, economic reform to begin receiving more returns on investments. On September 9, 1962, *Pravda* ran an article by Evsei Liberman titled “Plan, Profit and Bonuses.” Liberman largely repeated the arguments he made in his 1955 *Problems of Economics* article but distilled them to appeal to a more general audience.²³⁰ Liberman proposed making profitability, rather than gross output, the central indicator for planning and allowing workers and managers to receive bonuses based on their profitability. Liberman's article on the front page of the country's most prominent newspaper signaled that something was changing in the USSR. Western observers quickly picked this up—Liberman was featured on the February 12, 1965 cover of *Time*. While Liberman was lauded in the Western press as the face of reformist economics in the USSR, in fact, his role was much more convoluted. Following the XXII Party Congress, Liberman had sent his article to *Izvestiia*, the Soviet government's official newspaper, edited by Khrushchev's son-in-law and close advisor, Alexei Adzhubei. It is likely that Liberman understood that this was a way to get the leader's attention without going through convoluted official channels, and he was correct. Upon hearing of the article, Khrushchev took the scoop away from his son-in-law

²²⁹ On the 1961 Monetary Reform See “Kristy Ironside, “The Value of Ruble,” 76-81.

²³⁰ For a discussion of Liberman's 1955 article, see chapter 1.

and ordered that Liberman's work be run in the more widely read *Pravda*.²³¹ Liberman's intervention thus came at the right place and at the right time, but it did not represent the vanguard of reformist economic thought in the USSR—it simply opened the public conversation.

Stymied by his father-in-law's intervention, Adzhubei searched for his own editorializing economist. He found one in Igor Birman (not to be confused with Alexander Birman) and, to a lesser extent, his co-author Vladimir Belkin: two young economists whose work was influenced by the cost-of-production approach to pricing and whose expertise was in the new field of computer modeling. The most influential article written by the pair was the November 1962 "Price and Profit," which expanded on Liberman's analysis of profitability and replaced the incentive mechanism from bonuses to "the repayment for the use of productive funds." What Birman and Belkin imagined was that enterprises would pay the state back a certain percent of their total yearly profit for every ruble invested in their productive funds. The remainder of the profit would be kept by the enterprises and invested into whatever area the management thought best for profitability—from wages, to bonuses, to increases in social services and technical improvements. The new schema would replace the major source of funds for the Soviet budget from the turnover tax to the repayment for productive investments by enterprises—in effect creating an interest payment for lent capital. The proposal was supposed to best serve all interests. The state would have its budget controlled via a stable rate of repayment for its investments in the enterprises. The enterprises would have greater independence over their own production and be governed by return on investment, or profit which they could distribute

²³¹ Evsei Liberman "Plan, Pribel i Premia" *Pravda*, September 9, 1962, 1; S. Khrushchev, *Nikita Khrushchev*, 845-849; "Russia: Borrowing From the Capitalists?" *Time*, February 12, 1965.

to their workers. The consumer would not only be able to directly influence the economy through spending (thus affecting the profitability of the enterprise) but also benefit from differential prices on goods of different qualities. The pre-requisite for this radical new direction in economic management was a total reform of wholesale prices to reflect “the cost of production,” or the cost of capital. Birman and Belkin explicitly cited the work of Vaag, Atlas, and Zakharov from the debates of 1956 and 1957 in arguing that the best way to compose prices was through the combination of the cost of goods produced (*sebestoimost*) and the average return on capital over a moving five-year period for each branch of industry.²³² What the duo left to the imagination was what would happen to unprofitable enterprises—bankruptcy and restructuring, with its associated unemployment, were outside the realm of acceptable discourse.

The explosion of economic discussions in the pages of the USSR’s mass circulation media was not happening in a political bubble. The pressures on the state budget illustrated above were pushing Khrushchev the mobilizer to play, reluctantly, with becoming Khrushchev the technocrat. In November 1962 a Central Committee Plenum was called to deal with the problem of industrial policy and economic development. Addressing the plenum, the General Secretary acknowledged that “as many economists now propose, profit must play a greater role in economic management” but hedged his bets by saying that “while these proposals must be considered, profit cannot be the sole goal of socialist industry.” This same reluctance was evident in the Plenum’s priorities. While Khrushchev dedicated a larger portion of his speech to the Plenum to increasing the economic efficiency of management, the signature initiative that came of the meeting was the decision to split

²³² I. Birman and V.D. Belkin, “Tsena i Pribel’,” *Izvestiia*, November 12, 1962, 3.

the party's cadres into two—those responsible for agriculture and those for industry, a classic act of administration.²³³

Despite the establishment's hedging, the wheels were already turning toward structural economic reform as a viable political position. The Liberman article opened a wide-ranging discussion within the Soviet press with workers, managers, engineers and economists writing in, to both defend and attack the positions laid out in the September article. The contributions and suggestions were collected by a commission chaired by Gatovsky with a final report written by the head of the Academy of Sciences, M.V. Keldesh, Gosplan head L.F. Lomako, and *Pravda* Editor-in-Chief P.A. Satukov. The report concluded that one of the main problems in Soviet economic planning was that socialist enterprises were laboring under too many indicators that forced them to often work at cross purposes. Further, there was no real definition of the rights and responsibilities of the enterprises and their managers. Therefore, enterprises were not using their full productive capacities, as doing so would often contradict orders from above. Any attempt at strengthening cost accounting (*khozraschot*) was stymied by the fact that individual enterprises had very limited control over the use of their own financial resources. The report went on to explain that “the lowered role played by profit in the Socialist economy compared to the Capitalist economy did not exclude its use as an indicator of quality and to stimulate more efficient production.” Yet, the influence of Gatovsky and his cautious, conservative economics was felt throughout the report, which stressed that while the role of profitability needed to be increased it could not be the only, or even the most important, indicator of success in the Soviet economy. The report was delivered to the desk of now

²³³ RGANI f. 2 op. 1 d. 623 l. 15 ob; Taubman, *Khrushchev*, 523-524.

First Deputy Chairman of the Council of Ministers, Kosygin, and was meant to be processed and passed on to Khrushchev.²³⁴ In December 1962, a commission headed by Lomako began working on finalizing the long-discussed Law on State Enterprises to better define the responsibilities and rights of enterprises and managers as a matter of statutory rather than ad hoc administrative law. The law's first draft was ready to be sent for comment to the ministries and party commissions in February 1963.²³⁵

Something changed in the USSR by late 1962 and early 1963. While radical economic reform was still not possible, the direction of thinking about the economy had shifted. Previously, economists had been debating on the pages of economic journals and monographs, and technocrats within the state apparatus focused mostly on fixing the problems of the various new bodies introduced by Khrushchev. Yet by the start of 1963, the mounting pressures and expectations of the economy, put these debates and larger questions about the future of the Soviet economy and central planning out in the open.

From Invested Capital to Political Capital: The Economic Discussion and the Formation of Institutional Interest Groups

The move toward to economic reform went hand in hand with the deepening of the crisis of Khrushchev's tenure. As James Richter argued, the inability of the General Secretary to spur growth between 1962 and 1964, combined with failures abroad, was breaking the coalition he assembled in 1955.²³⁶ The growing dissatisfaction of various groups over the direction of the Soviet economy meant that the debate that had started in

²³⁴ ARAN f. 1877 op. 11 d. 164 ll. 3-18.

²³⁵ GARF f. 5446 op. 99 d. 430 l. 77.

²³⁶ James G. Richter, *Khrushchev's Double Bind: International Pressures and Domestic Coalition Politics* (Baltimore ; London: Johns Hopkins University Press, 1994), 153–174.

1962 was by mid-1963 taking on a much more directly political valence as economists and other reformers began to try to craft specific domestic policies. Charles Maier has argued that economic ideas are more than simply academic positions: they reflect poles around which various social groups and institutions with specific economic interests can rally. In this sense, the outcomes of economic policy can be a “revealed preference” of certain interest groups in society which might benefit from certain economic results—even if they are at odds with the interests of society at large. This implies that a historical approach to “political-economy” requires an explicit focus on how certain, often abstract and academic, ideas are politically deployed by interested groups.²³⁷ For the USSR, with its extremely limited public sphere and hierarchical organization, this also means delving into institutional competition as institutions became the political bases of various groups and the nodes from which economic ideas issued.

As Khrushchev’s polity began to fracture, the conflicts between these bases began to emerge in public and economic ideas became policy positions. While the power of the ministries was curtailed by Khrushchev’s 1957 reforms, the central apparatus still employed thousands of people and the Republics and Sovnarkhozes simply replicated these structures. The Soviet state was well designed to use Party mobilization to solve its problems, by reorganizing the structures from above, but economic reform—with its wholesale rebuilding of economic relationships—would require a vast amount of political capital and subtle legal techniques that the USSR did not have in its arsenal. Indeed, the Soviet Union was, in fact, a rather weak state with a strong Party hierarchy. Thus, economic reforms could take many forms as interest groups rallied to visions of change to push their

²³⁷ Charles S. Maier, *In Search of Stability: Explorations in Historical Political Economy*, (Cambridge: Cambridge University Press, 1987), 12–14.

agendas and subsequently began to build institutions—formal and informal—that would serve to further their goals.

While the public debate on economic reform began in the pages of the Soviet press and started to penetrate high-level discussions, economic research plowed forward. The Nemchinov committee organized in 1960 delivered its report to the Gosekonomsovet and Vladimir Belkin was tasked to use newly available computers to build a comprehensive model of an economy based on the new “unified” wholesale prices (prices that reflected the cost of capital) in January 1961. According to Belkin’s autobiography, through 1961 and 1962 he struggled to have his results made public. The head of the Gosekonomsovet, Alexander Zasyadko, insisted that the data he generated could only be published in secret or, at best, with the designation “for official use.” However, in September 1963, for some unexplained reason, the book was published for public consumption.²³⁸

This development emboldened Belkin and his associates to lobby the government more aggressively. Against the advice of the experienced Nemchinov, who told them that “[their] mathematical and the scientific potential is great but [their] chances of practical success [was] low,” the team sent copies of their work to Khrushchev, who in March 1964 forwarded it to First Deputy Chairman of the Council of Ministers Kosygin, defense industry chief and head of the newly created All-Union Central Economic Council (VSNKh) Dmitry Ustinov, Gosplan Chairman Piotr Lomako, and Finance Minister Vasily Garbuzov. This was not the friendliest audience for economic reform. Ustinov had a long career in the military-industrial complex and was a firm supporter of centralization, administration, and the priority of heavy industry. His protégé, the preceding chairman of

²³⁸ V.D. Belkin, *Tveryi put’ ekonomista*, 52-54; V.D. Belkin, *Cheny edinogo urovnia i ekonomicheskie izmereniia na ikh osnove* (Moscow: Izdatel’stva Ekonomicheskoi Literatury, 1963).

Gosplan, Vladimir Novikov, had, since the start of the Liberman debate, been against rushing into economic reform. In March 1963, Ustinov had been appointed the chairman of the newly created VSNKh which subordinated all other economic bodies under it, including Gosplan and the Sovnarkhozes. Lomako was also not a supporter of reform and remembered as more interested in restoring order to Soviet industry after the Sovnarkhoz reforms of 1957 than in introducing fundamental changes. These officials, resenting Khrushchev's administrative reforms which eroded their power, were also hostile to any economic program which could do the same through other means.²³⁹

The results of the meeting were predictable. At a meeting of the Gosplan collegium and academics held on May 27-29, 1964, Lomako and his supporters attacked the calculations produced by Belkin as "harmful to Soviet state interests." Further, since the Institute in charge of the research, the All Union Institute for Electronic Calculating Machinery, was, since 1963, attached to Gosplan, Lomako stated that he would not "tolerate such behavior" from its staff. Speaking of Belkin specifically, Lomako reportedly stated that the economist was a "fanaticizer who, with his drivel, wastes the time of people who actually do work." In June 1964, Lomako sent his report to Kosygin, which recommended rejecting all of the proposals for a general reform of prices produced by the academic economists as such actions would "change all of our economic values." Instead, Lomako proposed that Gosplan's own Section on Prices set the new wholesale prices demanded by the 1960 Plenum. Kosygin's response to Lomako is telling. Even Belkin, who believed Kosygin was not a true ally to reformers, recalled that the Deputy Premier berated Lomako for his crude behavior toward the scientific community, warning him that

²³⁹ S. Khrushchev, *Nikita Khrushchev*, 966-968.

“such outbursts [as had occurred at the Gosplan meeting] will lead to them [academic economists and other scientists] to not come to us at all.” In fact, Kosygin personally thanked the researchers for presenting their proposals and for their active participation in discussions with policy makers. However, at the end of the day, Kosygin approved Lomako’s final report.²⁴⁰

Kosygin’s role in the events of 1962-1964 was ambiguous. From all appearances, the Deputy Premier was an extremely intelligent man. However, he was also a member of a generation that had learned to be cautious and was, according to Kremlin insiders such as Georgii Arbatov, a person who struggled to rectify his deep loyalty to the Communist Party, its ideals and hierarchy, with an active mind that understood the fundamental economic problems of the USSR. Gosplan economist and pioneering Soviet econometrician Vladimir Kossov recalled that Kosygin had a natural understanding of economic intuition and instantly grasped numerical data but never had the courage to push radical policy agendas in the Politburo. Yet, if he was not ready to defend the economic reform agenda outright, as we shall see, Kosygin was likely working to advance the agenda through more subtle means.²⁴¹

While Gosplan may have been hostile to economic reform projects, the GKNT and its leadership supported Belkin and his colleagues. Its director, N.K. Rudenov, was a new kind of Soviet economic official who moved his agency, tasked with “technical progress,” into promoting social science and management, believing that it was a type of technology and thus under his organization’s purview. Unbeknownst to the economists working on

²⁴⁰ V.D. Belkin, *Trevnistnyii put' Ekonomista*, 54-59.

²⁴¹ Author interview with Vladimir Kossov, Moscow, Russian Federation, November 25, 2014; this characteristic is also confirmed in Georgii Arbatov, *The System: An Insider's Life in Soviet Politics* (New York: New York Times Books, 1992), 121–122.

price reform, the GKNT was already working on the problem of economic reform and on increasing the role played by computers in central planning. The GKNT's point man in the effort was its Deputy Chairman, Dzherman Gvishiani. Gvishiani's career trajectory will be the subject of a separate chapter of this dissertation, but it is already important to point out how extremely unusual his position was. Gvishiani was not an economist, mathematician or even an engineer—he held a *Kandidatskaia* (and later a *Doktorskaia*) in what we would now call the Philosophy of Science. His research interests were also unusual—the epistemic study of American management science, particularly in its MIT variation. It was because of this background that he was likely appointed the Deputy Chairman of the GKNT in charge of international cooperation in the areas of science and technology.²⁴² Being Alexei Kosygin's son-in-law did not hurt his meteoric rise. While in his own recollections Gvishiani never admitted to using his famous relative's political clout in advancing his career, archival evidence (and common sense) supports the notion that it was a factor. During Gvishiani's 1969 doctoral defense, a representative of the Construction Ministry (*Gosstroï*) turned his question about Taylorism into a long polemic on the orders coming from Kosygin, obviously counting on Gvishiani's intercession with the Soviet Premier.²⁴³ Thus, Kosygin's connections with economic reform took on a personal, unofficial guise. Indeed, with the dissolution of the Gosekonomsovet in 1963, Vaag would be hired full-time by the GKNT and Belkin and Birman included as some of its staffers for economic research.

In 1963, Gvishiani was appointed the head of the GKNT's "Expert Council on Problems of Scientific Management in the Economy," a body that included Fedorenko,

²⁴² D.M. Gvishiani, *Mosty v budushchee* (Moscow: URSS, 2004), 25-54.

²⁴³ ARAN f. 1922 op. 1 d. 1213 ll. 207-209.

Lieberman and Glushkov among its members. The program proposed by this committee was a decades-long reconstruction of the Soviet economy based on the introduction of computing and “methods of efficient economic management.” It envisioned the upcoming Five-Year Plan for 1965-1970 as the first “experimental stage” during which methods of rationalized economic management would be introduced. Between 1970 and 1980—Khrushchev’s target for achieving Communism—the system of real-time, accurate price-level data, calculated based on the current demand of the economy, would be widely implemented and the Soviet economy primed to “enter Communism.” This meant that 1964 to 1965 would be the critical years for laying down a course of action. In conjunction with the Academy of Sciences and its ad hoc “Committee on Economics, Planning and Enterprise Organization,” the GKNT issued plans to experiment with a new type of industrial organization—the “combine” of multiple, supply-chain integrated factories operating on “full cost accounting”—in the Russian Soviet Federative Socialist Republic’s paper industry. These new administrative units would be issued new, more accurate, sets of production costs and prices to test how a new economic system would work. Further, they were given a charter of rights and responsibilities designating them as “the basic unit of planning.” What was emerging in Gvishiani’s Commission was the cybernetic vision of economic reform that would soon be taken on as a mantle by CEMI and its allies.²⁴⁴

What had started as a debate on the front page of *Pravda* over Liberman’s article in 1962, had by 1963 become a matter of institutional competition with reformist economists emerging as a camp actively pursuing its own agenda for change over that of the ministries, Gosplan, and the VSNKh. Concentrating around research institutes within

²⁴⁴ RGAE f. 9480 op. 7 d. 1152 ll. 90-104.

the Academy of Sciences and the GKNT, economists and their supporters were not only advocating for radical reform but also establishing their own, parallel, institutional bases within the Soviet economic hierarchy. As the antagonism between these nodes of nascent economic politics erupted, their direct criticism of Soviet planning practice and bureaucracies intensified. In 1963, deputy director of the Institute of Economic Sciences of the Belarussian SSR, O.N. Pashkevich, wrote to the Central Committee to voice his concerns about the underutilization of economic sciences. Pashkevich was concerned that the planned development of the economy, the thing that “was impossible under capitalism” and in the USSR “established the place of each unit of the socialist society, every individual,” was being neglected. The reason for this was the “disconnect between economic research and practice.” While acknowledging the slow pace of economic research, he put the onus of the blame on the continuing influence of “Stalin’s Cult of Personality” amongst industrial managers. When economists came to analyze the work of enterprises and Sovnarkhozes and found “reserves that were not being used,” the managers and officials would stop sharing their statistical materials with them. A good manager, he wrote, “would be the first person interested in learning about and discovering the potential of his enterprise,” but the attitude of most industrial cadres showed “that perhaps it is too easy to become a factory manager in our country.”²⁴⁵

Pashkevich was not the only economist making claims against the way things were being done in the USSR. In June 1964, S. Pervushin, the chief editor of *Ekonomika*, the USSR’s economics publishing house, wrote to the Central Committee to warn that the USSR’s economy was in dire need of change and that its weakness posed an existential

²⁴⁵ RGANI f. 5 op. 55 d. 5 ll. 39-54.

threat to the state. Pervushin noted that the past decade had seen many promises of reform and suggestions about how to do it. For example, he noted that Rumiantsev's 1955 suggestion (discussed in Chapter 1) to establish a measure of the rate of obsolescence had long been ignored. He reminded the Central Committee that the 1957 Sovnarkhoz reforms were supposed to be only the start of a general reconstruction of the economy which was blocked by entrenched interests. Meanwhile, the growing complexity of the Soviet economy meant that "management had become worse, not better." Areas such as consumer goods, housing and services were being neglected "because a growing proportion of national income is being used to create increases in national income" through investments in heavy industry (goods and services were not considered to be part of national income in the USSR as they were not considered part of the "means of production.).²⁴⁶

This was more than an economic problem: it was a matter of global revolutionary importance. Certain capitalist countries such as Italy, West Germany, and France were recording growth rates over the decade that were as high as the USSR's. Meanwhile, Japan had achieved a growth rate two times higher than that of the Soviet Union and other socialist countries. Such a state of affairs meant that "bourgeoisie propagandists had more tools in their hand with which to attack the USSR." Even worse, the relatively low prestige of economics meant that the kind of propaganda that the USSR was deploying to counter these attacks was primitive and dogmatic. Pervushin admitted that such crude rhetoric was acceptable "when the socialist economy was still underdeveloped" but now that the Soviet Union had built "the conditions to begin overtaking the mightiest of capitalist economies—

²⁴⁶ RGANI f. 5 op. 55 d. 64 ll. 47-64.

the USA,” such pronouncements were counterproductive. Soviet researchers and authors had to “share the pluses and minuses of our economy with the world.”²⁴⁷

Such an honest accounting required more research in economics. The profession needed to begin agreeing on the “real rate of yearly growth” and Soviet propagandists needed to cite those instead of “fantastic figures of 40-60% found in the press.” It had to stop blaming individual cadres for not doing their jobs because the plans and rules were so badly developed that it was impossible to keep track of the responsibilities of enterprises and to resolve the conflicting orders that they received. Yet despite this situation, improvements and suggestions from economists continued to be received with hostility by the administrative apparatus and the academic establishment. “Typically,” Pervushin explained, “an economist brings a proposal to solve a problem. Then immediately, another group attacks him for being improperly Marxist as an excuse to not engage with and understand new ideas such as mathematical methods and cybernetics.” The older thinker’s paranoid fear of “restoring capitalism”— driven by “years of Stalinism”—killed the initiative of young scientific cadres. Pervushin closed his letter with a plea for the Central Committee, and the Politburo itself, to intervene in the ossified system by directly bringing on board young, reform-minded economists and forcing their ideas on the state apparatus.²⁴⁸

Pervushin’s dual focus on the press and the Cold War as the locus of his critique wasn’t incidental, or simply a function of his own background as a publisher. Rather, he was tapping into a confluence of phenomena that were enabling economic reformers to raise political capital by deploying discourse from an emerging “public sphere” into the

²⁴⁷ Ibid.

²⁴⁸ Ibid.

structures of political power. Though the use of the term “public sphere” seems somewhat oxymoronic in a polity with a strictly state-controlled press, Yitzhak Brudny has shown that during the early 1960s, “thick journals” such as *Novy Mir*, *Oktiabr’* and *Znamiia*, became locus points for factions within the party, debating the issue of nationality and Russian identity.²⁴⁹

Debates within the economics field were fought out in academic journals and publications such as *Kommunist*. These debates had, by 1960, already taken on a “Cold War” tone with opponents of mathematical economics accusing their rivals of destroying the labor theory of value and providing ammunition to Western propagandists, whereas the supporters of the new school accused the former of betraying Soviet goals of “catching up and overtaking capitalism” by attacking useful and innovative methods. The Liberman debate, which started in 1962, already showed how the pages of *Pravda* and *Izvestiia* had become fertile grounds for the direct deployment of economics into policy making. Yet, as the momentum toward economic reform accelerated, the press became a tool that reformers, and their supporters, self-consciously used to make the case for change as a matter of national and ideological survival. The curated “economic debates” in journals and newspapers became a way of building a direct line of communication to the high leadership that allowed them to balance the relative weakness of their institutional bases.

A case in point was the debate launched by Academician V.A. Trapeznikov in *Pravda* on August 17, 1964. Trapeznikov had a social and institutional profile typical of many figures interested in economic reform. Starting his education in a mathematical lyceum in the 1920s, he earned his undergraduate and graduate degrees in electrical

²⁴⁹ Yitzhak Brudy, *Reinventing Russia: Russian Nationalism and the Soviet State 1953- 1991* (Cambridge, Mass: Harvard University Press, 1998), 33-35.

engineering, eventually joining the faculty at the Moscow Energy Institute—the same one run by Malenkov’s spouse and where Vaag had begun his career. In 1951, he became director of the Institute of Automation and Telecommunications, placing him at the heart of the cybernetics community, which adopted economics as a branch of their own science. In 1965, he would become the First Deputy Chairman of the GKNT. Due to his expertise in automatization, Trapeznikov was part of a 1963 Soviet industrial delegation to Japan. What he saw there disturbed him: Japanese industry was far more efficient and modernized than its Soviet counterpart. Trapeznikov reported his findings to Kosygin, who encouraged him to write an article explaining his proposals for improving Soviet industrial practice and planning in *Pravda*. Kosygin planned to then pass the article to Khrushchev: perhaps understanding that the General Secretary would be far more sympathetic to a spontaneous proposal from an activist academic than a committee report, which would get bogged down in bureaucracy and interest group competition.²⁵⁰

The article, entitled “For Flexible Management and Economic Practice,” appeared in *Pravda* on August 17, 1964, taking up most of the front page as well as the third page. It explained that Soviet enterprises were overwhelmed by a “wave of norms and indicators that do not reflect the quality of their work” and were determined by “the results of the previous year’s outcomes rather than any scientific criterion.” Trapeznikov proposed that Soviet economic planning shift its tools from quantity-based output targets to a system of “taxes, fines, flexible prices and other financial indicators.” Such systems were used successfully in the “most advanced capitalist countries, including the USA” and would be even more effective in Soviet conditions. Trapeznikov was especially impressed by how

²⁵⁰ Igor Birman, *Ia ekonomist: o sebe, o liubimom* (Moscow: Ves Mir, 2004), 249-252.

the Bureau of Measures and Standards regulated the quality of American products. If such a system worked in the West, he explained, “in our conditions, when all economic and financial resources are in the hands of the state, it would have even greater results.” Trapeznikov argued that the sole indicator of enterprise performance should be profitability. The prerequisite for such a system was that enterprises would be given more control over their “productive funds,” especially the wage fund. Trapeznikov explained that this meant an overhaul of Soviet fiscal mechanisms. Like Birman and Belkin, he advocated replacing the turnover tax with payments to the state budget for capital by individual enterprises. He also believed that direct capital investments had to be complimented with an expansion of trade credit financing from state banks which would allow enterprises to create more flexible, direct contracts with each other and purchase goods from their counterparties on credit. He concluded that arguments that “interest payments on capital are only a feature of capitalism were unconvincing.”²⁵¹

Trapeznikov’s article restarted the public discussion that had been opened by Liberman but petered out somewhat in 1963. On September 1, 1964, V. Shkatov, the deputy director of Gosplan’s Section on Prices, agreed with Trapeznikov’s proposal and expanded on it, explaining that differential payments for natural resources should also be introduced.²⁵² Leonid Leontief, one of the Soviet Union’s grand men of political economy—the man Stalin had charged with editing his economics textbook—supported Trapeznikov’s proposals and argued that they had nothing to do with capitalism or explicitly capitalist practice.²⁵³ Liberman responded to Trapeznikov on September 20th in

²⁵¹ V. Trapeznikov, “Za Gibkoe Ekonomicheskoe Upravlenia Predpriatii” *Pravda* August 17, 1964, 3-4.

²⁵² V. Shkatov “Polezno Stane- Vygodno Kazhdemu” *Pravda* September 1, 1964, 2.

²⁵³ L. Leontief, “Plan i Ekonomicheskie Metody Upravlenia” *Pravda* September 2, 1964, 2.

an article titled “Once More on Plan, Profit and Bonuses.” Here he stepped away from some of his more radical proclamations of 1962, arguing that while profitability was critically underutilized as an indicator in the USSR, it could not be the sole indicator of enterprises compared to the productivity of labor. While Liberman supported Trapeznikov’s assertion that profitability did not mean an abandonment of Marxism, he placed a heavier emphasis on the fact that the profitability mechanism worked by stimulating “the increased initiative of our labor” rather than improving the efficiency of capital. Thus, Liberman was skeptical of the importance of credit financing or enterprise payments for capital investments.²⁵⁴ The disagreements between Liberman and Trapeznikov, though seemingly minor, were the product of a larger split in the Soviet economics community between the “cost of production school,” with which Trapeznikov, Birman and Belkin were associated, and Liberman’s “cost of labor,” *Tovarnik* approach, also associated with Yakov Kronrod and Alexander Birman. In May 1964 Nemchinov’s reform proposal was posthumously published in *Kommunist*. Nemchinov’s article shared the emphasis on profitability and enterprise independence but argued that price reform had to be conducted based on computerized information processing that considered continuous economic data and allowed the state and Party to incentivize their goals. These new prices would be the basis of “stable norms” which would be developed for the whole plan period, with defined long-term developmental priorities, and not randomly changed as per contemporary practice. Further, he integrated special “plan orders” from the government as a tool for the state to continue setting a base performance level for the economy. Enterprises would be free to sell any goods that exceeded the plan to consumers and other

²⁵⁴ E. Liberman, “Eshe Odin Ras o Plane, Pribeli i Premii” *Pravda*, September 20, 1964, 3.

enterprises under a contract system. Thus, Nemchinov tried to rectify the individual short-term interests of enterprises with the long-term interest of the Communist state.²⁵⁵ While Trapeznikov and Liberman represented the “cost of production” and “labor value” schools, Nemchinov’s article was the first public scheme laid out by the “Mathematical Economists” and shared the combination of greater mathematical sophistication and sympathy for centralization that would subsequently be enunciated in the Socialist Optimally Functioning Economy (SOFE) models debuted later that year by the Central Economic Mathematical Institute (CEMI).²⁵⁶

Yet if subtle differences were emerging in the economics community’s public pronouncements, the blitz of publishing by reformers in the Soviet press also elicited a response by their opponents in the planning bodies. In 1964, the VSNKh’s research institute prepared a briefing on the Trapeznikov discussion. Unlike the hostile reactions of Lomako and Ustinov, this report tried to cut a middle path. It acknowledged that the articles were a result of “a divergence between the scientific-research community and those involved on the practical side of planning and management.” In fact, the staff agreed that there were certain areas of the proposal that made sense, agreeing with Trapeznikov that the USSR was falling behind “the leading Capitalist states” in productivity and in the implementation of computing technology. Yet, the replacement of all plan indicators with “profitability” was a step too far and would erase the line between the two social systems. It also complained that the articles in *Pravda* were one-sided and did not point to disadvantages of the proposed system, such as short-termism in enterprise behavior, or reference the experiences of actual enterprise managers working under new “experimental”

²⁵⁵ V.C. Nemchinov, “Sochialnoe xozastvovaniia i planirovania proizvodstvo” *Kommunist* no. 5, 1964.

²⁵⁶ See chapter 1.

conditions being implemented by the VSNKh and the GKNT. The report also noted that Gosplan was already working on a set of wholesale prices that would reconcile the need for better efficiency with the state's long-term interests.²⁵⁷ The VSNKh staff were not reactionaries determined to stymie reform and cut off cooperation with the more radical academics and their allies. Rather they were conservatives who agreed with the general direction of action that the reformers proposed but feared that their specific proposals went too far too quickly. This cautiousness would become the default position of the staffs of the state economic planning agencies, especially Gosplan, as they navigated between the hardliners in the production ministries and Sovnarkhozes, and the radical proposals of the academics and their allies, especially those that threatened to rob Gosplan of its ability to allocate resources as it saw fit.

Conclusion: The Politicized Economy and the Soviet Ideological Project

By mid-1964, the intellectual positions and institutional alignments of various economic reformers and their opponents were established. More than just a matter of simple institutional and intellectual competition, these groups and their preferences were evidence of a fundamental dissatisfaction with the state of affairs in the USSR and its inability to transition from socialism to communism. The kinds of alliances and tactics that Khrushchev had used to build a base of support were coming undone and instead of one direction of development led by the Party—the Soviet ideal—very real political debates had begun within the Party. As the organization of the Soviet economy came into question

²⁵⁷ RGAE f. 524 o. 2 d. 114 ll. 1-64. My gratitude to Vyacheslav Nekrasov for showing me this document.

so did the legitimacy of Khrushchev's course. This, in combination with upsets in foreign policy, destabilized Khrushchev's political base, ultimately paving the road to October 1964.

The fact that there was something wrong with the Soviet economy was easy for all to see. Yet the solutions to the problems of planning, and even their causes, elicited heavy debate. What was certain is that by October 1964, the authority of economists as experts in the policymaking process was now no longer a dream, but a nascent reality. For the first time since Malenkov's defeat in 1955, there was a potential for an economic rather than an administrative reform of the Soviet system. However, the question of what criterion of value to select for economic decision making remained open, even amongst the most radically-minded economists. As we shall see, this dilemma made reform easy to initiate but extremely hard to define, as so many different groups held different meanings for that one word.

Chapter 3

Reform in Action?: The Political Contexts of the Kosygin Reforms

On September 27, 1965, the new Soviet Premier (Chairman of the Council of Ministers), Alexei Kosygin, mounted the podium at a Plenum of the Central Committee. In his speech, Kosygin announced that “at the present stage of development in our economy, science, technology and culture, we need to start prioritizing economically rational management.” He noted that “we are not taking advantage the superiority of our socialist system” as Soviet growth rates were falling while those of many capitalist countries remained positive. The USSR could not even export its goods to its allies as “[its] machinery was of lower quality than that of most capitalist states.” Kosygin proposed three major solutions to the country’s economic problems. First, he declared that planning must be placed “on a more rational basis,” to more efficiently put available resources toward the achievement of “scientifically determined goals” based on “the general laws of socialist development.” Second, he proposed “a whole series of measures to increase the independence of enterprises” in fulfilling their assigned tasks. Third, he emphasized the need to “strengthen ‘cost accounting [*Khozrasset*],’ by increasing the priority of other enterprise indicators such as profitability, the expanded use of commercial credit, price levers, and bonuses for productivity.”²⁵⁸

The process that the September 1965 plenum launched, which in Soviet parlance was officially called the “September 1965 Reforms,” and were later to be labeled the “Kosygin Reforms,” looked like they might fulfill the dreams of the most radical of economic thinkers. In the years running up to September 1965, international observers also

²⁵⁸ RGANI f. 2 op. 1 d. 805 ll. 5 ob-8.

thought the Soviet economy might be headed for a radical change. Evsei Liberman made the cover of *Time Magazine* as a stand-in for a perceived trend in Soviet thought that encouraged “borrowing from the West” in economic practice.²⁵⁹ Yet, while Western Sovietologists believed that the Kosygin reform was an important event for the USSR, and would later write about its ultimate failure as an example of Soviet corporate politics (as we shall see quite accurately), since the “archival revolution” the Anglophone literature has barely mentioned the Kosygin reforms or what it meant for the Soviet system.²⁶⁰ In her under-cited book, *Soviet Consumer Culture in the Brezhnev Era*, Natalya Chernyshova describes the Kosygin reforms as a crucial step in the building of a Soviet consumer culture but does not explore their actual content.²⁶¹ Both Vladislav Zubok and Slava Gerovitch dismiss the reforms, and their potential, as a fantasy of the intelligentsia.²⁶² The Russian-language literature is not much better. Most writings on the reform have been written by participants and/or are polemics on the reformability, or lack thereof, of the Soviet system.²⁶³

This chapter will not only fill the void in the literature by documenting the conditions under which the Kosygin reforms were formed but also will suggest that rather than debate reformability, a more productive way of discussing the reforms is to understand them as a key moment in the political history the post-Stalin USSR. It will argue that the

²⁵⁹ “Borrowing from the West: The Soviet Flirtation with Profits” *Time* February 12, 1965.

²⁶⁰ See for example, George Besslauer, *Khrushchev and Brezhnev as Leaders: Building Authority in Soviet Politics* (George, Allen and Unwin, 1982); Robert Westin, *Lenin’s Legacy: The Story of the CPSU* (Stanford: Hoover Institution Press, 1978).

²⁶¹ Natalya Chernyshova, *Soviet Consumer Culture in the Brezhnev Era* (New York: Routledge, 2013).

²⁶² Slava Gerovitch, *From New Speak to Cyber Speak: A History of Cybernetics* (Cambridge, Mass: MIT Press, 2002), 275–277; Vladislav Zubok, *Zhivago’s Children* (Cambridge, Mass: Belknap Press, 2009), 276–279.

²⁶³ See for example G.A. Popov, *Reforma ne reformirovuemogo: popytka Kosygina* (Moscow: Mezhdunarodnii Universitet V Moskve, 2009).

reforms were the result of an ideological and political opportunities in the wake of Khrushchev's October 1964 ouster. In that moment, the new leadership, wracked by internal rivalries, had not yet defined exactly what would come after Khrushchev's tumultuous decade in power, thereby creating the space for the various intellectual camps in Soviet economics to try to turn their ideas into policy. As well, with Khrushchev's removal, the Soviet leadership could acknowledge the vast economic challenges facing the USSR and the fact that it was losing "the socio-economic competition" with the West. This political vacuum was a unique period in which every interest group saw the possibility of reshaping the economy. The events that followed the October Plenum marked the apogee of the process of economics' transformation from a science used to justify the decisions of Soviet leaders to a "Cold War Science" in which economists defined themselves as experts advising their country's leadership on how to improve the domestic economy in the face of superpower competition. By studying the drafting and then the implementation of the Kosygin Reforms, this research shows how deeply economic ideas were marshaled to create political programs advocated by distinct coalitions of schools of thought and interest groups.

This chapter will also show that the programs of reform that attempted to influence the writing of the Kosygin Reforms were as hampered as they were aided by the politically fluid conditions of the mid-1960s. Without a narrative for the future of the socialist system, a decision was made to implement the reforms through administrative, rather than through statutory law, as had been envisioned during the late Khrushchev period with the discussion over a "Law on State Enterprises." This re-enforced the fundamental weakness of the Soviet political system: the inability to openly reconcile and debate differences in the

process of drafting legislation. This feature of politics, spurred by the Democratic-Centralist ideal, meant that choosing to conduct reform through a set of ad hoc, open-ended goals which were vulnerable to many different readings was more politically feasible than the drafting and implementation of a long-term program of deep economic and social change. As such, I argue that there was no comprehensive “Kosygin Reform,” but rather that the September Plenum set off a process of competition between various interest groups over the future of Soviet society. However, our *ex-post* assessment of the reforms’ ultimate failure should not cloud us to understanding their importance both to understanding Late-Soviet history and to the actors involved with them. The reforms capped off a transformation that had begun in 1956. The competition over the Kosygin Reforms was a new kind of political process in which economic expertise was mobilized by various groupings to push their agendas—a shift in political practice that raised more questions than it provided answers.

Neither Catching Up Nor Overtaking: The Post-Khrushchev Dilemmas of the Soviet Cold War

On October 12, 1964, Nikita Khrushchev was vacationing in Abkhazia when he received a call from his subordinate, Leonid Brezhnev, about an emergency meeting of the Presidium that was called to address the pressing problem of agriculture. The General Secretary’s presence was needed. Two days later, after being grilled by his colleagues, Khrushchev was stripped of his offices and retired. From a certain point of view, the October 1964 Plenum represented a step toward the “normalization” of Soviet politics. The Party had just, through the initiative of its middle cadres, removed a General Secretary and sent him into retirement with no blood spilled or armies mobilized. Yet an examination of

the transcripts of the October Presidium meeting and subsequent Central Committee Plenum mark it not only as a moment of a triumphal Party ousting an increasingly ineffective leader, but also as a moment of profound political anxiety about the future of the Soviet project.

A reading of the proceedings of the October Presidium meetings indicates just how central Khrushchev's economic failures were to his removal from power. A draft of the Presidium's report to the Central Committee, to be read in the wake of Khrushchev's resignation, explained that "It is no secret to anyone that we have created a myth of a 'great decade' of economic development. We are constantly told that, in the years that Khrushchev has been in charge, miracles have occurred in our economy." However, "the truth is that in this 'great decade' many aspects of our economy have become worse, not better." The Third Party Program was condemned for "unrealistic deadlines and projections" related to economic growth resulting from the fact that it was written on the basis of "no good economic research or accurate calculations." These same flawed projections were the origin of claims of "overtaking the United States in industrial production," a goal that the report, citing evidence from the Institute for Economics, showed was not being met. These failures were pinned on Khrushchev's 1957 *Sovnarkhoz* reforms and his subsequent meddling in the organization of economic cadres.²⁶⁴

The attacks on Khrushchev in October 1964 were conducted through the deployment of economic research on the state of the Soviet economy *vis-a-vis* the West. In a report to the assembled Presidium cited above, Brezhnev quoted research from the Institute of Economics that showed that the Soviet economy had slowed down during the

²⁶⁴ A.N. Artisov et. al. eds. *Nikita Khrushchev 1964: Dokumenty* (Moscow: Mezhdunarodnoy Fond Demokratia, 2007), 185-195.

Seven Year Plan and that growth in several countries in Western Europe and Japan had accelerated in the same period.²⁶⁵ Ironically, the revolution in Soviet thought that Khrushchev had launched in 1954, by publically admitting that there was a disparity in consumption between Soviet and American citizens that was not closing, had come back to haunt him as Brezhnev broke the final taboo: explicitly noting that the USSR's economy had thus far failed in its mission of "catching up and overtaking" the West. In 1965, a report of the Institute of Economics to the Central Committee noted that "the recent slowdown in economic growth in the Soviet Union comes at the time in which the capitalist states, and the United States, in particular, have seen some increases in output." While the USSR was still beating the USA over the course of the previous decade, the recent slowdown "created complications for the socio-economic competition of the two systems, for the competition of the USSR and the USA." The data presented by the report, and reproduced below, is consistent with the findings presented in the previous chapter and shows that the falling rate of return on central state investments, and thus the slowing of economic growth, was creating problems for profitability and output.²⁶⁶

Table 3.1: Sources for National Income of the USSR 1959-1963 in Billions of Rubles.

	1959	60	61	62	63
All Industry (not counting the turn over tax)	3.52	3.21	3.48	4.01	
Turnover tax	1.39	1.06	1.45	1.08	
Agriculture	-.40	.81	.51	.06	
Construction	.94	1.09	.20	.38	
Trade	.49	.55	.21	.41	

²⁶⁵ Ibid, 184-185

²⁶⁶ ARAN f. 1877 op. 8 d. 451 ll. 1-6.

Transport	.81	.72	.32	.28	
Structural and Safety Industries	-.09	-0.06	-0.02	-0.09	
Foreign Trade Balance	0.73	0.33	0.55	0.06	
Total Growth of National Income Accounts	7.4	7.7	6.7	6.0	4.5

Source : ARAN f. 1877 o. 8 d. 451 l. 6

This phenomenon was both cause and effect of a deep structural imbalance in the Soviet economy. Falling rates of “accumulation” (Marxist parlance for the rate of reinvestment of capital into the real economy) meant that disproportions between sectors A and B (heavy and light industry), as well as between all of industry and the agricultural sector was expanding. Therefore, citizens were increasing their hoarding cash and goods over the course of the last two years of the Seven Year Plan. The report pointed out that while the USSR had far larger national capital reserves than any capitalist country (a claim made based on the huge savings held by the population), its investment structures were causing the efficiency of capital to fall. While most Soviet investments went toward increasing production, two-thirds of investment in the United States went to consumption causing savings to rapidly circulate through the economy. The unstated implications were radical: the reason for the falling rate of national income and thus the slowing efficiency of capital was that there was a fundamental misbalance in the economy caused by the political priority of heavy industry.²⁶⁷

²⁶⁷ Ibid.

The Institute's assessment of Soviet backwardness was confirmed by Gosplan's own, internal, Institute for Scientific Research in Economics (NII). In a report, it argued that "the main reason that the task of the competition of the two systems was not fulfilled lies in the rates of growth of the capitalist economies which were underestimated by Soviet economists." Because of this miscalculation, "the period of the Seven-Year Plan coincided with an upswing in economic growth in capitalist countries" which had "higher growth than in previous economic cycles." Further, "it was thought, that [in this period] the capitalist economies would have to go through an [economic] crisis" which did not happen. The institute concluded that there were four reasons for this capitalist success that were not predicted by the USSR's economic theory: the large volume capital investments in industry; rapid, consumption-led economic growth: a decrease in the production of armaments; and finally, the restoration of global trade which forced higher capital efficiencies through competition. According to the institute's calculations, while investments into new capital assets in the USSR were larger, overall, than in the USA, the American rate of return on these investments was fifty percent higher.²⁶⁸

The problem of catching up and overtaking the United States was as much a problem of economic knowledge as it was of economic practice. In 1965, Gosplan ordered its various branch institutes and committees to issue reports comparing their resources usage and quality standards to similar sectors in the most advanced capitalist countries. The results were unacceptable. It was clear that the ministries and branches had neither knowledge of modern techniques of measuring per capita usages of raw materials and energy nor of contemporary international quality standards. In fact, these specialists in

²⁶⁸ RGAE f. 99 op. 1 d. 686 ll. 51-55.

production and engineering had very little understanding of the workings of contemporary capitalist economies in general. For example, Gosplan tried to compare the quality of 438 goods made in the Moscow Oblast to global standards only to realize that it had no comparative data for 338 of them. The report concluded that without the filtering down of specialist knowledge on capitalist economies to the branches and the founding of a specific organization to coordinate “catch up and overtake,” “all of our proposals about reaching global standards of quality and investment” will just be “clouds in the air” because “no one knows what those standards are” in the first place.²⁶⁹

The inability to accurately measure let alone analyze the comparative growth of the Soviet and American economies resonated deeply with elite attitudes toward Soviet economic policies and impacted the ability of high-ranking experts to push their agendas. In December 1964 Kosygin requested that the presidium of the Academy of Sciences produce a report “On the Means of Increasing the Economic Effectiveness of National Production.” The report delivered by Azumanian and applied mathematician and President of the Academy of Sciences, Mstislav Keldysh, was an extremely honest accounting of the state of the Soviet economy. The executive summary featured stark data:

Table 3.2: Average Rates of Growth of Key Indicators in Percentages

	1954-1958	1959-1963	1961-1963
Total National Income	11.0	6.5	5.6
Industry	11.4	9.6	9.0
Sector A	12.3	10.8	10.4

²⁶⁹ Ibid., ll. 55-65.

Sector B	9.3	7.2	6.5
Agriculture	8.6	0.0	0.0
Capital Investments	15.0	6.6	4.0

Source: ARAN f. 1849 op. 1 d. 51 l. 1

Further, rates of labor productivity faced a long-term decline: labor productivity in industry fell from a 7.4% average annual increase between 1954 and 1958 to a 5.1% p.a. increase in 1961-1963. The growth of output per unit of capital invested had fallen from 1% to .61% in the same period.²⁷⁰ While to a modern observer, such growth rates would seem to be more than exemplary, this would not be acceptable to a Soviet official of the sixties for several reasons. First, while maintaining high rates of growth, these were less than those of “capitalist economies” like Japan, West Germany and even the United States in the same period. Second, while the Soviet economy continued to expand, its growth rates were nowhere near high enough to either catch up to the United States in nominal terms or efficient enough to have any basis to claim progress toward that goal in real terms. The report pointed out that structural deficiencies in the Soviet economy had led to the “inefficient use of financial and technical resources, the continual use of obsolete technology, the insufficient integration of new forms of production into distribution networks, and extremely high uses of raw materials,” resulting in low quality and slow rates of economic development. The executive summary of the report concluded that “unless [yearly] growth rates in the United States fall rapidly in the next few years, the task of catching up and overtaking the United States in gross output will require significant acceleration in the growth of industrial and agricultural production.”²⁷¹ It concluded that

²⁷⁰ ARAN f. 1849 op. 1 d. 51 ll. 1-2.

²⁷¹ Ibid. ll. 3-4.

“catch-up and overtake”—the bedrock of Khrushchev’s policy of “peaceful co-existence”—had failed.

The body of the report explained that the “major impediments” of the Soviet economy were not inadequacies in heavy industry but rather the rate of growth of agriculture, light industry, and civil construction. This led to a situation where “the Soviet Union is significantly ahead of all capitalist countries in gross accumulation, especially in gross production [Marxist term for the expansion of financial and physical output], but significantly lags many of these countries in the quality of accumulation [Marxist term for the absolute return on investment].” The rate of return on “every monetary unit of accumulation was 21-23% higher in the United States than the USSR and 35% higher in Japan.” A major reason for increasing efficiencies in “the leading capitalist countries” was the larger percentage of investment going to group B, or consumer industries, than in the USSR or other socialist countries. Other advantages that capitalist industrial practice had over the USSR included greater energy efficiency, faster rates of completion in new capital construction, and a more motivated and educated workforce. The report thus recommended that Soviet authorities adjust “unrealistic plans for capital investment” and increase the importance of consumer industry and agriculture over that of heavy industry.

The anxieties proliferating in the economics profession were well expressed in 1966, at a meeting of the Academy of Sciences’ Economics Section. The venerable Rumiantsev lamented that Soviet economics had no answer to how socialism would prove its worth in an increasingly Americanized world. Addressing the meeting he asked, “does building the material technical-base of communism mean copying American methods of development? Does America have Communism? Shouldn't capitalists be jealous of

socialist technology, of Communist technology? It should be our task to put these demands on science and technology. But to do that we must first solve the problem of organizing production and setting its overarching tasks.”²⁷² I.E. Malyshev, the deputy head of the TSsU [Central Statistical Agency] and a supporter of the Belkin and Birman price reform proposals, echoed these anxieties, explaining that he did not share the “optimism [of other speakers]” because he “believe[d] that there are too many divisions in our economic sciences on basic questions. We do not have agreement on such basic problems as the setting of prices, the establishment of profitability, the effective use of productive funds, the main indicators of planning and others. These are all the basics of economic theory without which the economy and economic science cannot develop.” These disagreements and internal squabbling were hurting the work of creating a program for economic reforms now that it was becoming increasingly obvious that the growth rates of the Soviet Union were steadily falling compared to those of the United States. Malyshev concluded his speech lamenting that “we often talk about importing leading technology from overseas but what we should aim for is that they import from us. But how to do this? In military matters, they often say that if you fall behind, you are dead. It is the same in economies but it just happens more slowly.”²⁷³

Subjectivism and “Scientific” Socialism: Economics and the Post-Khrushchev Ideological Void

Many of those who organized the October 1964 meeting of the Presidium and the subsequent Central Committee Plenum came from the camp of those figures in the Party who wished to restore the pre-1957 prerogatives of the central authorities. Others,

²⁷² ARAN f. 1877 op. 8 d. 504 ll. 25-27.

²⁷³ ARAN f. 1877 op. 8 d. 505 ll. 52-56.

including powerful Central Committee secretaries like Alexander Shelepin and Petr Demichev, may have even wanted to turn the clock back to the period before 1956. In such an atmosphere, it would seem that the agenda for radical economic reform was as doomed as Khrushchev's administrative tinkering. Yet, the agenda for radical reform came out of October 1964 stronger than it had been at any point since the mid-1950s.

One of the reasons for this strength was the precarious position of the USSR in the Cold War competition. The other was the ideological void left in the wake of Khrushchev's removal which allowed many to think that the new leadership would be more progressive than Khrushchev's. Hints of why Soviet reformers could have thought this way come out of Mikhail Suslov's speech to the Central Committee Plenum assembled in the wake of the Presidium's removal of Khrushchev—the one that laid out an ideological critique of the Khrushchev era. Suslov, the man who would become the party's chief ideologist, leveled two major charges against Khrushchev. The first of these was that Khrushchev had violated “Leninist Party Norms” by combining the positions of General Secretary, the chief party leadership position, and of Chairman of the Council of Ministers, the highest state policy making position. This facilitated the second of Khrushchev's mistakes—“subjectivism”—what Suslov “roughly defined” as “making decisions only from one's own point of view” rather than that of the Party and unadvised by experts. As part of his evidence, Suslov detailed how Khrushchev had derailed Gosplan's work on the 1966-1970 Five-Year Plan, by dismissing their painstaking efforts and offering his own idea of another “seven-year plan” or maybe even “eight-year plan.”²⁷⁴ Suslov's critique was conservative but it was not reactionary. Its implications were not that the Soviet state should somehow abandon

²⁷⁴ RGANI d. 2 op. 1 d. 753. ll. 4-13.

progress, or revert to the pre-Khrushchev norm—in fact, it praised the progress made by the XX, XXI, XXII Congresses for expanding party democracy and setting the precedent for Khrushchev to be replaced. These were not the words of the “Soviet Chinese,” a term used by some party officials to describe the group of young hardliners that had gathered around Shelepin and KGB head Vladimir Semichastny.²⁷⁵

Subjectivism became a rallying cry for a scientific community that was searching for ways to elevate its role in Soviet politics following October 1964. In 1965, hardline Central Committee Secretary Pyotr Demichev began working to organize a series of meetings to root out “subjectivism” in the social sciences and humanities. The USSR’s leading economists met under the direction of Trapezdnikov in May 1965 to prepare a report for the Central Committee. The tone of the meeting was anything but defensive or hardline. The fight against “subjectivism” was turned into a call to arms for reform and rigor in economic theory. According to one presenter, “the lack of a stable position on many basic questions had lowered the prestige of Soviet economists with our foreign colleagues.” For example, the Czech economist, Ota Sik, an eminent reformer and later a key figure in the Prague Spring, had told his Soviet counterparts that while they had once been theoretical leaders, “their inconsistency meant that they had lost their authority in the eyes of many people.” The blame for this turn of events was placed on “the subjectivist reading of Marxism-Leninism” present in the profession. Indeed, the concluding remarks of the meeting, read by Trapezdnikov, recommended that the final report “critique subjectivism and volunteerism” in economic sciences and insist that economics be judged

²⁷⁵ See Sergei Radchenko, *Two Suns in the Heavens: The Sino-Soviet Struggle for Supremacy 1962-1967* (Washington D.C.: Woodrow Wilson Center Press, 2009), 165-167; Radchenko argues that the Chinese diatribes about the USSR being too concerned with prosperity over revolution actually helped reformists gain political capital over their hardline opponents in 1965 by linking the latter to Maoism.

on the basis of “a deep knowledge of Marxism-Leninism, the effective development of specific rules of socialist economic development based on those rules and actions to turn theory into practice.”²⁷⁶

Thus, as Vladislav Zubok pointed out for Soviet intellectuals as a whole, the removal of Khrushchev initially did not seem like the coming of stagnation, but rather an opportunity for a more mature government.²⁷⁷ “Liberal” Central Committee advisor and speechwriter, Aleksander Bovin, recalled in his memoirs that the personable Leonid Brezhnev seemed a welcome change over the manic Khrushchev. The relatively young and energetic new General Secretary was even perceived as more welcoming than the dower and rigid new Chairman of Council of Ministers (technically Brezhnev’s co-equal), Aleksey Kosygin.²⁷⁸ For the economics community, this optimism was complimented by the opportunity to continue making the critique of other cadres that, in their opinion, denied the usefulness of economic methods and calculation. The years following Khrushchev’s removal saw the profession arguing its key role in making Soviet economic practice “scientific” and “objective” in contrast to the earlier period’s “subjective” decision making.

Even before Khrushchev’s removal in August 1964 Azumanian and K.B. Kozlova of IMEMO had written to the Council of Ministers to advocate the creation of a centralized institute of economics and industrial practice to coordinate and bring together research on industrial practices being done by the individual branch ministries. Azumanian and Kozlova reiterated this proposal to the new leadership in June 1965 whereupon Kosygin forwarded their suggestion to Gosplan and the VSNK. The reply written by VSNK

²⁷⁶ RGANI f. 5 op. 35 d. 214 ll. 87-143.

²⁷⁷ Vladislav Zubok, *A Failed Empire: The Soviet Union in the Cold War From Stalin to Gorbachev* (Chapel Hill, NC: North Carolina University Press, 2009), 192–201.

²⁷⁸ Alexander Bovin, *XX Vek Kak Zhizen: Vospaminanie* (Moscow: Sakharov, 2003), 190–196.

chairman Dimitri Ustinov suggested that while the idea had merit, there were “not yet enough trained cadres to staff both a new institute and the existing institutes” at a branch level. Ustinov, the advocate of restoring ministerial power and the head of the powerful Soviet military-industrial complex, did not want the ministries’ own research institutes to be de-staffed and a new institution headed by reformists to gain power over industrial policy.²⁷⁹

The economics community meanwhile had some ideas about what was responsible for “the lack of trained cadres.” In the first presentation at the 1965 meeting on the direction of economic sciences, K. N. Polotnikov complained that “our country has a serious problem with the lack of qualified economists. It wouldn’t be an overstatement to say that most economists working in enterprises do not have graduate level training. Industrial engineering and administrative cadres do not have any training in the economic organization of production.” Polotnikov also pointed out that there were not enough post-graduate economists to keep up with the need to instruct the expanding number of engineers being educated in the USSR and that many of the country’s engineering programs had dropped the economics requirements in favor of further technical specialization.²⁸⁰

Just as the reevaluation of the success of “catch up and overtake” had prompted the economics community to organize for structural, economic reform as a strategic, existential imperative of the Soviet state, the discussion of “subjectivity” allowed them to make a case that it would be central to the restoration of the party line and the regularization of

²⁷⁹ GARF f. 5446 op. 99 f. 9 ll. 41-59.

²⁸⁰ RGANI f. 5 op. 35 d. 214 ll. 80-81.

governance. The times seemed ripe for the many interlocking, competing schemas that had been germinating since 1956 to blossom.

State Weakness, Interest Group Politics and the Crafting of the Kosygin Reforms.

When the new leadership of the USSR came into power in 1964, it faced very real economic and ideological dilemmas but it lacked a coherent schema for implementing the necessary reforms. While it was clear that something was wrong, various institutional and intellectual groups all presented competing versions of how to solve the problem, and indeed, what the problem was. Such issues are not unusual for a modern polity; any observer of the guts of policy making in a Western, liberal democracy would recognize the familiar battles between interest groups and their affiliated experts. Yet, what makes the Soviet case different is that, unlike liberal democracies, with their deliberative institutions, the USSR lacked the mechanisms to resolve these tensions outside the fiat of the party leadership. This problem of institutional arrangements and decision making was engendered by “the democratic-centralist” ideal. While such a conspiratorial organization of government was useful for a revolutionary state mobilizing for conflict and growth, it became ever more inconvenient as the Soviet economy grew more complex and political processes became “normalized.” As Harold Berman already pointed out in 1950, the USSR’s post-1936 legal system was stuck in a perpetual cycle between centralizing and decentralizing engendered by the need to balance between centralized planning and the contingency inherent in decentralized shop floor operations that did not fit into the “democratic centralist” ideal.²⁸¹ Thus, the political opening that allowed for radical

²⁸¹ Harold Berman, *Justice in Russia: An Interpretation of Soviet Law* (Cambridge, Mass: Harvard University Press, 1950), 71-73.

economic reform, the October 1964 plenum, was also a moment of political indeterminacy in which no defined center of power had formed.

On the heels of the March Central Committee Plenum on agricultural reforms, spearheaded by Brezhnev, the politburo seems to have turned to industrial and economic management as their next problem area. Given his long track-record in the area and the mantra of collective leadership, the task of formulating this policy fell to Kosygin. The first step of the discussion was the status of a legacy of the Khrushchev period. Shortly before October 1964, a version of a “Law on State Enterprises,” the one in discussion since 1959 and ordered by the November Plenum, was rubberstamped by the Supreme Soviet. At a meeting of the Council of Ministers in April 1965, it was decided that the law should be reviewed over the next two months before it was approved by the Party. From April through June, Kosygin and his staff consulted with both enterprise managers and economists at a series of meetings in Moscow and Leningrad, concluding that the law needed to be revised to simplify the structure of economic indicators and to increase enterprise independence. According to the protocol notes of the Council of Ministers, the central ideas that came from the meetings was that main plan indicators should be the volume of realized or commodity production in current prices (essentially a measure of goods produced in cash prices rather than physical gross output), a centrally determined list of vital products, the total wages used in production (the wage fund), total employment, and net profit.²⁸² While the Council of Ministers agreed on the centrality of these indicators, there were still many definitional, organizational and measurement issues to be worked out. For example, if profit were prioritized how would it be calculated? Thus, during summer of 1965, various

²⁸² GARF f. 5446 op. 99 d. 430 ll. 77-78.

interest groups and economic schools of thought mobilized to attempt to influence whatever new system would emerge out of the drafting process.

One simple model available for the Soviet Union to follow in its economic reform was the GDR's New Economic System (NES). There is some evidence that the German experience was seriously considered by Kosygin as part of his deliberations. Shortly after coming to power, perhaps already realizing the task ahead of him, Kosygin asked for information on the operation of the new German system from the Soviet ambassador to the GDR. The report explained that the new East German system had increased the output of consumer goods, which in the previous year had been 6% over the target, and had improved the efficiency of investment by making profitability the primary target for the performance of individual enterprises and combines. Each enterprise's working capital was also organized at the enterprise levels and by the local authorities in "production funds" rather than at the ministry level.²⁸³

Foreign experiences of economic reform and administration were certainly important to the discussion of what would be termed the "Kosygin Reforms," but what was more significant was how domestic pressure groups filtered these, and other economic ideas, through their own experiences to advocate for their own interests. The ministries saw the reforms as a chance to get rid of the *Sovnarkhoz* system and to restore control of production back to Moscow. Ministerial pressure on Kosygin began shortly after the October Plenum. On December 14, 1964, P. Goremykin, the former head of the machine building ministry who was forcibly retired by Khrushchev due to his opposition to the 1957 reforms, sent a letter to the Central Committee that was forwarded to Kosygin. In it, he

²⁸³ GARF f. 5446 op. 99 d. 1 ll. 102-107.

argued that the “current system of economic management does not correspond to the interests of the state” as the Sovnarkhozes only represented “regional interests.” Because of these competing interests, the indicators for plan fulfillment were distorted and were generally set at too general a level to be accurate. The alternative was to restore the economy back to the condition it was before the 1957 reforms by recentralizing management to strong, central branch ministries.²⁸⁴

As the summer discussions intensified, the ministerial interests continued to make their pitch. In a July 1965 proposal sent to Kosygin’s office, VSNK head Dmitri Ustinov reiterated the ministerial view, placing the blame for the failures of the Seven Year Plan on Khrushchev’s 1957 Sovnarkhoz reforms. This, in Ustinov’s opinion, had led to the diffusion of key specialist knowledge and the “loss of the branch as the single basis for developing technical and scientific advancements,” thus stalling growth. The steps taken since then, including the post-1962 decisions to establish the VSNK and branch-specific coordinating departments in Gosplan, had failed to make a dent in the situation because these institutions had “neither the legal rights to give orders to the Sovnarkhozes nor the material means (physical and financial) to influence their actions.” An alternative system needed to be established that would re-concentrate production into branch specific organizations. Ustinov proposed restoring central ministries for branches with all-union, national significance and having Republican ministries for industries of regional significance. Notably, Ustinov said nothing about changing any economic indicators or made any hint of supporting a farther-reaching economic reform involving a fundamental change of the role of the state in the economy.²⁸⁵

²⁸⁴ GARF f. 5446 op. 99 d. 1 ll. 1-6.

²⁸⁵ GARF f. 5446 o. 99. d. 1 ll. 8-18.

Ministerial interests were not the only advocates for recentralizing control over the economy. Everyone seemed to agree that the Sovnarkhozes were a terrible idea. In his report to Kosygin, N.K. Rudnev of the State Committee on Science and Technology (GKNT) wrote that the major problem of Soviet technological progress was that “large construction and contracting organizations” remained inefficient at completing their projects on time and incorporating new technologies. These organizational deficiencies explained why the Soviet Union remained “behind many foreign countries in the development of new technology even though many technical ideas were developed in this country.” One of the causes of this problem was that “during the reorganization of 1957, many questions of scientific-technical organization were not answered.” Despite the decisions of several party plenums between 1962 and 1963 that attempted to rectify the problem, no steps had been taken to further experimental arrangements because of the resistance of the Sovnarkhozes to transferring their enterprises to other institutions. He concluded that the VSNK needed to be eliminated and all its functions moved into the Council of Ministers and into Gosplan. Rudnev’s note also betrayed a separate set of concerns that were neither present in Ustinov’s note nor Goremykin’s letter. He explained that the Soviet economy had larger problems than its administrative organizations. Economic issues were at play: the main indicators used in the economy — “gross production, costs of goods produced, and labor productivity” — were “inadequate [tools] for improving the use of financial funds and stimulating more effective production techniques and management.” The problem was that “the questions of developing an

improved system of indicators and of effective cost accounting are still being discussed and no proposals should be made until such discussions are complete.”²⁸⁶

What discussions was Rudnev referencing? The GKNT was a vital institution for cultivating reformist economic thought and an especially strong base for the “cost of production” school—the economists interested in creating a common interest rate on capital, described in chapter one of this dissertation. When their former institutional base, the Gosekonomsovet was dissolved, much of its staff and associates including cost of production advocates Vaag, Belkin, Birman, and Trapeznikov went to work for the GKNT either directly, or as consultants. Shortly after the publication of Trapeznikov’s *Pravda* article in 1964, Rudnev assigned Vaag to explore its suggestions further. Following the October Plenum, Vaag was invited to meet Kosygin and had what his associate Igor Belkin would recall was a “productive conversation” that convinced him that the new leadership was ready to begin implementing the ideas he had been arguing for since the mid-1950s. Spurred into action by his meeting, Vaag changed the tenor of the report his commission was writing from a scientific backgrounder to a set of concrete policy proposals for implementing a new system of economic planning and management. In hindsight, Vaag’s meeting with Kosygin could be dismissed as one of the fantasies of the “intelligentsia” described by Zubok, but there were many reasons why a reasonable observer could think dramatic changes were afoot for the Soviet economy. For example, one of the Deputy Directors of the Chairman of the Council of Minister’s staff—the one in charge of assisting

²⁸⁶ GARF f. 5446 op. 99. d. 1 ll. 115-125.

Kosygin in the development of the new reform—was I. Malyshev, a supporter of Birman, Belkin, and Vaag’s proposals of the 1950s.²⁸⁷

The Vaag committee finished its proposals in November 1964. Its suggestions can only be described as astounding and truly radical. First, Vaag and his associates dismissed the previous discussions of economic reform as too little too late, explaining that though the November 1962 Plenum had ordered a report on the Liberman discussion in *Pravda*, “the document produced was not widely circulated” and “argued that only minor changes to the planning system were needed” because of Gatovsky’s influence on the document. Only Trapeznikov’s suggestions were cited as a step that “could finally solve the problem of improving the system of economic methods in the economy.” The central issue, they argued, was that enterprises were not given proper incentives to work effectively because the current system prioritized gross output and because managers had no control over the uses of their enterprise’s resources. These perverse incentives encouraged enterprises to “hide their reserves from their superiors” to maintain their autonomy and have continually improving output indicators. The authors concluded that “the [planner’s] inability to resolve the contradictory interests of individual enterprises and of society as a whole can be completely explained by *the use of the wrong method of measuring labor costs in cost accounting that does not take into account the cost of capital* .”²⁸⁸

To correct this problem, the commission proposed a radical solution. Following Tapeznikov’s suggestion, it argued that the main source for the state budget should be a fixed percentage payment from each individual enterprise for each ruble invested— in

²⁸⁷ I. Birman. *Ia ekonomist: o sebe o lubimym* (Moscow: Vremya, 2001), 249-254; V.D. Belkin “Zadalis li reformy Gaidara?” *Novyi Mir* no. 1, 2002, available at http://magazines.russ.ru/novy_i_mi/2002/1/belkin.html [accessed:04/07/2016].

²⁸⁸ RGAE f. 9480 op. 7 d. 261 ll. 1-6. Emphasis added.

other words, an interest rate on funds lent by the state—rather than the “turnover tax”—the tax on goods sold to the population and wholesale industrial consumers—which the report proposed abolishing. This would be accompanied by the elevation of profitability as the sole criterion of enterprise performance. The question of pricing and value, the key to determining what is profitable, would be solved by instituting a price reform in which the baseline price of goods would be set by a moving average of the cost of wages and capital investments for the individual plant’s branch plus any markup that the enterprise believed was proper: in other words, a net cost of capital across a branch. Higher quality goods could be marked up more, and lower quality goods less, giving the consumer the flexibility and information to make decisions. The report concluded that “the difference between each price and the individual costs of each enterprise or the profitability of the enterprise will be the measure of its economic effectiveness. Profit is the indicator that shows all sides of an enterprise’s economic activity.”²⁸⁹

This was a remarkable statement for an official Soviet state working group. What came later in the report is even more shocking. The authors suggested that new wholesale prices, based on the cost of capital, be introduced rapidly and overnight. In their estimation, this would not lead to major changes in consumer prices, and thus social disturbances, since light and consumer industries were already overvalued compared to heavy, producer goods and would have the smallest price increases. Due to the institution of payments for productive funds, the government budget would suffer no losses. Furthermore, the plan envisioned that starting in 1968, unprofitable enterprises would begin to be closed and their facilities, staffs, and fixed capital transferred to profitable uses.²⁹⁰ What the Vaag

²⁸⁹ Ibid. ll. 7-8.

²⁹⁰ Ibid. ll. 30-47.

commission was proposing was a variant of what would, in the 1990s, be called “structural reform.”

Such a radical proposal could not help but generate a vigorous response from many corners of the intellectual and political world. One set of criticisms came from the Ukrainian Academy of Sciences with Liberman at its helm. The Ukrainian report argued that “the committee has mostly concerned itself with the improvement of indicators” which “was the main problem of the report. Indicators, in and of themselves, do not address the problem of increasing the effectivity of production if there are no underlying changes in the way planning procedures work, material stimulus is undertaken, and enterprise rights are spelled out.” It continued, explaining that the report did not do enough to specify the procedures and rights of enterprises and ministries in price setting, the distribution of funds and the setting of wages and bonuses. Further, the Ukrainians were concerned that overnight price increases, the elimination of indicators other than profit, and ending the turnover taxes would have unforeseen economic consequences. Liberman and his colleagues clearly were leveraging a conservative critique, but one that came from their grounding in an approach based on the cost of labor rather than the cost of capital.²⁹¹

A more stridently reactionary critique came from economist M.Z. Bor. Bor accused the authors of the report of violating the norms of Marxism-Leninism and harming the socialist order. In his letter to the GKNT, he explained that “the proponents of the ‘cost of production school’ neglected the negative aspects of profitability.” Bor’s concern was that if the profitability of production became the main criterion for judging economic efficiency, then goods that were not profitable, but “vital to the needs of building

²⁹¹ Ibid. II. 68-80.

socialism” would no longer be produced, thereby reducing the USSR to the same position as a market economy.²⁹² This intervention led the GKNT’s leadership to seek the counsel of the Institute for Marxism-Leninism, the USSR’s main academic body for the study of Marxist-Leninist theory. The institute responded stating that “we [the authors of the letter] are not experts in economic theory and its application, and can only speak in generalities, but we believe that Comrade Vaag and other economists proposing setting prices based on the ‘cost of production’ are correct.” The Institute singled out Bor as incorrect for thinking that price and profitability were only categories associated with capitalism.²⁹³ For now, Vaag and his colleagues had won the day.

Yet if the “cost of production school” and its GKNT-issued proposals had won official ideological sanction and established connections with the Council of Ministers, it was not the only reformist economic theory that tried to sway official opinions in 1965. The “cost of labor school,” or the *Tovarniks*, not only criticized the Vaag commission but also forwarded their own proposals to the Council of Ministers. On January 25, 1965, the Institute of Economics of the Academy of Sciences sent a set of proposals written by a group chaired by Yakov Kronrod to Kosygin. Like the Vaag team, Kronrod’s proposals argued for the need to replace the centrality of gross production with indicators for net goods delivered, as measured in money rather than physical terms. In addition, the report emphasized the need to make “commodity-cash” relationships, based on contracts, the central means of regulating and operating the Soviet economy. The state would set production priorities and economic policy and enterprises would be left to figure out how to achieve them through their own financial resources: a move that implied higher levels

²⁹² Ibid. II. 117-123.

²⁹³ Ibid. II. 191-192.

of enterprise autonomy than even Vaag's radical proposal. This required not only price reform but the establishment of a banking system designed to provide commercial and trade credit to enterprises. The proposal was consistent with Kronrod's argument that for money to smoothly circulate in the USSR—without significant hoarding—and thus become a *numeraire* reflecting value, the production of consumer goods would have to increase.²⁹⁴ Kronrod and his colleagues differed from Vaag's team in three areas. First, they placed a much greater emphasis on the institutional organization of enterprises and the need to establish a banking system to facilitate flexible payments. Second, while emphasizing the need to make profitability an important indicator, they opposed the elimination of other parameters for plan fulfillment. This arose from their interpretation of profit's role under socialism as primarily a stimulant for labor productivity rather than capital investment. Even if profit could be used as a major source of the financial resources of an enterprise, it could not be the sole criteria of the use of financial and physical resources in production. Third, following from their emphasis on profit as a stimulant of labor productivity, Kronrod's group believed that the cost of labor, or the wage bill, rather than the cost of capital, should be the basis for a price reform in 1966.²⁹⁵

A third set of proposals came from the so-called mathematical economists gathered around CEMI. Their report, signed by CEMI director Fedorenko, was delivered on January 12, 1965 and was remarkable in several ways. First, it was not written in the guise of a report of CEMI but rather of the Academy of Sciences and forwarded with a cover letter from Academy President Keldysh. Keldysh's background as an applied mathematician who gained prominence in the Soviet space and ICBM programs made him a natural

²⁹⁴ ARAN f. 1877 op. 8 d. 455 ll. 126-154.

²⁹⁵ Ibid.

champion of CEMI and testifies to the ways that the military-scientific complex of the Cold War bred a mix of mathematical optimism and utopianism—what Slava Gerovitch described as the social network around the burgeoning cybernetics community.²⁹⁶

The second element that made this memo different from those reviewed above was its explicit use of American corporate institutions as a model for the USSR's new economic system. The report explained that in the United States, "the main unit of economic administration was not the individual enterprise but rather 'the firm' consisting of several interconnected factories and enterprises." What fascinated Fedorenko and his colleagues about the firm was that its units were decentralized and regulated by managers with specific financial targets set by the corporate head office. The report was especially enthralled by the system of accounting control for corporate divisions developed by General Motors in the 1920s that became, and still is, the basis for corporate finance and decision making. In fact, the authors of the report included organization maps of two iconic postwar American "Multi-Divisional Form," or "M-Form," multi-branch corporations with independent departments—Ford Motors and DuPont—as models that Soviet industrial organization could follow. What most disturbed the CEMI economists was that rapid incorporation of computerization and data-based management was making American corporations even more efficient, allowing for a flexible set of rapid controls from the center and feedback loops from each corporate unit.²⁹⁷

²⁹⁶ Gerovitch, *From Newspeak to Cyberspeak*, 133–135.

²⁹⁷ GARF f. 5446 op. 99 d. 1 ll. 70-82. On the history of American corporate organization see Louis Galambos "The US Corporate Economy in the Twentieth Century" in *The Cambridge Economic History of the United States: Vol. III the Twentieth Century* eds. Stanley Engerman and Robert Gallman (Cambridge: Cambridge University Press, 2008), 927-968.

What was to be done on the basis of these facts? While it criticized the Sovnarkhozes, the report did not suggest a wholesale return to the ministerial mode of organization. Rather than the branches being the most important unit of the economy, CEMI suggested that the “cost accounting based combine [*Khozraschetnyi Kombinat*]—a set of interlinked enterprises modeled on the multi-division, vertically integrated corporation—become the basic unit of economic management. The leadership of the combine would be responsible for making decisions based on internal accounting rather than through gross production orders. As with the other groups of economic reform theorists, the CEMI economists gave the profit motive a leading place for structuring the behavior of economic agents. However, unlike the cost of labor school, which saw profit as motivating productivity, and the cost of production school, which saw profit as a measure of capital efficiency, the mathematical economists saw price in a similar way to Western neo-classical economists: as a transmitter of information. This is why CEMI emphasized that it was prices that were important, not profitability; prices should not reflect the efficiency of neither capital nor labor but should be transmitters of information from the plan to the individual units of the economy. In CEMI’s proposal, prices would be set in real time by a nationwide system of computer centers that would process data and adjust price levels to prioritize the decisions of the party and make sure that the plan was “balanced,” i.e., that all resources were being effectively used toward the fulfillment of the set goals.²⁹⁸

The proposals put forward by the three major camps of Soviet economists reflected division in thinking that had emerged with the creation of Soviet economics as a Cold War

²⁹⁸ Ibid. I. 96-101.

Science. The least internationalized of the camps of reformists, the cost of labor school, presented a vision of reform based on the cost of labor but also showed the most sensitivity to the financial structures of the Soviet economy and their potential to be used for the motivation of “work place collectives” toward more efficient production. The “cost of production school” held the middle with a focus on the efficiency of capital investment and its implication for the development of technology. Meanwhile, the most internationalized economists, the mathematical economists working at CEMI, deployed information theory to create a schema for economic management that was the least interested in workplace democracy and institutional transformation and most concerned with arming the state with the correct type of information and decision making systems to place central planning on what they viewed as a true scientific basis.

The economists were just one fractured interest group amongst many. While they may have agreed that the Soviet economy’s ills were not just mechanical but fundamentally economic and that economists needed to be involved in policy making, they had strong differences of opinion on what would solve the problem of economic inefficiency. We have already seen that the ministries were exerting direct pressure on Kosygin and the Soviet leadership to simply return the USSR to the pre-1957 system of administration. Another group was forming in the background trying to manage the change in the economy: the central state planning agencies. Already, during the Council of Ministers’ discussions in March 1965, the Ministry of Finance warned Kosygin not to give enterprises full control over their productive funds and to set central controls over how much investment they could make per unit of delivered production in order to avoid a loss of control over the

budget.²⁹⁹ In 1965, former Gosplan chairman, Nikolai Baibakov, was called back from his “exile” as the chairman of the Russian Soviet Social Republic’s Gosplan and greeted as a returning martyr by the new leadership for his opposition to Khrushchev’s 1957 scheme. He immediately retook the helm at Gosplan and began to make the agency the new center for state planning, hoping to consolidate other intermediaries such as the VSNK as the Sovnarkhoz reforms were undone.³⁰⁰

The consolidating central planning agencies thus began to more actively take a position on reform somewhere between the hyper-conservative, perhaps even reactionary desires of the ministries and calls for systemic change issued by the academic economists. Through the course of 1965, staffers from these agencies began to make their views known. Writing in responses to the Vaag committee proposal, N. Fatisov, head economic specialist of the VSNK, complained that “the committee has not touched on the most important aspect of improving the economy: the improvement of the planning system and the development of a means of managing resources to bring the economy into balance.” Instead of starting from the problem of pricing Fatisov argued that first, a system of information and administration needed to be perfected that would then set prices. Finally, he asked, who under the Vaag plan:

would be responsible for the distribution of goods? With the proposed weakening of central planning, this is obviously the enterprise itself, based on its knowledge of its reserves. But then who will be responsible for quality control? It seems obvious that the answer is the interaction of the enterprise itself and the consumer—in other words a market.

He continued, sarcastically:

²⁹⁹ GARF f. 5446 op. 99 d. 430 ll. 77

³⁰⁰ N. Baibakov. *Sorok let v pravitelstve* (Moscow: Respublika, 1993), 98-105.

Then why doesn't the commission follow the logic of their proposal to its end? It should recommend that we encourage competition, organize stock markets and other elements of a 'blossoming' system of commodity production.' How, otherwise, will we be able to work out supply and demand?

Fatsov's alternative was to continue to invest and implement the integration of computing into production to better manage inventories and distribution. As well, he explained that Gosplan and the VSNK were developing their own project of wholesale price reforms that would be introduced gradually based on a long period of experimentation. These conclusions certainly showed that the staff of the central agencies had some sympathy toward the CEMI vision of economic reform.³⁰¹

Gosplan, however, was interested in "mathematical economics," only as long as it would not take away from the agency's privileged position in drafting the plan and distributing resources. This cleavage between Gosplan's official policy and economists, including its own experts, was laid bare in the following exchange of letters and memos. In September 1965, L.M. Dukhin, a senior scientific specialist at Gosplan and a holder of a Kandidat in economics, wrote to Kosygin to complain about Gosplan's lack of interest in the deployment of cutting-edge economic science. He lamented the hostility of Gosplan staffers to the introduction of "optimal planning techniques" for the distribution of capital investments. These plans were prepared on a branch by branch basis rather than from the perspective of the needs and outcomes of the economy as a whole, the latter a critical element of the "optimal" approach which attempted to start from an economy wide basis. Gosplan's approach encouraged poor inter-branch connections and the hoarding of scarce financial resources. Dukhin complained that "the author of these lines has been fighting for

³⁰¹ RGAE f. 9480 op. 7 d. 261 ll. 87-91.

two years for the creation of a special department within Gosplan which would be dedicated to the creation of concrete optimization methods and their applications to the calculation of the material balances of various branches and products.” Dukhin wrote that his proposals were answered by complaints that his ideas “were only theoretical” and could not be put into practice. While admitting that these models were indeed in their infancy, Dukhin stated that “without primitive rockets, we could not have today’s satellites.”³⁰²

Dukhin’s intervention promoted a response from Gosplan signed by Baibakov himself. He (or his staffer) displayed a significant knowledge of optimal planning, explaining its controversial origins in Kantorovich’s work. In 1964, Baibakov testified, Gosplan began investigations into implementing “optimal planning techniques” in the formation of the 1966-1970 Five-Year Plan. The letter noted that Gosplan had considered seven variants of optimal planning methods, including one presented by Dukhin himself. The problem with implementing these and other new macroeconomic models was that there was simply not yet enough data to test their applicability to various, discreet planning problems. All of these schemes were predicated on a central plan for the entire economy and had not developed any branch-specific interventions. Baibakov argued that this was not the correct way to go about planning and that any exploration of alternative planning techniques would have to start with better branch planning because such smaller interventions could produce most of the benefits that the proponents of optimal planning sought without the need for unfeasible levels of data collection. Baibakov’s response showed that Gosplan was not against economic reform—it just wanted it on its own terms.³⁰³

³⁰² RGAE f. 5446 op. 99 d. 1 ll. 26-36.

³⁰³ Ibid. l. 45-47.

Writing the Reforms

Kosygin and his office became the nodes through which different conceptions of the reform were processed. Yet, the question of what steps to take was as amorphous as the question of power in the Soviet system in the wake of Khrushchev's removal. Both the lines of authority and the new directions that the state should take were still in question. What legislative and legal form would the new reform take and would it simply modify Khrushchev's project of a new law on state enterprises, that was ready to be passed in September 1964, or cancel it and starting anew? A letter by A. Goregliad, the former deputy chairman of the Gosekonomsovet and a Gosplan deputy chairman, warned Kosygin that letting Khrushchev's September 1964 decision to pass the a law on state enterprises go through would weaken the effectiveness of the new, experimental "economic methods of management" that "we have recently begun to realize are so necessary for the economy" because it would force enterprises into a work regime uninformed by the results of the economic experiments that Gosplan and other agencies hoped to conduct.³⁰⁴ The sentiment was shared by Rudnev, who explained that "the current draft of the law reflects cost accounting regulations that maintain the preponderance of administrative, rather than economic management techniques." Due to the deficiencies of the Khrushchev-era law and the fact that the "government is reviewing suggestions for a new system of management based on the wide use economic levers," he noted, it would be better to rewrite the law "later, once we have some experience with this new system" rather than immediately implementing the flawed drafts of 1964.³⁰⁵

³⁰⁴ GARF f. 5446 op. 99 d. 432 ll. 1-2

³⁰⁵ GARF f. 5446 op. 99 d. 431 ll. 133.

The notes seem to have had an effect. After reviewing these letters, Kosygin dispatched a memo to his staff ordering that the reform be approached through a decree of the Council of Ministers rather than through statutory law.³⁰⁶ This conceded the fact that the state was not ready to define the long-term goals and outlines of an economic reform and that changes in the Soviet economy would be the result of a process of negotiation between different political-economic visions. The dilemma revealed by the debates of summer 1965 was that no one had the political-capital to decide on a grand reform of the USSR's economic system.

The reforms were officially launched by Kosygin at the September 1965 Party Plenum. The Plenum's decree authorized the party to begin "bringing the management of industrial enterprises in line with the new conditions of the economy." At the center of these plans was a restoration of the "branch principle of administration" (i.e. the restoration of the ministries) concurrent with greater "independence for enterprises."³⁰⁷ The Plenum gave formal party authorization for the Council of Ministers to begin developing a program for economic reform through proclamation. The Council of Ministers issued its decisions on October 4, 1965 through a set of two main interlocking proclamations.

The first, known as Order no. 721 "On the Improvement of Management, Planning and Stimulation of Industrial Production," established the modifications to the Soviet system of planning. Point 4 of the proclamation ordered the state and its institutions to "acknowledge the necessity of expanding the independence of industrial enterprises." To accomplish this, it specified that "the number of plan indicators given to enterprises must be cut down." "As a rule," it continued, the most important of these indicators should be

³⁰⁶ Ibid. II. 134.

³⁰⁷ RGANI f. 2 op. 1 d. 805 ll. 59 ob-60 ob.

“the general volume of realized production, priced in current wholesale prices’ and, in especially important categories of products, the gross volume of completed production.” What this meant was that, in general, enterprises would begin measuring their output of goods in money prices rather than the total tonnage of all goods produced. However, specific branches and industries whose goods were deemed especially strategically important would still work on the old system of measuring their output by the total tonnage. The order also specified that labor productivity would be defined by the “general expenditures of the wage fund.” The main financial indicators would be the enterprise’s profitability and its returns on capital investments. The order defined the main financial “funds” over which each enterprise had ownership: the wage and bonus fund (*fond materialnogo porusheniia*), the socio-cultural and housing fund, and the technical development fund. Enterprises would have the right to distribute any profits they made into these funds as their management saw fit. Finally, it specified that the “delivery contracts would be the main legal regulators for economic interactions” and specified that Gosbank and its branch-specific sub-banks would begin work on the issuance of commercial credit to allow enterprises to engage in contracted agreements.³⁰⁸

The second proclamation, known as Order no. 729 “On the Role of the Socialist Enterprise,” established the definition of an enterprise. It confirmed that the enterprise would be the primary holder of property in a socialist state, including the main financial funds. Crucially, term holder of property distinguished from owner of property which was still the state and thus, in theory, the people. Thus, it specified that ministries, as the enterprises’ superior state body, had the right administer how these funds were “formed:”

³⁰⁸ K.Y. Chernenko and M.S. Sertukov (eds.), *Resheniia partii i pravitel'sva po xozaistvenom voprosam* Vol. 5 (Moscow: Gospolizdat, 1968), 658-684.

in other words, ministries would set not only the initial level of these newly formed financial accounts but would also be able to issue transfers or subsidies over a given fiscal period.³⁰⁹

Implementing the Kosygin Reforms

The October 1965 joint decrees of the Council of Ministers and the Central Committee made little progress on the general direction of economic reform that had been established the previous spring. Other than eliminating the Sovnarkhozes, no long-term goal for economic reform was specified. Instead, the decrees were treated as a starting point in an unspecified long-term program of economic reconstruction—one that in the absence of an interest group with sufficient political capital, could not be specified. Rather than dealing with difficult questions such as what should be the priority and institutional design of the USSR's economy, it moved responsibility for such discussions to the agency levels, specifying that Gosplan and the ministries, in consultation with research and academic bodies, work out larger problems such as wholesale prices and economy-wide quantitative target on “the basis of experience with the new system of economic management” established by the 1965 decrees. Effectively, what this did was establish these agency committees and ministries as the loci of implementation. This would have dramatic consequences as the outcomes of the Kosygin reforms pushed the limits of what was acceptable for Soviet economic politics and left the resolution of specifics in the hands of state institutions.

Ambiguities about the precise nature of steps to be taken caused problems almost immediately. Even before the issuance of orders 721 and 729, a Gosplan NII report

³⁰⁹ Ibid, 691-735.

pointed out the difficulties encountered by an experimental clothing plant in Gorky called Mayak, which was to be one of the models for the new system. The report found that as soon as profitability and marketing were emphasized in the plant's internal accounting, it had to respond to a new factor: consumer demand. Success on the consumer market required the plant to retool to produce greater amounts of high-quality products which, in turn, hurt the enterprises' financial position as it was forced to spend its initial funds on expensive fixed investments. These large initial outlays required Mayak to receive continued external financial support from its ministry it could not produce returns on investment and would be, in the short run, be a loss leader. Between the first quarter of 1964 and the first quarter of 1965, the plant saw a decrease in net profits of 18.5% due to its fixed capital outlays. This, in turn, had negative consequences on the bonus system and the labor productivity of the plant. To make up for its initial losses, Mayak, which was given the right to set its contracted delivery price, had to increase its markups on goods which became the main source of funding for the plant's financial assets. Thus, on paper the plant would soon be profitable and, according to the new system, would soon be able to pay out incentive based bonuses to its workers based on that profitability. However, the plant was deriving a nominal increase in its wage and bonus fund from its cost markups rather than from any real increases in labor productivity. In other words, wages and bonuses only increased because Mayak was using its newly found flexibility in price setting to gain a relative advantage in a scarcity filled, seller's market rather than any "objective" improvement in efficiency.³¹⁰ For a Marxist state that ostensibly still

³¹⁰ RGAE f. 99 op. 1 d. 433 ll. 111-133.

believed in the importance of the labor theory of value, such a method of increasing profitability was unacceptable.

These initial experiences with single plants became even more complicated as more enterprises began to be moved onto “the new system.” At the all-Union level, light industrial concerns such as tobacco, tea, and sugar processing were placed on the new planning system and issued their initial, self-administered funds, by the end of 1966. These were followed by light metallurgy, lithium, and ceramics by early 1967. The republics began moving their own industries to the new system, which in the RSFSR including metals, energetics, chemistry, machine building and chemistry. Financial discoordination began to rear its head almost immediately. A March 1966 report from M. Zotov of Gosbank’s RSFSR branch spelled out what was happening on the ground as enterprises and ministries began to operate with more liquid budgets. According to Gosbank’s surveys, the ministries had achieved good initial results: profitability had increased by 15% in the first year, return on investment had gone up by 9% from the previous year, and the cost of goods produced went down by 3%. Meanwhile labor productivity, as measured by average output to average capital invested, went up by 13% against an increase of wages of 9.7%. However, these positive headline figures obscured a set of underlying problems. First, the ministries were not introducing needed changes in planning procedures quickly enough to lock in these initial successes over the long-term. An enterprise’s ability to operate at profit depended on multiyear, stable norms of output which would allow its management to plan its expenditures accordingly. However, ministries continued to make up for initial planning failures with frequent changes in upcoming yearly production plans and throughout the yearly planning periods, in

violation of order 791's explicit directives. Further, ministries were not transferring enough initial working capital to enterprise controlled funds and not setting the long-term repayment rates for that initial capital which hindered the individual enterprise's ability to set multiyear financial plans. For example, the Ministry of Heavy Electrical and Transportation Machinery did not create a rate of repayment for issued funds until three weeks after its major plants had been transferred to the new system. The same was true of prices in milk and dairy processing plants which were not confirmed for months.³¹¹

Zotov concluded that without establishing such prerequisites, the positive results of the new system would be ephemeral:

The effectiveness of the new system is significantly lowered by the fact that consumer enterprises do not have the means of payment to fulfill their end of the contract. The reason for this are the long delays in ministries' establishment and planning of direct legal and economic ties between producers and consumers. The situation is especially dire in the machine building and construction sectors where enterprise managers and ministerial officials still place orders with no regard to their means of payment or for profitability.

To borrow the language of modern financial markets, the prevalence of such "incompletes" between supplier and consumer in unsecured instruments meant that the contracted counterparties could not guarantee future cash inflows and thus would become unprofitable despite doing everything correctly. The profitability indicator was also distorted by the fact that the ministry staffs were setting inconsistent rates of repayment for capital investments to privilege some enterprises over others.³¹²

Zotov's note reflected the financial and economic consequences of the fundamental problem with 1965 proclamations—the fact that they did not specify a legal

³¹¹ RGANI f. 5 op. 17 d. 488 ll. 155-158.

³¹² Ibid. ll. 159-161.

set of obligations for the ministries, nor did they have a mechanism for enforcing consistent implementation through some third party. Essentially, by passing the buck and choosing to make the reforms an evolutionary process, the proclamations reified the institutional arrangements of the Soviet economy as much as they reformed them by leaving the inter-institutional financial flows largely unchanged. This situation was confirmed by other early evaluations of the reform. In March 1966, Gosplan's Baibakov wrote to the Council of Ministers with his initial estimations of the effectiveness of the reforms. The early results were generally positive as enterprises transferred to the new system had been showing improvements in both productivity and profitability. Yet, Baibakov noted that there were not yet enough consistent regulations across branches in areas like contract enforcement, the transfers of productive funds, and remuneration which were holding back the overall impacts of the reforms. Baibakov was impressed by the expanded use of bank-issued trade credit by enterprises attempting to make deals with counterparties.³¹³ This opinion was not shared by Stroibank, the entity in charge of financing new construction, which wrote that in the same period addressed by Baibakov the lack of clear regulation had led to 248 million rubles in overdrafts. This increasing reliance on overdrafts to deal with the lack of rules and regulations led to 30% of equipment orders by construction sites being unpaid for by the customer. Further, enterprises were mostly drawing on long-term credit lines instead of shorter nine-month financing meaning that the traditional position of a bank (state or private)—borrowing short and lending long—was moving in the wrong direction and banks were unable to use their balance sheet to rollover funding and had to take losses on failed loans. In the Soviet

³¹³ GARF f. 5446 op. 101 d. 22 ll. 10-22.

system, where bankruptcy was non-existent, this meant an ultimate loss to the state budget.³¹⁴

Meanwhile, on the other side of the institutional divide, ministries were complaining that they had no guidelines for how to implement the reforms. For example, the Ministry of Light Machine Building complained that Gosplan and the experts in the Academy of Sciences were both moving too slowly in giving them information on wholesale pricing. The Ministry of Oil Exploration was even more strident stating that without price reforms on its category of products, it could not maintain profitability and asked for special exceptions be made for it in amortizing their losses on replacing old equipment.³¹⁵

Frictions were also increasing between the now nominally independent enterprises and their ministries and superior organizations. These were laid bare in 1968 when the multi-agency commission on economic reform (MGK), a special committee of agency staff and experts formed under Gosplan, met to discuss how to issue accounting regulations to the *glavki*, the ministerial subdivisions, to full *Khozrashchot* (cost accounting using their own funds). The meeting was divided into two days, the first to listen to the representatives of the enterprises and the second to listen to the heads of the *glavki*. The enterprise leaders were extremely wary of expanding the profitability requirement to their superiors as they feared that the *glavki* would begin to interfere in enterprises operations in ways that would advance their own bottom-line but hurt the enterprise's. A "Comrade Osivitch" of the Krasnogorsk Mechanical Plant argued that:

We agree that the *glavki* need to be moved onto a cost accounting standard. However, we think that this transition is only possible if the rights and

³¹⁴ Ibid., l. 105.

³¹⁵ Ibid., ll. 92-95.

responsibilities of these entities are strictly defined. As other comrades have already mentioned, we need to have a strict delineation of the ways that this higher standing organ will interact with its subordinate enterprises.³¹⁶

Furthermore, he explained that he was concerned that such steps required “strict monitoring and definitions of the wage and bonus funds” of the Glavki in fear that their workers would take profits from enterprises to remunerate themselves. Other members of the discussion were more straightforward about their fears. One participant, a Comrade Slivin, explained that if enterprise rights were not protected, his superiors, searching for profit, would put excessive tasks on his profitable plant “because we work well” rather than on the unprofitable members of his branch which could not fulfill those tasks. This, in turn, would mean that his enterprise would not be able to keep its profits and his own financial resources, and thus wages, would diminish. Another speaker feared that the entire matter would wind up being a “conspiracy against the rights of enterprises” and stated that it should not be the individual enterprise’s responsibility to give up its hard-won profits to benefit less profitable enterprises in their *glavok*. Enterprises, he concluded, should focus on their jobs, and “the government should focus on creating new financial reserves.” Finally, several enterprise managers complained about their superiors being generally wasteful, with one arguing that cost accounting and bonus structures might incentivize the staffs of these organizations to come to the factory floor since in their industry, it seemed no one ever came to interact with enterprise staffs.³¹⁷

The second day of the meeting featured representatives of the *glavok* staffs. These staff members also had their own complaints to Gosplan, mostly about their own

³¹⁶ RGAE f. 4372 op. 66 d. 2289 ll. 74

³¹⁷ Ibid. ll. 75-86.

superiors. A manager named Ilunin working at the Ministry of Instrument Manufacture argued that “the construction of long term new investments [capital construction] is not being done according to procedure because too many organizations, including Gosplan’s branch committees, are not giving us the opportunity to address our area’s problems as we believe fit.” A representative of the Ministry of Light Metals complained that the propositions being discussed had no relation to reality as “cost accounting is moving forward with no regard to the further planning of supply.” How then would the glavok staff be able to operate with profit if Gosplan was not issuing standards of the kinds of goods that needed to be produced or consistent prices for them?³¹⁸

Tensions between institutions were the result of the larger problem of how to control the spending and flow of relatively more liquid funds. Yuri Firsov, one of Kosygin’s aides specializing in foreign relations and international trade, recalled one illustrative incident when, during the height of the reforms, Kosygin met with the director of the famed Red October Chocolate Factory, A.A. Grinenko. Grinenko complained that the regulations being issued meant that the enterprise only had the right to use 4 million rubles of their 176-million-ruble enterprise fund toward wages. “I ask you nothing else but to let us use the funds we have as we see fit,” Grinenko told the Premier. Kosygin replied “Look Grinenko, I know I can trust you to responsibly administer your funds as you see fit. But can you imagine what would happen if I gave this right to all enterprises and what would happen in a very far-off area like say Yakutsk? We will never figure out what they are doing out there!”³¹⁹ The Grinenko-Kosygin exchange points to one of the central underlying issues of institutional distrust and competition: the distribution of

³¹⁸ Ibid., ll. 96-100.

³¹⁹ Alexei Gvishiani, *Fenomen Kosygina: Mneniia Sovremennikov* (Moscow: Ekaterina, 2004), 177.

control of wage funds and bonuses. The challenge of ruling a vast country with diverse economic conditions naturally brought up the tensions between the central control of the state budget and enterprise independence that were inherent in the Soviet economic reform project. Kosygin's instinct was to err on the side of the former. Baibakov recalled that while working with Kosygin, the Premier's primary concern was to make sure that the five-year plans developed under his watch had considered the proportion between planned central expenditures and the planned growth in wages and bonuses to defend the state budget from over-issuing currency and to prevent shortages in contrast to his own preference for boosting growth.³²⁰

The fear of losing control over the relationship between wages, investable funds, and enterprise profitability brings us back to the problem identified by Kalecki, discussed earlier in the dissertation. If the USSR maintained an economic structure that emphasized the production of heavy goods at the expense of the consumer, any profitable action by an individual enterprise would be offset by the fact that the additional wages generated by the bonus system would not be complimented by an equivalent, inter-temporal increase in the basket of available goods that a gain in productivity would otherwise engender. While attempting to address this problem, the reforms simply shifted the institutional channel through which this misbalance in the real economy expressed itself on institutional balance sheets from capital investments funded from the state budget to overruns of enterprise wage funds. Soviet economists associated with the "Tovarnik" and "Cost of Production" approaches understood this problem in various ways. For the Tovarniks, like Kronrod, the misbalance in the economy was proof of the alienation of labor from the

³²⁰ Ibid., ll. 208-209.

fruits of production. Workers were being paid more cash while the amount of consumer goods that they could purchase with that cash remained relatively constant. This meant the the purchasing power of the ruble reflected the worker's relative alienation. For Vaag and his colleagues, the continued existence of these perennial problems were the result of the lack of an economy wide interest rate. Without such a benchmark, enterprises could not effectively price their goods and markets would not clear. The results were the same. The Soviet Union was still stuck in a cycle of inflation wherein the state was issuing more cash to chase the same volume of goods. This cash would pile up in the savings of households thereby not reentering the budget through taxes, resulting in an expanding set of liabilities on the state.

This dilemma was implicitly understood by Gosbank which, in its June 1968 "Quarterly Report on the Circulation of Currency in the USSR," explained that while "in the conditions of a planned economy the state has the ability to regulate the volume of currency in circulation," if the population is undersupplied with goods compared to its spending power, "a portion of the money supply remains in the hands of the population." According to Gosbank's calculations, this amounted to about 2 billion rubles in cash that weren't making it back into circulation.³²¹ If the problem of money being held by the population mirrored the inflationary tendencies of 1961-1963, its precise dimensions and institutional pathways changed due to the 1965 reforms as wage overdrafts at the enterprise level had replaced state budget overdrafts. In the second quarter of 1966, a joint report of Gosplan, Gosbank, and the Ministry of Finance to the Council of Ministers explained that despite a general stabilization in the issuance of rubles compared to 1961-

³²¹ RGAE f. 2324 op. 28 d. 2427 ll. 49-53.

3, “the lower than needed rate of growth in the production of consumer goods compared to the increased money gains of the population is having unhealthy effects on the circulation of money.” The report concluded that the bonuses being paid out to workers in enterprises converted to the new system in 1965 and 1966 had increased the money supply above the quantity of goods available on the market “despite some increase in consumer goods” and could present “long term difficulties for the purchasing power of the ruble.”³²²

Gosbank pointed out that since the early 1950s, consumer production had fallen as a percentage of total output. In 1950, consumer goods had made up 45.5% of all Soviet production and 42.8% in 1955. By 1960, it was 39.8% of all production and 1965, 38.6%. By 1965 and 1966 “group B” consumer industries made up only 4.5% and 4.4% of new capital investments respectively. Meanwhile, wages were going up faster than planned, reducing the overall productivity of labor in monetary terms. These phenomena combined to lower the return on capital which in 1951-1960 had seen increases of 2.0% p.a., but began to fall at 1.0% p.a. between 1956 and 1960 and then at 1.5% p.a. in 1960-1965. What was changing after 1965 was the structural composition of the Soviet labor “market.” The Kosygin reforms had incentivized enterprises to change the way they were distributing salaries. From 1961-1965, the main source of above-planned wages was the over-hiring of workers. After 1965, enterprises were hiring fewer workers but the average salary per worker was increasing. This was causing “a disruption in the planned increases in labor productivity” as bonus payments were not doing their job to incentivize an increase in average output per worker.³²³

³²² Ibid., ll. 63-73.

³²³ RGAE f. 2324 op. 28 d. 2631 ll. 8-27.

While Gosbank was observing these shifts from above, an unlikely source was also doing so from below: the KGB. A 1966 survey of opinions and work conditions by the Lithuanian branch of the KGB gives us a glimpse into the on the ground conditions driving the phenomena observed by central economic authorities. The first thing that the report noted was that enterprises were suffering from the problems of institutional and supply chain coordination. Managers complained that their suppliers would miss deliveries which, in turn, would force them to both fail to complete their contracts to their own customers and to not fulfill the profitability targets set by their superior organizations. As well, they complained that their labor productivity and bonus targets were set on a yearly basis, rather than on the 3-5 year terms that the new system envisioned, constraining their enterprise's internal planning, and that republic-level management institutions had become "the agents of the central ministries." This, in turn, had drastic consequences for labor practices. Supply issues meant that "labor wasn't being utilized at full capacity" with many workers idled due to lack of material. This encouraged unhealthy "storming" practices, as workers made up the lost time in bursts of work which stressed supply chains further. In turn, enterprises suffered from increasingly high rates of labor turnover. Over the period the KGB observed the Vilnius electronic calculator plant, 1307 out of 4407 workers had left their workplace while the plant hired 1609 new personnel. Of those who left, the majority were line workers, most of whom, 897, had left of their own accord. The same phenomenon was observed at the Vilnius Bus Depot, which despite increases in wages, saw so many of its conductors and drivers leave that it was facing a labor deficit. The most active, productive workers were moving to less demanding jobs as soon as enterprises attempted to catch up on missed production or

to hit more intense productivity standards—after all, given the undersupply of goods, a marginal increase in cash payments associated with greater productivity produced very little added utility. In turn, productivity was not moving at the same rate as wage expenditures since enterprises had to compete for these more skilled workers by offering drastically higher salaries and better benefits.³²⁴

In 1969, as the Eighth Five-Year plan was coming to an end, a review of the reforms began both in the Central Committee and in various Soviet agencies. A report from the Yaroslavl Obkom noted that “all enterprises transferred to the new system had produced better results across a whole range of indicators than any enterprise still working under old conditions.” Yet, it also explained that “a whole variety of enterprises working on the new system have low rates of increase in the volume of production (from year to year) despite over fulfilling their financial plans.” Some of the reasons proposed by Yaroslavl were that enterprises were not installing new equipment and that capital investments were not being used effectively, even though enterprises now had to pay some of them back. Like other localities, Yaroslavl’s average enterprise’s rate of wage increases was not in line with its rate of labor productivity. In 1966, labor productivity went up 4.7% while the average wage went up by 6.5%. In 1968, this ratio was 7.6% to 8.3%. While the disproportion was decreasing due to the “work of local party organizations in enforcing norms,” many “individual enterprises” were still increasing their wages faster than their productivity. This was compounded by the fact that “the

³²⁴ LVOA f. K-41, ap. 1 k. 6. ll. 73-80. My infinite thanks to my friend and colleague, Alex Hazanov, who found and scanned this document while researching KGB surveillance in the Baltic. The role of the KGB as a source of economic information leaves itself open to further investigation, if and when archives become open. On the rapid increase of labor mobility in the late 1960s and through the 1970s see David E. Powell, “Labor Turnover in the Soviet Union,” *Slavic Review* 36, no. 2 (1977): 268–85.

management and engineering staffs” received the lion’s shares of bonuses issued for plan fulfillment.³²⁵

A similar pattern was observed in the report from Ukraine’s Communist Party Central Committee. Failures to consistently introduce financial indicators such as an unchanging rate for payments on state investments, and the lack of coordination in supply led to problems in fulfilling the plan. Newly decentralized enterprises, now extremely sensitive to being profitable and to potential bonuses that their staffs could receive, underestimated their own potential to their superiors and then over-fulfilled their plans. Thus, while enterprises appeared to be profitable, and to be increasing their output, they were operating below capacity to make sure that they would hit their targets. The prevalence of these, so called, “untaught” plans were a symptom of the fact that “the current system of fund payments and labor stimulus bonuses lead to enterprises perceiving no difference between intensive and un-intensive production plans.” This intentional under capacity on the part of the enterprises led to the major problems reported in other localities: wages outstripping productivity and high labor turnover. In fact, it meant that very often the wage and material stimulus funds were overdrawn compared to production funds earmarked to purchase new fixed capital. The preference for immediate returns meant that new technology was not effectively introduced to the factory floor. Despite a slight increase in the purchasing of new machinery, new fixed capital units were still far costlier than their impact on productivity to offset spending on bonuses. For example, while automatic looms increased the average productivity per worker threefold they cost eight times the amount of older, manned, mechanical looms—

³²⁵ RGANI f. 5 op. 61 d. 261 ll. 38-74.

money that could be spent on salary increases now rather than improved production later.³²⁶

Other factors were also interfering with the efficient implementation of the Kosygin reform. The original orders from 1965 specified that while the net cash price of goods delivered to market would be the primary indicator, gross production of goods would remain the primary target for unspecified key strategic sectors. The Moscow Party Committee reported that enterprises and ministries resisted moving to the new system and tried to maintain their old gross output indicators. Without the incentive to market their goods to make cash profits, these enterprises paid bonuses for increases in gross production without any change in the quality of goods produced.³²⁷

These local reports were confirmed by a November 1969 TSsU report to the Central Committee. Surveying 325 sites, including workshops, production lines, and agricultural technical facilities, TsSU's staff found that at 270 sites, the net production of goods per worker was lower than projected in the production plan and only 55 sites had over-fulfilled their targets for this indicator. Thus, four out of five surveyed sites had failed to achieve improvements in labor productivity. As well, surveyed enterprises tended to not use their financial resources for investing into labor-saving technological improvements, meaning that the majority had under-fulfilled their targets for reducing their labor force. As a result, at 197 enterprises the cost of goods produced (*sebestoimost'*) had failed to fall to the level projected by their yearly production plan and only 36 had managed to over-fulfill their target cost reductions, causing an overrun of

³²⁶ RGANI f. 5 op. 61 d. 259 ll. 61-80.

³²⁷ RGANI f. 5 op. 61 d. 252 ll. 254-257.

190 million rubles across the sample.³²⁸

The problems faced by the USSR in the wake of the first wave of the Kosygin reforms were summed up in a note written by CEMI veteran turned in-house economist to Gosplan's section on economic reform and new computing technologies, Vladimir Kossov, in 1970. According to Kossov, the reforms had been relatively successful in shifting the onus of financing from the state's central budget to the balance sheets of the enterprises and to a certain extent the ministries, as shown from the data below:

Table 3.3. Sources of Capital Investments 1965-1968

	1965	1966	1967	1968
Central Capital Investments (in billions of rubles)	17.7	18.3	19.5	21.1
Profit (in billions of rubles)	22.5	26.1	34.9	44.4
Central Capital Investments as Percentage of Profit (in %)	80	73	56	47.5

source: RGAE f. 4372 op. 66 d. 3962 ll. 1

As the table shows, while central capital investments increased slightly, they had come down from being 80% of the funding of enterprise profits in 1965 to being only 47.5% in

³²⁸ RGANI f. 5 op. 61 d. 254 ll. 3-9.

1968. Clearly, enterprises were beginning to rely more on their own financial resources. Yet, this channel of fund outflows was being replaced by another one: the constant increase of wages in proportion to the national income as shown in Table 3.4.

Table 3.4: Growth in Average House Hold Wages, 1961-1968

	1961	1962	1963	1964	1965	1966	1967	1968
Average Growth of Monthly Take Home Wages (in millions of rub)	4.1	3.2	1.7	2.0	5.2	6.5	4.5	7.6
National Income Growth (in millions of rub)	6.8	5.7	4.0	9.3	6.9	8.1	8.6	7.7
Real Rate of Income Growth	.60	.56	.43	.22	.75	.80	.52	1.01

source: RGAE f. 4372 op. 66 d. 3962 ll. 2

Thus, while one channel for the outflow of state funds began to close, another began to widen, as enterprises began to remunerate their most valuable workers more in the face of increased labor mobility, while less valuable workers idled while continuing to receive wages. This situation, Kossov pointed out, was caused by the fact that Soviet enterprises had few rights to lay off workers in order to become more profitable and productive. Further, to fulfil obligations and make wage payments, enterprises stopped drawing on central state funds directly, and instead took out loans from Gosbank and its subsidiaries that they could not pay off, resulting in large overdrafts which, in turn, resulted in losses to the overall state budget as Gosbank had to write off its losses—after all, Soviet enterprises could not go bankrupt so what was the point in repaying loans on

time.³²⁹

As enterprise accounts became more liquid, leverage flowed from the state budget to the enterprise wage funds, and banks, which in turn put pressure on the consumer goods market and then finally, onto the state budget through the over-issuance of cash and credit by state-owned entities. In other words, the USSR had accumulated a giant ball of intra-societal debt and the limited structural changes introduced by the Kosygin Reforms had simply succeeded in getting it to roll from one part of the state balance sheet to another with very little deleveraging.

Gosbank recognized this problem. In 1970, it argued that the state had several ways of dealing with the changes that were emerging in the Soviet economy. The best option was to begin a long-term shift toward reinvesting the bulk of the state's income into the consumer sector, thereby supplying the market with goods and removing excess cash from the population. Yet, because this would take an extremely long period of time to implement, it proposed that the increases in economic stimulus funds and the issuing of bonuses for productivity be frozen for two to three years to slow the increasing volume of cash being held by households. It also suggested that prices on consumer goods be made "more flexible" and markups on especially high demand goods, such as automobiles, be increased by as much as fifty percent to force households to spend their excess savings. As well, it argued that enterprises should get out of the business of providing fringe benefits such as housing and vacations—a key element of the Soviet welfare state model—and that those resources should be paid for out of worker's wages.³³⁰

³²⁹ RGAE f. 4372 op. 3962 ll. 1-3.

³³⁰ RGAE f. 2324 op. 28 d. 2651 ll. 46-48.

What went unstated in Gosbank's proposals was that each of these choices either required a political shift in the conceptualization of the relationship between the state and economy or an abandonment and slowing of the reforms. The economic fissures opened by the implementation of the 1965 reforms posed a series of political and ideological dilemmas for the Soviet state. Would decreasing leverage and improving capital efficiency mean that the USSR would have to abandon certain elements critical to its identity as a "socialist state?" Could the Soviet Union really abandon such core elements of its version of state socialism such as the enterprise-based welfare system, the priority of production goods, and the centrality of labor productivity to growth? Even more critically, these dilemmas begged the question of who had the power to make these choices and how could making (or not making) them be justified. These underlying political-economic tensions would shape the politics of institutional and intellectual competition over economic reform from the late 1960s to the mid-1970s.

Conclusion: Weak State, Weak Reforms

While they were the most far-reaching Soviet reform project since the 1957 Sovnarkhoz reforms and offered the possibility of a radical rethinking of the economics of socialism, the October proclamations made little progress on the discussions of April 1965. With the exception of the restoration of the "branch principle of administration," a goal shared by all stakeholders, the reforms had not implemented any course of action or strategy that had been recommended over the summer. Instead of radically changing the underlying institutional relationships, and most importantly, the funding priorities of the state, the October 1965 reforms became empty vessels for the aspirations of various groups who each saw them as a first step to gaining what they wanted. Thus, everyone from the

ministries, to Gosplan, to the most radical of reformers could remain hopeful that their agenda would soon be implemented. Yet, that did not make the politics of reform any less real or historically important. Concrete steps were being taken that, given that the reforms were being pitched as a long, multistep process, were obvious starting points for any of these agendas.

This ambiguity was a symptom of a larger problem of Soviet state power in the wake of Khrushchev's reign. The zigzags of Khrushchev's policies led to a Soviet state that perceived itself as weak on an international level, having failed to reach its targets to "catch up and overtake the United States," and whose government was divided between two or three powerful leaders with no mechanism to resolve these divisions short of political intrigue and backroom deals. While the 1965 reforms were a response to some of these problems, their lack of a concrete aim other than an abstract improvement of the economy were a symptom of the multi-polarity of Soviet politics and the lack of institutions that could forge effective legislation. The results that did emerge from this process were hampered by the fact that the legislation was a collection of half measures which reified institutional power relationships in the economy rather than reformed them.

Yet, the problem that faced Khrushchev's successors remained. The USSR's economic success was deeply tied into the narratives that underpinned the day-to-day functioning of Marxist-Leninist ideology and therefore the legitimacy of the Soviet state itself. Like in 1955, Soviet leaders needed a way to create a new narrative of the USSR's economic superiority to its capitalist rivals which legitimized both bases of the Soviet project: its ideological vision and its institutional practices. This task would fall not to an administrator like Kosygin but rather to a talented politician: Leonid Brezhnev.

Chapter 4

From Radical to Conservative Reform: The End of the Kosygin Reforms and the Politics of “Developed Socialism.”

In 1972 Yakov Kronrod was in trouble and, unlike in 1955, he would not get out this one free of harm. A commission of external auditors including experts from rival economic research institutes and officials from the Moscow Party Organization had descended on the Academy of Sciences’ Institute for Economics following a proclamation by the Central Committee on its failures in advancing social sciences. The Commission, having taken its stock of the Institute’s work, removed Kronrod from his post as Deputy Director in charge of the Section on The Political Economy of Socialism—the Institute’s primary body for the development of the theory of what defined a socialist economy—and forced him into semi-retirement by giving him the largely powerless position of “Senior Scientific Associate.” Like most forced retirements in Late-Soviet academic politics, Kronrod’s removal wasn’t just a scientific matter: it was a coordinated strike by a set of academic and political groups on their rival—in this case, the *Tovarniks*.³³¹

What is especially striking about this round of academic purging is that it came right on the heels of a period during which the *Tovarniks* and other economic reformers believed that the implementation of their ideas was imminent. The previous chapter argued that the September 1965 “Kosygin Reforms” were viewed as a fundamental breakthrough for those, including Kronrod, who had wanted to see fundamental changes in the Soviet economy. Yet, between 1965 and 1972, two paradoxical shifts were happening. On the one hand, Soviet state officials were trumpeting a new stage in the economic reform—one that

³³¹ T.E. Kuznetsova, “Zhizen v Nauke” in *Ekonomicheskaya Teoriia I Phenomen Yakova Kronroda: K Sto Letiiu So Dnia Rozhdeniia* (Moscow: Nestor-Istoriia, 2012).

would push the USSR into a new era of development marked by what they called “the global scientific-technical revolution.” This new period in historical development heralded the final victory of socialism—whose planned order was a natural fit to this looming post-industrial era—as well as the expansion of cutting edge initiatives in the economy involving better management, optimal planning, and the introduction of computer driven productive techniques. On the other hand, the scope of what economic reform meant and the extent of the intellectual and institutional changes that it could entail was drastically curtailed. Indeed, the era that would follow would be labeled “stagnation” by the successors of the leader at the helm of “developed socialism”—Leonid Brezhnev. Leaving aside the ex-post facto assessments of Brezhnev’s successors, a close reading of “the era of stagnation” reveals not only the negative agenda of anti-reformism emphasized by Gorbachev and his allies but also a positive project into which massive amounts of political capital was invested.

As we shall in this chapter, a striking amount of ideological work had to be done to build the conservative settlement that “stagnation” signified. “Developed Socialism” was not just a set of axioms that stifled reform but also a shaped the intellectual parameters of those who would later critique it. Research on the “Soviet Seventies” has shed light on the era as an incubator for the “liberal” political reform of the late 1980s. Political Scientists and historians as diverse as Mark Sandal, Edward Bacon, Archie Brown and Robert English have traced the ideas that inspired Gorbachev’s *Perestroika* to the intellectual milieus formed during the Brezhnev period.³³² However, despite the dominance of political

³³² Mark Sandle, “A Triumph of Ideological Hairdressing: Intellectual Life in the Brezhnev Era Reconsidered,” in *Brezhnev Reconsidered*, ed. Edwin Bacon and Mark Sandle (London: Palgrave Macmillan, 2002); Edwin Bacon, “Reconsidering Brezhnev,” ed. Edwin Bacon and Mark Sandle (London: Routledge, 2002); Archie Brown, “Transnational Influences in the Transition from Communism,” *Post-*

scientists in this literature, there has been surprisingly little politics involved in it. Rather, authors have either relied on studies of small groups in the Central Committee (calling them “Chamaeleon Institutions”) or on intellectual communities looking “West” to some ideal liberalism rather than contextualizing these figures into their own political milieus including their relationships with conservative opponents. By avoiding the nitty-gritty of Soviet economic politics, this Whigish historiography, unsurprisingly written in the late 1990s to mid-2000s, looks to its subjects as the antecedes of triumphal post-Soviet, Russian liberalism. Yet, this approach means taking many of their study’s actors out of the context of their period. In other words, it cannot explain how an erstwhile left-liberal hero like Gavril Popov, the first post-Soviet mayor of Moscow and Social-Democratic economist at Moscow State University (MGU), would align with some of the most conservative elements in the USSR to oust a critic of the Soviet system like Yakov Kronrod in 1972. In the Russophone literature, R.G. Pikhov and A.K. Sokolov have carefully and expertly cataloged the intrigues and high political shifts of the late-Soviet era, placing the start of “stagnation” with the end of economic reform but have not specifically focused on its institutional or intellectual context.³³³

A similar problem has emerged in the recent literature on Soviet economic thought. Coming out of sociology, science and technology studies, and anthropology, a slew of work has appeared in recent years looking to better understand the social and cultural composition of Soviet economists and related technocrats in the 1970s. Ben Peters’ excellent *How Not to Network a Nation* has used publically available information,

Soviet Affairs 16, no. 2 (2000): 177–200; Robert English, *Russia and the Idea of the West Gorbachev, Intellectuals, and the End of the Cold War* (New York: Columbia University Press, 2000).

³³³ R.G. Pikhov and A.K. Sokolov, *Istoriia sovremennoi Rossii: krizis kommunisticheskoi vlasti v SSSR i rozhdeniia novoi Rossii* (Moscow: Rosspen, 2008), 10-54.

Ukrainian archives, and interviews to paint a subtle picture of Soviet cyberneticists and mathematical economists as both competing, if often aligned groups, but as starkly different from what he calls “liberal economists”—in other words *Tovarniks* and the members of the Cost of Production school.³³⁴ Adam Leed’s recent dissertation deploys critical theory to write an ethnography of Mathematical Economists and describe how they, and other members of the so-called “technical intelligentsia,” formed under the conditions of the 1970s and became the vanguard of Post-Soviet liberalism with its elitist particularities.³³⁵ Olessia Kirtchik and Ivan Boldyrev’s research group at the Higher School of Economics has done similar sociological research to trace how mathematical language allowed Soviet general equilibrium theorists to draw on the same sources as their Western counterparts while never being institutionally incorporated into economics as a discipline or indeed thinking of themselves as economists.³³⁶ Their study has done extensive work on the internal institutional contexts of various Soviet research institutes and CEMI in particular. Yet, these studies of the rise of Soviet “mathematical-economics” have the same thing in common: they are completely apolitical, or at least they replace policymaking and bureaucratic politics with cultural politics. What is lost in this cultural-institutional sociology of science is the sound of the grinding wheels of institutional competition, political coalition building, and their associated economic outcomes. Losing these textures is particularly harmful to the study of the USSR which, after all, was a highly

³³⁴ Benjamin Peters, *How Not to Network a Nation: The Uneasy History of the Soviet Internet* (Cambridge, Massachusetts: The MIT Press, 2016).

³³⁵ Adam Leeds, “Spectral Liberalism: On the Subjects of Political Economy in Moscow,” (PhD Diss, University of Pennsylvania, 2016).

³³⁶ Ivan Boldyrev and Olessia Kirtchik, “General Equilibrium Theory behind the Iron Curtain: The Case of Victor Polterovich,” *History of Political Economy* 46, no. 3 (September 21, 2014): 435–61.

bureaucratized authoritarian state and the study of modern economics which is, as these studies have established, a political discipline at its heart.

This chapter will attempt to rectify the gaps in the literature and move toward building a new way of understanding the period of stagnation by chronicling how the evolution and consolidation of Soviet economics was deeply intertwined with consequences of the Kosygin Reforms and the very real political and economic dangers that they unleashed. It will continue the thread developed in the previous chapter by arguing that these challenges sharpened the divisions between interest groups with very different visions and agendas for what a post-reform USSR would look like. Finally, it will show how Brezhnev built a conservative framework for both limiting the impacts of the reform while keeping those elements that did not pose a political challenge. In doing so, Brezhnev, and those around him, developed a set of new conceptions such as “Developed Socialism” and “the Scientific-Technical Revolution” to keep elements of earlier policies, such as “peaceful co-existence,” and research into cybernetics and networking, that were useful while stripping them of their unpredictability and subversive content. This new political context allowed certain camps in economic sciences to take on their opponents, thereby forming much tighter, yet ultimately ill-defined borders to what were politically acceptable directions for economic policy. As such, this chapter will be the culmination of the multi-part story of the emergence and fracturing of reformist economics. It will present the political consequences of the end of the Kosygin Reforms as a central turning point in how the Soviet state was able to coopt and trim its subversive edges. This however does not mean that economics became a state “pseudoscience” as Gerovitch argues cybernetics

became. Rather, this chapter will open a longer discussion of how economic critique adapted itself to new political circumstances by shedding some of its Cold War guise.

While the previous sections of this work set up the theoretical dilemmas and splits within Soviet economic thought and the gradual politization of these groups within the context of the dilemmas post-Stalin state, this chapter will show how Brezhnev's political intervention into the Soviet project tamed the potentials unleashed after 1953 without restoring what came before it. From this perspective, I want to begin challenging both conceptions of "stagnation" that I outlined above: the "Brezhnev as bad leader" and the "stagnation as incubator for liberalism" interpretations of the Soviet seventies. First, I will show that the agenda that has been termed "stagnation" was not an act of weakness and unoriginality on the part of Brezhnev but rather a massive project of constructing a positive political program which emphasized a new direction of the Soviet economy based on modernization. Second, I wish to start a strand of argumentation that I will continue in future chapters, that those intellectuals and policy entrepreneurs that informed the critique of stagnations were not "secret liberals" working in special institutions but were rather products and architects of Brezhnev's "developed socialism" *par excellence*. Drawing on Charles Maier's argument that economic policies, no matter their eventual unintended outcomes, are sets of choices that reveal the socio-political preferences of their supporters, it will argue that the period of "stagnation" was not a period of inaction but rather a coherent conservative policy agenda that attempted to use reformist methods without their troubling political consequences. The unintended failures of those policies were not a function of the weakness or incompetence of Soviet conservative leaders. Rather, the political structure that was built in response to the Kosygin Reforms was strong enough

that it was able to tame the impulses behind the radical agenda and give each interest group around the reform process something that it wanted. Stagnation was therefore an outcome that may have not been desired by the USSR's leaders but the risk of it was accepted over the prospect of deeper structural change.³³⁷

Whose Reforms? Institutional Competition and the Shifting Goals of the Economic Reform 1966-1970

In his memoirs, Baibakov, Gosplan's chief, recalled a conversation he had with Politburo member Nikolai Podgorny in 1966 who told him, "I don't understand why we need these damned reforms anyway." Podgorny, a known arch-reactionary with ties to heavy industry, was a natural opponent of the Kosygin reforms. In his memoirs, Baibakov portrays himself as a champion of reforming the USSR's economy against conservatives.³³⁸ As we shall see, this portrayal is at odds with how many of his contemporaries and the archival records often depicts him. However, we should not take Baibakov's remembrances as entirely self-expurgatory. Rather, Baibakov was often a "reformer" but a conservative one. He recognized the need to reform elements of the Soviet economic system but feared doing so too quickly, or in a way that might delegitimize the fundamental institutional underpinnings of Soviet state power. While more radical reformers saw Baibakov as an impediment, others could see him as an ally.

Baibakov's, and by extension Gosplan's, ambiguous position in the politics of economic reform was a function of both the reforms themselves and the nature of Soviet politics in the wake of the October Plenum. The Kosygin reforms were envisioned as an

³³⁷ Charles S. Maier, *In Search of Stability: Explorations in Historical Political Economy*, Cambridge Studies in Modern Political Economies (Cambridge: Cambridge University Press, 1987).

³³⁸ N.K. Baibakov, *Sorok Let V Pravitelstve* (Moscow: Respublika, 1993), 110-113.

extended administrative process rather than as a single set of structural reforms with an overarching ambition. As they unfolded, the problems they posed, such as rapidly rising wages and falling labor productivity made the discussion over the next step in reforming the Soviet economy a terrain in which interest groups competed and eventually, the outlines of a post-reform economic orthodoxy emerged. Thus, the debate over the future of the reforms—the process that would eventually tellingly be labeled “the improvement of economic management” rather than the previous, more ambitious term, “economic reform”—would define the contours of Late-Soviet economic organization.

Varying interpretations of the reform’s goals started almost as soon as the ink dried on the October decrees. In 1966, the Soviet Union’s economists met to discuss the results of the XXIII Party Congress, where the economic reforms were at the center of discussion, with the Party leadership trumpeting them as the next step in the construction of Communism. Yet already, tensions were present over the most critical question of economic reform: prices. Without a reform of prices, any move toward enterprise independence or greater efficiency through profitability would be doomed by the fact that current prices simply reflected the status-quo-ante’s distribution of resources. Wholesale price reform was not a new dilemma. It had been in the works since 1960, with the members of the Nemchinov commission such as Belkin sparring against Gosplan and the bureaucrats throughout the final years of Khrushchev’s reign. At the 1966 conference, Gosplan’s line on the matter was laid out by Deputy Chairman N.I. Sitinin, in charge of the Section on Prices, who attacked those who believed that the USSR needed a radical price increase, singling out Belkin’s work. Defending Gosplan’s proposals to the Council of Ministers to raise wholesale prices by 11-15%, he stated “that recently the *Ekonomika* publishing house

has published a brochure by Comrade Belkin advocating for a larger increase in wholesale prices. While I understand that Comrade Belkin is sitting here, I would like to say on the record that I think that publishing this material was a critical mistake.” At this point, Belkin interfered from the audience saying “I will answer your accusations” to which Sitinin answered, “I am sure you will but I will not listen to your response as it is as useless as two deaf people trying to talk to each other.” Belkin responded explaining that if prices were not immediately raised higher, then not only would some industries be given an advantage over other, turning profitability into an inaccurate measurement, but that the Soviet budget would continue to suffer losses as some sectors would continue to be heavily subsidized because there was no consistent pricing across different sector of the economy. Gosplan’s price increase plans were piecemeal, encapsulating only certain sectors while not seeing how they interacted across the economy as a whole. Belkin argued that “the problem created by preserving prices set by various standards is not one of principle, it is a problem that is the basis of the entire reform itself.”³³⁹

Gosplan recognized the centrality of price reform and the revision of the methodological basis upon which prices were set when it appointed A.V. Bachurin, the head of the Finance Ministry’s Research Institute, and the Vaag and Atlas’ 1959 opponent, to be the director of the so-called “multi-agency state commission for the implementation of economic reform” and later “its section for new management techniques.” Bachurin’s statements at the 1966 meeting provides us with more insight into how Gosplan was planning to go about the reform. For Bachurin, “profitability, bonuses and the formation of wage funds” constituted “a system of indicators” each of which would “work together” to

³³⁹ ARAN f. 1877 op. 8 d. 506 ll. 15-16, 138-9.

not only improve the supply of goods to the population and their quality” but also “lower the cost of production.” As such, he distrusted the position of those such as Belkin and Vaag that were pressing for the priority of profitability over other targets for enterprise management. Bachurin also recognized the international political context of the economic reforms by explaining that changes to planning in other socialist countries “have significance for the entire socialist camp. However, each state must approach things differently according to its own needs. We believe that there should have a mandatory hierarchy, while the Czechoslovaks believe that indicators are guiding principles, that in practice seems to have a mandatory nature.” For Bachurin, like many in the Soviet elite, believed that the USSR had to be a conservative power both at home and abroad so as not to violate the boundaries of ideological acceptability. Therefore, he placed the onus of effectively implementing the economic reforms on having better control over planning from the center and improving local practices. The ministries “were constantly hurting the advancement of contract based inter-enterprise trade by interfering with the day to day operation of enterprises and changing production orders” he explained. Further, problems with enterprise level planning meant that yearly plans were constantly violated. Thus, it was at the level of the factory where Bachurin left the door open to importing foreign and even Western experience. Here he praised a Czechoslovak delegation he had met in Prague that had gone to France to study how accounting was done in French corporations. In 1966, Gosplan’s agenda was thus not to stall the reforms but to impose a rationalized form of planning over the ministries without giving up the priority of the “Five Year Plans.” Bachurin called this process “making the Five Year Plan the main guideline for planning”

in contrast to the system that existed before the reform which he correctly pointed out was *ad hoc* and run by the whims of the ministries or *Sovnarkhozes*.³⁴⁰

Gosplan's position placed it in opposition to the GKNT, and its associated "Cost of Production School." Almost immediately after the launch of the reforms, in November of 1965, Vaag wrote to Demichev, the Central Committee Deputy Secretary responsible for the Department of Culture and Science, complaining about the lack of training of many of those working under Gosplan. Most economic cadres, he argued, did not understand that the price of goods produced (*sebestoimost*) for an individual enterprise could not be the basis for determining the most vital element of the reform: price. Rather, as he argued earlier, the USSR's economy needed to acknowledge "the importance of variable labor" by which Vaag meant the opportunity cost of capital. He complained that Gosplan's Sitinin refused to move beyond a "primitive, local understanding of price" and that Gosplan's prices section was too interested "in working out a system of various indicators to build the basis of prices" rather than a "single economy-wide economic indicator" which would allow profitability to sort out where investments would have the greatest economic return. Vaag continued to argue that it was the fact that in a socialist economy, the cost of capital (or as he termed it the cost of production) was equivalent to the real cost of variable labor, rather than in a capitalist economy where it reflected the capitalist's exploitation of labor. Not deploying this vital difference would forgo the USSR's "natural" advantages over its rivals. For Vaag, the September Plenum marked the moment in which the work that was conducted by him and his colleagues, starting in 1948, and culminating in the Nemchinov Commission of 1959-1960, could have been turned into policy. The thing that was standing

³⁴⁰ ARAN f. 1877 op. 8 d. 505 ll. 110-126.

in the way was the resistance of conservative economists in certain corners of academia and most of all in Gosplan. The solution Vaag had in mind was to take the issues of implementation out of Gosplan's hands and to move it to a separate commission made up of his contemporaries like Atlas, Birman, Belkin and CEMI's Petryakov. The response to the Central Committee about these matters was written by Gatovsky who stated that Vaag was a member of both Academy of Sciences' and Gosplan's commissions which were considering multiple conceptions of price formation including, Vaag's. This was the basis of the response from the Central Committee which told Vaag that as he was an active participant in Gosplan and the Academy's consultations and that he had every chance to voice his opinions.³⁴¹

The Central Committee's response was symptomatic of the problems that radical economic reformers had when facing Gosplan. First, Gosplan's position as the agency tasked to implement economic changes meant that it would be the arbiter of new economic ideas and methods. Second, the fact that Gosplan placed itself firmly in the center of the debate between radical reformers and the entrenched interests of the ministries allowed it to portray itself as the reasonable middle. This dynamic only accelerated as the problems of implementation, particularly the issue of labor productivity, began to impinge on the initial successes of the reforms. A 1967 report from the Institute for Economics of the Academy of Sciences concluded that "many economists believe that the profit and profitability always reflects a relatively proportional growth in productivity. Profit and profitability are criteria of the effectiveness of production. Yet, it is important to note that profit and profitability are also criteria for distribution, while the productivity of labor

³⁴¹ RGANI f. 5 op. 35 d. 213 ll. 117-129.

reflects deep processes reflecting the development of technology and the improvement of production. The relationship between productivity and profitability is not an equivalence and thus there are a variety of branches in which achieving the two targets simultaneously cannot be introduced into planning.” While the report concluded that “the introduction of wholesale price reform is vital to solving this problem,” it noted that the priority for economic growth was the introduction of new technology and that the price system should reflect that priority for individual enterprises.³⁴²

Mounting problems with productivity was a cause of existential angst for a Communist state whose guiding economic doctrine was the labor theory of value and the existence of an ever-expanding frontier for growth. Thus, by late 1968 and early 1969, a discussion began about how to get around the problems in the original set of reforms. With less of the central budget being expanded on capital investments, the priority for improvement shifted to increasing productivity. This was reflected in a July 1969 assessment by the Central Committee’s section for Financial and Planning Organizations which noted that since the 1965 reform, ministries and enterprises had been rapidly expanding their administrative and management cadres rather than focusing on saving on labor and expanding per worker output. The priority of the future reforms had to be the “scientific management and organization of cadres,” especially workers engaged in engineering and white collar labor.³⁴³

As the reforms were being undertaken through administrative decrees from the Council of Ministers (of which Baibakov was First Deputy Minister), it became Gosplan’s job to develop the line of reasoning behind the new directives. Gosplan’s diagnosis of the

³⁴² ARAN f. 1877 op. 8 d. 623 ll. 10-11.

³⁴³ RGANI f. 5 op. 63 d. 107 ll. 44-52.

problem was that "while there has been some increase in the quality of work of the enterprises, there also have been significant problems with the increase of the productivity of labor envisioned by the XXIII party congress. Often enterprises increase their profitability and productivity by increasing the number of workers they employ." The solution was to apply the decisions of the 1965 decrees more rigorously to force enterprises and their superiors to plan for the long term. In Gosplan's estimation "the five-year plan has not yet become a stable system of yearly indicators due first of all to the lack of a continuous plan of capital investment hurting industrial practice. This allows instability in norms for creating enterprise and ministry level funds of economic stimulus, the creation of direct enterprise ties and the calculation of material and technical supply."³⁴⁴

The approach from Gosplan and the party acknowledged the need to improve the administrative implementation of the reforms without touching the fundamental elements of an economic reform: price and interest rates. In a 1968 note, the GKNT's Trapezdnikov responded to Gosplan's arguments noting that while they were correct that the rate of "technical progress" and "productivity" was slowing down, the problem was caused by the fact that "the rate of wage funds were often growing independently of an enterprise's real profitability because they were not being compared to the profitability of the economy as a whole" due to the absence of a system of prices that took into account the economy-wide cost of capital for all branches. Thus, many obsolete, unprofitable enterprises could still appear to be profitable and have their wages increase without a corresponding increase in productivity. Trapezdnikov suggested that the rate for repayment on capital investments should be set at a universal 15% in order to create a base interest rate to compare enterprises

³⁴⁴ GARF f. 5446 op. 105 d. 6 ll. 5-7.

from across branches and sectors.³⁴⁵ This position was seconded by Vaag who in 1970 wrote an entire draft of a new declaration on improving the Kosygin Reform which held that technical progress was being held back because “the main indicator of the effectiveness of an enterprise’s production was its individual profitability rather than in comparison to the whole economy.” This led to perverse effects in which “the best performing enterprises had no incentive to invest in new technology while poorer performing ones lacked a signal to make effective improvements in their operations.” The main indicator for the effective enterprise performance would be “net profit,” or profits after tax, interest, and overhead payments. Finally, the proposed decree would have had the 1966-1967 price reforms instituted by Gosplan supplemented in favor of a steeper wholesale price increase.³⁴⁶

Obviously Gosplan could not stand for this. In a 1968 note to the Central Committee outlining future steps for the economic reform, Baibakov explained the need to push back against the position of “economists who argue about the incompatibility of central planning and the expansion of direct enterprise ties, central planning and enterprise autonomy; who wish to separate prices from the laws of socialism, replace five year plans with long-term forecasting and introduce bourgeoisie practices of bankruptcy.”³⁴⁷ In a 1970 note to Kosygin, Bachurin responded to the GKNT’s criticism in particular. The letter pointed out that Gosplan was not ignoring the problem of labor productivity and technological progress and was indeed taking on a “complex multifaceted approach” to these issues in its deliberations on a new decree on economic reform. Gosplan’s draft included “a five-year plan to develop the productivity of labor,” a “focus on the production of new goods in the

³⁴⁵ RGAE f. 9480 op. 9 d. 540 ll. 60-61.

³⁴⁶ RGAE f. 9480 op. 9 d. 1032 ll. 27-46.

³⁴⁷ RGANI f. 5 op. 6 d. 227 ll. 49-51.

five-year plan,” “increasing the role of self-financing industrial combines in the Soviet economy,” “a review of prices,” and expanding the means to “improve the planning and funding of research into new productive techniques.”³⁴⁸

These consultations had led Gosplan to determine that it was “not appropriate to make net profit the main indicator of enterprise performance” and instead it proposed a set of indicators that would judge an enterprise’s performance by “its place in the economy.” This meant that Soviet planners would have to accept that some production would need to have different criteria of effectiveness from others. This opinion was confirmed by Baibakov in his introduction to the final draft of what would be the new decree issued in September 1970. According to Baibakov:

The draft has incorporated certain comments made on it by the members of the State Committee of Science and Technology. At the same time, the GKNT insists that key problem of economic reform is the reconstruction of the entire system of economic planning, stimulus and the assessment of enterprise operations based on a single criterion of profitability. This would overturn a variety of other important indicators introduced in 1965 such as repayments for capital investments, effective usages and issuances of credit and other important economic criteria. As such, Gosplan does not believe that their proposals are acceptable.³⁴⁹

Baibakov’s position as both Chairman of Gosplan, and as First Deputy Chairman of the Council of Ministers meant that Gosplan would be the agency that carried out the brunt of the work of implementing and “improving” the reforms of 1965—especially as power structures began to consolidate in the wake of the October Plenum of 1964. In the recollections of several participants in high Soviet politics, by the late 1960s, Baibakov was increasingly seen as one of “Brezhnev’s men.” Reportedly, he had been given his position as number two on the Council of Ministers at Brezhnev’s behest to check

³⁴⁸ RGAE f. 4372 op. 66 d. 3774 ll. 179-184.

³⁴⁹ GARF f. 5446 op. 105 d. 10 l. 16.

Kosygin's influence. In his own recollections, Baibakov argued he was somewhere in between seen as "Brezhnev's friend" by Kosygin's allies and "Kosygin's associate" by the Brezhnev's camp. However, it is widely confirmed, including by Baibakov himself, that the two men clashed over the direction of the Ninth Five Year Plan, with Kosygin trying to emphasize financial balances and Baibakov trying to push on the expansion of productivity and increased investment into new technology.³⁵⁰

Yet if Gosplan opposed the radical proposals for a profit led economy, it was not the most obstructionist organization or group in the USSR. In fact, Gosplan would also act as an active defender of the very concept of economic reform from those who believed that it was diluting the Soviet Union's socialist mission. For example, in May 1970, a journalist named A. Starostin wrote to Suslov complaining that the press has become inundated with discussions of material incentives rather than the organization and ideological motivation of labor. "Economists" he complained "were rejecting the directive basis of planning" for "the false ideals of Western propaganda." Increases in wages for productive workers "would lead to more goods and less social responsibility."³⁵¹ Starostin explained that what was needed as "more moral rather than material stimulus." In April 1971 V.K. Rostochkii, the Deputy Minister of Railroad Machine Building, wrote to the Central Committee's Department of Higher Education and Science to complain that a pamphlet distributed IMEMO to management cadres in the ministries, entitled "Problems of Production Management in the Main Capitalist Countries," had "no Marxist-Leninist critique of these [Western management] theories" and "in essence, supported them." While acknowledging

³⁵⁰ V.V. Grishin, *Ot Khrushcheva do Gorbacheva: politicheskie portrety, memuary* (Moscow: Aspol, 1996), 38-41; N.I. Baibakov, "Bez glubokogo analiza i vzveshennogo podkhoda" in *Leonid Brezhnev: materialy k biographii* ed. Iu. Aksutin (Moscow: Polizdat, 1990), 247-252; *Phenomen kosygina*, 238-242.

³⁵¹ RGANI f. 5 op. 63 d. 3 ll. 15-19.

that “the September Plenum directed us to study new methods in capitalist countries” these inquiries should “never forget that our socialist system is ahead of the capitalist system by an entire historical epoch, which means that our management methods are much more effective than any capitalist country’s.” For Rostochkii, IMEMO’s ideological slipup was the result of the difference between “practical workers and researchers” the former of which “may not know as much about the West but know a lot about Soviet industry.” Indeed, he criticized the idea that Soviet ministries could be compared to American corporations (a very valid point) noting that any deficit of the former in management compared to the latter was a matter of “the temporary backwardness of Soviet industry.” IMEMO’s note did not consider the great potential of Soviet industry which “was already the most centralized in the world [sic].”³⁵²

Discomfort with the reforms wasn’t confined only to ministry personnel and journalists. V.I. Katz, a Stalin-era economist, wrote to the Central Committee objecting to Gosplan’s rules for measuring the acquisition of new technology. In Katz’s estimation, the “Price of Production School” had influenced Gosplan’s regulations too strongly as it was imposing a quasi-interest rate on technology by demanding that enterprises calculate their capital expenditure over a period of time. This was an outrageous act that denied a socialist economy its natural advantages: it’s lack of concern with short term profits. Indeed, Katz noted that even large capitalist conglomerates such as IBM and GE often made technical investments that brought no profitability for decades. Gosplan strongly opposed Katz’s argument in its reply stating that it was well understood that the state had limited resources and that there had to be a way of distinguishing “experimental” technologies whose effects

³⁵² RGANI f. 5 op. 63 d. 124 ll. 21-50.

were not fully calculated from “established” new technologies that had to have a rate of return for expenditures made in purchasing them.³⁵³ This exchange again testifies that Gosplan did not oppose reform as such. Rather it wanted a conservative reform that changed the procedural elements of planning, strengthening its regularity, without challenging the underlying power structures it entailed.

Baibakov’s dominance in economic policy making, and thus the more conservative direction of the economic reform, was sealed at the December 1969 Central Committee Plenum. Unlike the September 1965 Plenum, the man in charge of the December 1969 gathering was Brezhnev, who, as General Secretary, led proceedings. The main speaker was Baibakov, widely interpreted as a Brezhnev ally, whose report to the Central Committee on the next five-year plan also touched on the long-range problems facing the post-Kosygin reform economy. “It is impossible not to raise concerns about the gradual slowdown in growth rates in our economy over the past two years” Baibakov explained. “This is largely due to the falling rate of introduction of new productive intensity³⁵⁴ compared to that envisioned in the plan, especially the productivity of labor.” The reasons Baibakov gave for these problems was that ministries often lacked “resources for the introduction of new technologies, proper guidelines and documentation for new machinery and lacked the proper labor force needed for increased intensity in production.” The primary issue, however, was “the lack of discipline,” or the lack of responsibility in the use of labor resources across a variety of ministries and construction bureaus.³⁵⁵

³⁵³ RGANI f. 5 op. 64 d. 107 ll. 19-22.

³⁵⁴ Baibakov uses the Russian term “Mochnost” which can both mean intensity and productive capacity. The closest meaning for the term would be intensity in the increase of productive capacity and thus the introduction of new factors of production.

³⁵⁵ RGANI f. 2 op. 3 d. 137 ll. 3 ob-5.

The guidelines approved by the December Plenum became the basis for Soviet economic policy in the coming, Ninth Five Year Plan as testified to by a 1970 Central Committee working group led by Secretaries Gostev, Petovich, Frolov, and Dimitriev. The report concluded that the “main goal of the reform—a significant increase in the effectiveness and intensity of social production—has not yet been reached” due in large part to the lack of growth in labor productivity underscored by the fact that the early success of 1966 and 1967 had “not been routinized.” “The guidelines for action” they concluded “were established by the December 1969 Plenum.” The priorities for the Party’s policy toward the economy were thus “to move toward a full system of planning,” rather than the contemporary system of haphazard plans often “corrected” by the ministries, which integrated yearly plans with the five-year plan, force the ministries to become more responsible for their own finances, improve the economic training of cadres, and improve the use of accounting standards. While all these were sensible goals, what underpinned them was a return to central control by the planning agencies and a slowdown in the movement toward real, radical economic change through deeper structural reform.³⁵⁶

The Scientific-Technical Revolution, Developed Socialism, and The End of Radical Reform.

The December 1969 plenum marked more than an ascendance of a more conservative version of economic policy in contrast to the reactionary approach taken by some of the ministers and the radical economic restructuring advocated by various schools of economics. Yet, that was not enough to deal with some of the existential questions that had opened the window to some truly radical possibilities in 1964. The failure of

³⁵⁶ RGANI f. 5 op. 62 d. 271 ll. 8-15.

Khrushchev's Seven Year Plan and the promise of "catch up and overtake" meant that the USSR's leaders had to rethink how they would deal with the tie-up between domestic economic performance and the USSR's revolutionary mission that the former General Secretary had established. In this section, I will argue that Brezhnev, and his supporters, were successful in doing this by deploying two interlocking ideological constructions that set the limits of Soviet economic policy: "developed socialism" and "the scientific-technical revolution." Developed socialism argued that the USSR was in an extended period in which "the material-technical basis for the construction of Communism" was still being laid but that the dream of a Communist society would be left to some distant future. Meanwhile, socialism could be enjoyed in day to day life through a greater emphasis on consumption, privacy, and regularity. This specific "phase" of Soviet development was accompanied by "the global scientific-technical revolution" which Soviet ideologists defined as a worldwide process in which the fruits of new technologies, such as computing, automatization, and petrochemicals, would herald a new age in the development of productive relations. The Soviet Union, with the "inherent advantages of its planned, socialist system," would eventually triumph in this new phase of scientific development but, at the moment, it could cooperate in this new phase with various states with different social orders.³⁵⁷ In fact, what developed socialism and the scientific-technical revolution had in common was that they deferred progress to the future, or at least to a slow pace, without fundamentally challenging the idea that it would, one day, come. This brilliant conservative political strategy allowed Brezhnev to give something to all the groups involved in fighting over the future of the Soviet economy. Ministries would continue

³⁵⁷ Donald R. Kelley, *The Politics of Developed Socialism: The Soviet Union as a Post-Industrial State* (Westport, CT: Greenwood Press, 1986).

having control over the day to day operations of their enterprises and not see their investments restricted, Gosplan and other planning agencies would continue to administer the Soviet Five Year Plans, and the academic reformers would be allowed to work on theoretical problems of economic performance and introduce piecemeal techniques of computerized management into industry.

Brezhnev's success as a political leader was due to his mastery at playing ideological politics and using them to cut a middle, consensus path through various factions in the Central Committee. Liberals believed that, compared to Shelepin, Semichastny and even, at times, the dower Kosygin himself, Brezhnev was the leader that was most likely to preserve the "achievements of the XXth and XXII Party Congress" such as the condemnation of Stalinist tactics and "peaceful co-existence." In the recollections of Gregory Arbatov, the director of the Institute for the Study of the USA and Canada and a consummate Soviet insider, Brezhnev himself was a rather torn figure, with some of his confidants like S.M. Trapeznikov (not to be confused with the economist) very much on the side of the extreme reactionaries while others like G.E. Chukanov, Brezhnev's point man on the economy, were conservative pragmatists. Memoirists both left and right portrayed the Brezhnev of 1964-1967 as maneuvering against the right flank of neo-Stalinist sympathizers.³⁵⁸ By 1967, he had outmaneuvered this faction, sending Shelepin to a less powerful, though in theory more prestigious, position as deputy chairman of the

³⁵⁸ Gregory Arbatov, "Iz nedavnogo proshlogo" in *Leonid Brezhnev: materialy k biografii* ed. Iu. Aksutin (Moscow: Polizdat, 1990), 61-92; Alexander Bovin, *XX Vek Kak Zhizn: Vospaminaniie* (Moscow, 2003), 145-190.

Council of Ministers, and replaced Semichastny as head of the KGB with his ally, Yuri Andropov.³⁵⁹

Toward the end of 1967, and especially after the events of the Prague Spring, Brezhnev moved rightwards to secure his left flank. It is no coincidence that this right turn witnessed the expanding influence of Suslov and S.M. Trapeznikov as the curators of Soviet social science. In August 1967, the Central Committee passed a resolution on “The Means to Advance the Social Sciences and Further Their Role in the Construction of a Communist Society.” The resolution noted that while the social sciences had been placed on a better track since the October 1964 Plenum, many ideological questions including “the political economy of socialism, the expansion of national income and the implementation of economic policy” were still underdeveloped. Further research had not paid attention to “the forecasting of social development, and the integration of these forecasts into economic plans.” Social scientists’ and humanists’ duty to fight “bourgeoisie ideologists and reformist falsifiers of Marxism” was being stymied by insufficient knowledge of the “newest enemy ideological positions.” Economic sciences, in particular, had to begin to work toward “refining and better defining the categories of the socialist political economy,” begin research on the “integration of optimal planning methods,” and “integrate computing technology into research.” Gosplan, the GKNT, and the Academy of Sciences were charged with establishing a system of planning and financing for the social sciences.³⁶⁰

The implication of the resolution was that social sciences were to take on a pragmatic role: they were to become tools of the party state toward a political goal, rather

³⁵⁹ A. Shelepin, “Istoriia- uchitel' surovoi” in *Leonid Brezhnev: materialy k biographii* ed. Iu. Aksutin (Moscow: Polizdat, 1990), 190-211.

³⁶⁰ *KPSS v resoluchiakh* 8 eds. Afansev et al, (Moscow: Gospolizdat, 1972), 343-355.

than establishing the goal through theoretical critique. Responding to the 1967 decree on the social sciences, Baibakov and Keldesh wrote to the Central Committee to explain that Gosplan and the Academy of Sciences would begin to take joint action to promote applicable economic techniques and prioritize applied, rather than the theoretical research, within economic institutes to explore the problems of management.³⁶¹ This prioritization of applied research can also be gleaned from the Institute for Economics' response to the directives of the XXIV Party Congress. The Institute's report to the Central Committee argued that "because of delays in increasing efficiency" the time had come to create an infrastructure of economic research departments for each branch of industry. This would allow direct study of the problems of production and break the resistance of many sectors in introducing the 1965 reforms.³⁶² What went unstated in these calls for "application" was that economists would now no longer be working on the existential questions of Soviet institutions and economic processes and limit themselves to applying their research to improving the efficiency of the existing political-economic power structure.

While the resolution had set a criterion for what would be acceptable economic research, it had not yet established a Party directive for its theoretical dimension. What was lacking was a new analytical framework for understanding the Soviet economy's relationship to the global economy, and thus its millennial revolutionary message in the wake of the failure of Khrushchev's program at the XXth Party Congress. The need for clarity became ever direr following the "Prague Spring" of 1968. To fit the conservative agenda, such a program had to reconcile the tasks of preserving the structures of Soviet economic governance, maintain the window for gradual improvement and posit the USSR

³⁶¹ RGAE f. 9480 op. 538 d. 101 ll. 138-140.

³⁶² RGANI f. 5 op. 63 d. 110 ll. 29-33.

as a revolutionary power on the world stage. The search for such a unifying idea culminated at the XXIV Party Congress which started on March 30, 1971. At his speech to the congress Brezhnev put a phenomenon called the “scientific-technical revolution” at the center of Soviet economic development stating that:

the most important characteristic of our countries contemporary economic development is the rapid development of the ‘scientific technical revolution.’ Socialism, with its planned economy, presents us with a wide horizon for a general expansion of science and technology. Yet, the scientific-technical revolution demands serious changes to many elements of our economic processes. In other words, this huge potential, that socialism is poised to acquire, will be squandered.³⁶³

The idea of the Scientific Technical Revolution (STR) as the guiding paradigm for the USSR’s economic development did not come from thin air. The term had a long history in Soviet discourse about science, technology and their connection to historical changes in the “means of production.” Discussions about the connection between science, technology, and social order were as old as the Soviet experience and was inherent to Marx’s theory of social change. Indeed, early Soviet economic thinkers, such as Alexander Bogdanov and Nikolai Bukharin, had stressed that the Soviet socialist order was “pregnant with technical potential” in their 1927 writings. The modern genealogy of the STR can be traced back to the work between years between 1955 and 1962. The term was first used by historians V. Danielevskii and G. Osipov in a series of articles written in 1956 and 1959. From 1959 to 1965, the theory would be formalized and refined at the Academy of Sciences’ Institute for the History of Natural Sciences and Technology (IIEiT) by its two lead proponents, A.A. Zvorykin and S.V. Shukhardin who, by 1965, had argued that the STR was a new period in the development of technology and its introduction into the means of production that

³⁶³ *XXIV s’ezd KPSS: stenographicheskii otshot* (Moscow: Gospolizdat, 1971), 63.

had begun in the USSR on the eve of the Second World War (and was disrupted by the war) and in the capitalist world in the wake of the Korean War which forced the greater planning of the military-industrial process through the introduction of new cybernetic and economic techniques. The STR was not a “revolution” in the sense of “the industrial revolution” as it was not yet a change in the “mode of production.” Rather, it was a change in “technique” which was building the prerequisites for a future social-political change that would presage the revolution in the capitalist states and the movement to socialism. The theory had acquired enough currency by the mid-1960s that it had become included in the 1962 Third Party Program’s assessment of the status of the world and the movement of history.³⁶⁴

However, the conception of the STR in the 1960s was still descriptive rather than proscriptive, let alone programmatic, and it applied more to capitalist economies than it did to socialism. Tellingly, it entered economics through Gatovsky’s theorizing. At a 1965 meeting of economists to discuss the future of Soviet economics, Gatovsky framed his concerns about the slowing rates of growth in socialism compared to capitalism in terms of a new historical moment characterized by:

The development of the Scientific-Technical Revolution that was spreading across the entire world. We cannot fall behind in this and that we must be in its vanguard. However, this demands huge capital investments (which is generally necessary for socialism) accompanied by an increase in consumption. To solve these two problems at the same time, it is necessary to not only expand production into new areas but to better understand how to make it more effective through the better integration of new technical innovations into production. The problems of scientific and technical progress are thus connected with the optimization of planning and economic management.³⁶⁵

³⁶⁴ Julian M. Cooper, “The Scientific and Technical Revolution in Soviet Theory” in *Technology and Communist Culture* (New York: Praeger, 1977) 146-175.

³⁶⁵ RGANI f. 5 op. 35 d. 214 ll. 93-94.

Gatovsky's formulation carried with it a prescriptive tone which established the STR as not only a descriptive characterization of the current global situation, as deployed by IIEiT, but as a guiding concept for Soviet economic policy and the stage on which the "competition of the two systems would be fought." This prescriptive formulation of the STR did not enter official parlance immediately. It's first reported use by Brezhnev was in his speech to the June 1969 "World Meeting of Communist and Workers' Parties." This was an auspicious meeting at which to announce the STR as the centerpiece of Soviet ideology. First, it coincided with the 1969 discussion of how to further develop the 1965 reforms. Second, it was a meeting that was meant to develop the party lines of Soviet-aligned Communist Parties in the Sino-Soviet split. A major element of the Maoist criticism of the CP-USSR was that it was becoming too technocratic and was abandoning its international revolutionary élan for pursuing domestic economic growth and embourgeoisement. In 1969, Brezhnev responded to these attacks by arguing that "contemporary imperialism continues to have a powerful economic and military base" which is being strengthened by whatever final means that "monopoly capitalism has" through investment into "technological progress." The "technical and scientific successes" of socialist states were forcing the capitalist states to make "ever more concessions to their working classes, thus forcing monopoly capitalists to begin "reaching the limits of their system." Thus, "having reached this point, we Soviet Communists believe that the development of the economy is the crucial front in the battle [with capitalism] which still requires much sacrifice." The coming Soviet Five Year Plan would be a vital front in this battle as it acknowledged that "the [development] of the STR is the main area of competition between capitalism and socialism" which needed a "massive capital

investments” into science and new industries. Explicitly noting the connection between this “international struggle” and the reform process, Brezhnev noted that the USSR had been “in recent years engaged in a wide-ranging reform of economic management and planning.” This process would be a continual one and in the coming years would begin to focus on advancing the STR to make up for some of the “drawbacks” of the previous five-year plan.³⁶⁶

The importance of the 1969 meeting for the codification of a new Soviet doctrine was elaborated in two classified brochures written by the newly formed Institute for the Study of Applied Social Problems (IKSI) under the leadership Rumiantsev. The IKSI was formed in the wake of the 1967 decree on social sciences as the Academy of Sciences first formal institute for the study of sociology. The institute took the place of IIEiT as the center for the theory of the STR and formulated more muscular, proscriptive socio-economic development strategy based on the former organization’s previous work.³⁶⁷ In their reports to the Central Committee, IKSI’s researchers argued that the STR was on par with the Industrial Revolution of the late-18th century. The difference between the two was that “while the first [Industrial Revolution] was a revolution in labor, the current revolution is a revolution of the application of science. It is thus a scientific, rather than an industrial revolution. As well, it is no longer just a phenomenon of capitalism but also of socialism.” This had implications for the “competition of the two systems” and Soviet domestic politics. Thus, the report concluded, while “data shows it may be possible to reach the same

³⁶⁶ L.I. Brezhnev, *Izbranie proizvedeniia tom 1* (Moscow: Izdatelstvo Politicheskoi Literatury, 1981), 369-390; this speech is noted as the moment that the STR entered Soviet understanding of the world by the Soviet Union’s textbook on ideology *Istoricheskii Materializm* eds. A.P. Shepultina et al. (Moscow: Izdatelstvo Vyshaia Shkola, 1974) available at <http://www.biografia.ru/arhiv/istmat13.html> [accessed 5/20/2016].

³⁶⁷Eglė Rindzevičiūtė, “A Struggle for the Soviet Future: The Birth of Scientific Forecasting in the Soviet Union,” *Slavic Review* 75, no. 1 (2016): 52–76.

gross output as the USA in 1975-1977” such a victory was not enough because “the capital intensity of the United States is much higher than the USSR” making it “use fewer inputs to get the same amount of output” due to “its superior organization of labor.” The STR mandated that the USSR shift its resources to new areas of technology with the IKSI arguing that what was needed was “cybernetization [automatization] of production” that would be achieved by the expansion of data processing centers and Party intervention to rapidly introduce them into production because “efforts in this area are uncoordinated and lagging behind the leading bourgeois states and other socialist countries.”³⁶⁸

The XXIV Party Congress was a culmination of the previous five years of political and ideological work. Brezhnev artfully preserved the main elements of “peaceful coexistence through the socio-economic competition of the two systems,” that had been established by Khrushchev at the XXth Party Congress, without the excesses of the former leader’s mobilization program. The triumph of Soviet conservatism was secured not only through Brezhnev’s dispatching of his enemies left and right, but also through the creation of a defining doctrinal narrative. The XXIVth Party Congress affirmed that the STR was the defining characteristic of “the present historical conjuncture” and the key area of competition between socialism and capitalism. It would rectify the two goals of the Ninth Five Year Plans: the increase of domestic consumption and the continuing priority of heavy industry which not only was the “heart of the socialist society,” but also provided scientific advances and the ability of the USSR to defend itself. The coming five-year plan would advance these goals by better managing investment “to make sure that “for every unit we spend—either in labor, material or financial resources—we receive a consequent increase

³⁶⁸ RGANI f. 5 op. 61 d. 60 ll. 214-239.

in national income. The critical task for this result must be the increase in the productivity of labor.” Connecting this new direction of economic reform, set by the discussions of 1969, to the party line, Brezhnev explained that the goal of Soviet society was “the historical task of combining the unfolding STR with the advantages of the socialist economic system by integrating the latest advances of science into production. This included “continuing the process started by the September 1965 Plenum” through the integration of “the advances of economic science” into the most important element of economic production “the remuneration of labor” which would strengthen productivity.³⁶⁹

In essence, the Brezhnev program did not reject reforms but rather turned them into a continual process that would make planning more efficient rather than make enterprises more independent and profit oriented. Such a program made sense given the conservative bent of the implications of the STR on the program of “developed socialism” also announced by the resolutions of the Congress. “Developed socialism,” like the STR, was also an innovation of the Late-Khrushchev period which was developed by reform-minded theorists like Fedor Burlatskii who tried to make the contemporary stage of socialist development into a more predictable and humanist period not driven by the extraordinary whims of the state. By the XXIV Party Congress, the term had been effectively deployed by Brezhnev to declare that the USSR would enter a long period of development in which Communism was far from coming to fruition. While the basis for the future utopia would continue to be “constructed” through the STR, which was assumed to automatically advantage the already “scientific” economy of the USSR, the fruits of socialism, including consumption, could already be enjoyed. Thus, “developed socialism” was a conservative

³⁶⁹ *XXIV s'ezd KPSS: stenograficheskii otshot*, 68-82.

narrative stating that utopia would inevitably come but that the current situation would continue for the foreseeable future without any radical actions by the party or state. On the other hand, citizens would be free to enjoy their day-to-day existence without being constantly mobilized.³⁷⁰

The statements of the XXIV Congress were more than acts statements used to justify the new course of the party—they had some immediate effects on the development of the coming Ninth Five Year Plan and long-term economic policy. In May 1970, the Council of Ministers issued a proclamation ordering ministries to issue plans for moving their remaining enterprises working under pre-1965 regulation to the new system in light of the December 1969 Party Plenum. In December of 1971, Gosplan reported to the Council of Ministers that the plans developed by the ministries were no long relevant due to the new tasks issued by the XXIV Party Congress. The ministerial proposals were insufficient for the development of new management techniques and lacked structural changes that would reorganize the ministries to have more roles played by multi-branch and enterprise organizations and inter-branch research and development structures. Gosplan ordered the ministries to begin reworking their proposals. Indeed, Gosplan argued that the directives of the XXIV Congress meant that some delays would have to be made in the development of the next plan to adjust for the failure of ministries and republics in adjusting their plans. In 1972, the plan was changed to include larger capital investments into developing “Scientific-Technical Progress” and the purchasing of new technologies

³⁷⁰ Mark Sandle, “Brezhnev and Developed Socialism: The Ideology of Zastoi,” in *Brezhnev Reconsidered*, ed. Edwin Bacon and Mark Sandle (London: Palgrave Macmillan, 2002).

from abroad. Another decree, issued in May 1971, determined that the priority for the ninth Five Year Plan would be the organization of “combines,” or networks of enterprises organized around an internal system of cost accounting, as the new basic unit of economic management.³⁷¹

These post-1971 actions formed the course of Soviet economic action in the Brezhnev period. It secured an orthodoxy that though acknowledging the problems of returns on state investments that triggered the need for reform in the first place, resolved to solve them through an expansion of the production frontier without significantly changing the priority of investments into heavy, producer goods. This was a brilliant political move, as it continued the illusion of reform and change with no substantial political risk to Party cadres or to Brezhnev’s own personal prestige. In 1973, Brezhnev summed up his thinking about the politics of economic reform to his speech writers telling them that:

The [1965] reforms needed to be improved. They did not do enough to boost the productivity of labor so we improved them. We the Party, there is no other authority. After, we improved in some things like the production of tractors and other items, but that is not important. What needs to be highlighted [in the speech that they were preparing] is the leading role of the Party.³⁷²

The Closing of the Soviet Economic Mind: From Measurement Without Theory to Theory Without Reality

Brezhnev’s ideological intervention did not just have an effect on the future course of Soviet economic reforms. It also brought the debate over economic value and the object of economics that had been raging in Soviet academia since the late 1940s to ahead. The

³⁷¹ GARF f. 5446 op. 110 d. 3 ll. 1-20, 72-73, 104-105.

³⁷² RGANI f. 80 op. 1 d. 168 l. 1.

STR was a teleological program arguing that the USSR would be ready to lay the stages of Communism through the inexorable march of technological progress that was embedded within the Soviet system's DNA. Implicit within this vision of progress was an increased emphasis on the use of computers in improving economic micro-economic management rather than the underlying institutional foundations of the economy. Indeed, the discourse of economic change in the 1970s shifted from "economic reform [*ekonomicheskaya reforma*] to "improving the management of the economic mechanism" [*ulucheniia upravleniia ekonomicheskogo mekhanizma*]. Against this background, the Soviet economic establishment, even its reformist wing, attempted to consolidate a dominant theoretical and programmatic approach. The casualties of this process would be the *Tovarnik* school and to a lesser extent, the Cost of Production paradigm. The Mathematical Economists would cross through the crucible of the end of the Kosygin reforms transformed but not defeated. Echoing Slava Gerovitch's observation about cybernetics and its offshoots turning into a state supported "pseudoscience," mathematical economics limited its ambitions from the automatizing planning and economic decentralization to providing support for and expanding the scope of the traditional planning process.³⁷³ In the end, the boundaries of the economics that emerged out of the end of the Kosygin reforms grew ever more sophisticated in theory yet separated from institutional realities and neutered in its political vision.

Khrushchev's removal and the beginning of economic reform saw economics at its most politically influential but also its most politically exposed. A 1965 all-Union scientific meeting to discuss "subjectivism" and the future direction of Soviet economics

³⁷³ Slava Gerovitch, *From New Speak to Cyber Speak: A History of Cybernetics* (Cambridge, Mass: MIT Press, 2002).

marked a moment in which the Central Committee not only looked to social sciences for ideas but also, for the first time since Stalin's intervention, wished to codify "socialist political economy" in some form. At the meeting, even Gatovsky conceded that there needed to be more work done on defining the basic relationships between economic theory and economic reality. For example, he admitted that while the problem of the oversupply of commodities should not, in theory, exist in a socialist society as they would in a capitalist economy "our mistakes in planning have created our own very own type of over supply problem" because "we have not developed any practical approach to connect production to the demand for goods."³⁷⁴ What was needed was a means to connect Marxist theory to the problems of supply and demand in a uniquely Soviet way.

There were several ways to answer Gatovsky's prompt for a Marxist model of supply and demand. Fedorenko presented an especially positivist version of a socialist economics in his address to the conference. Economics, Fedorenko argued, needed to move beyond the dichotomy of theory and practice and begin thinking of economics as a "world view." For example, he objected to the classification of problem areas like the optimal distribution of resources in planning and price setting as exclusively "practical problems," instead stating that they should be placed at the heart of a unified theory of planning. Redeploying Nemchinov's argument in the Soviet "measurement without theory" debate of the late 1940s (described in chapter one of this work), Fedorenko argued that economics had to "become an experimental science" and economists had to develop particular areas of technical expertise. "When we build a new airplane" he continued "we have a design bureau of three thousand to five thousand specialists who design the plane, or even just the

³⁷⁴ RGANI f. 5 op. 35 d. 214 l. 94.

wings.” Yet “when it comes to management, it seems that everyone knows how to properly manage.” “Everyone” he continued from the “head of a shop, to the director of a factory, to the chairman of the VSNK, let alone to the staff of Gosplan, have their own ideas about how to manage.” Without transformation of economics into an experimental science, all economists could offer the state was to copy the experiences of “the GDR, Czechoslovakia, and Yugoslavia” rather than to give opinions on Soviet industrial practice. The implication was that instead of discussing the specifics of what a socialist economy should be, and the role of the market in it, as the Tovarniks and the Cost of Production School would have it, economists had to become more like engineers and work toward the best solutions for economy as it existed.³⁷⁵

At the same meeting, Fedorenko’s positivism was complimented by a fierce debate over a more abstract topic: the economic basis of the institutional practices of socialism itself. The theoretical study of the “Political Economy of Socialism,” in turmoil since the late 1950s had, by the mid-1960s, begun to fracture into two major theoretical schools: The Tovarniks based in the section on economic theory of the Academy of Sciences’ Institute for Economics, led by Yakov Kronrod, and the Moscow State University (MGU) School of political-economists led by Nikolai Tsagolov. Tsagalov’s rise as a leader in Soviet economic thought was slow. Despite working on the early “material balances” at the Gosplan of the 1920s with the likes of Strumilian, he retired from applied work after being arrested in the 1930s. Following his release, he made his name as a historian of economic thought, writing a history of Russian economic thought at the height of the anti-cosmopolitan campaign, that, despite its nationalism, was a rigorous work and considered

³⁷⁵ Ibid. 134-136.

a classic in the field, even after de-Stalinization. Tsagolov began developing a distinctive approach toward “The Political-Economy of Socialism” after being appointed to MGU in the late 1950s. Instead of studying practices through the application of inductive reasoning and the description of institutions, Tsagalov framed political-economy as a deductive science: a methodology he claimed to inherit from Marx’s *Kapital* which started from first principles and applied them to realities. In contrast, the Academy of Sciences’ Institute, which argued that the “law of planned development (*planomernost*)” emerged from the socialist ownership of property, Tsagalov’s deductive method postulated that socialist property relations, and thus socio-political processes, should follow from the laws of planned economic development.³⁷⁶ Tsagalov’s approach to the study of economics took a giant leap toward recognition as a dominant camp when, in 1958, he was asked by the deputy minister of education, N.I. Mokhkov, to submit a proposal for a new textbook on political economy. Tsagalov’s was one of twenty-two proposals submitted to the ministry and was eventually selected by the ministry as the winner and published in 1963. The 1963 two volume textbook became the guideline for undergraduate teaching in institutions controlled by the Ministry of Education and thus a competitor to the revised version of the 1954 textbook favored by the Academy of Sciences.³⁷⁷

The emergence of two well-defined and institutionalized camps of political-economy (in addition to other methodological camps) burst out at the 1965 meeting on subjectivism discussed earlier. Tsagolov accused inductive, institutional research of “adjusting the knobs on a primus” (a colloquial expression meaning wasting time and doing

³⁷⁶ S.S. Drazov, G.P. Popov et. al. *Sudba sovetskoi politekonomiki i ego klassika* (Moscow: Alpina, 2004), 215-247.

³⁷⁷ *Ibid.*, 200-205; RGANI f. 5 o. 33 d. 112 l. 167-171.

nothing derived from a brand of pressure cooker). Without the deductive theoretical stances inherited from *Kapital*, discussions about improving the economic system through profitability were being corrupted by the “bourgeoisie press” since focusing on the operations of enterprises and Soviet budgeting was obscuring the deeper Marxist logic of the system. It was not that Tsagalov was against reform *per se* but rather that “the rejection of dialectics by political-economy” gave the enemy something to grab onto since the justifications of such ideas did not go from the *a priori* “theoretical” ideas of “proportional planned development” to the specifics of “the role of profitability” in the day-to-day practices of a distinctly socialist state.³⁷⁸ Responding to Tsagalov, G.A. Kozlov of the Academy of Sciences stated that the debate over whether property followed or came from the laws of planning was a small one explaining that “Tsagalov’s so-called opponents understand that his point is important.” Yet Kozlov responded that Tsagalov’s concerns over justifying and explaining profitability reflected a lack of analysis of the “inheritance that the socialist order received from state-monopoly capitalism” which create the pre-conditions for socialist property and organization—a property-centric, institutional view propagated by Yakov Kronrod and his students.³⁷⁹

The debates between Kronrod and Tsagalov were more than “a pseudo-scientific waste of time,” as asserted by the positivist Fedorenko—they were questions about what made an economy socialist and, in the context of the Kosygin reforms, how far the USSR could deviate from the principles of central planning developed under Stalin and enshrined under Khrushchev.³⁸⁰ These dilemmas became especially pressing as the reforms began to

³⁷⁸ RGANI f. 5 op. 35 d. 214 ll. 116-119.

³⁷⁹ Ibid. 131-132.

³⁸⁰ See N.P. Fedorenko, *Vospominaii proshloe, zagladavaii v bydoshee* (Moscow: Nauka, 1999), 303-305.

“rebalance” the Soviet economy and leverage moved from the balance sheet of the state to that of the enterprises and the worker/consumer. The emergence this new structure of financial flows begged the question of how far could the USSR move to an economy where consumers and profitability would be prioritized? The answers the *Tovarniks* presented radicalized as the reforms continued. A.M. Birman, a prominent *Tovarnik*, wrote in a 1968 article in *Novyi Mir*, that “we should [neither] fear profits” nor the rising wages and spending on fringe benefits as “these reflected the desires of millions of workers” and the “rising wealth of the nation.”³⁸¹ In a 1970 article, Birman argued that the fundamental problem being faced by the Soviet economy was the fact that “each ruble was not purchasing an equivalent amount of labor time across different industries.” This was responsible for the slowing of productivity as workers were simply responding to the incentives that the system of ministry subsidies, price markups, and over-investment in production goods was creating. The next step of the reform would have to be a movement to an economy where the state would control output through adjusting the price of money and material targets and even a universal cost of capital, abandoned. Ministries, *glavki*, and enterprises would have to be put on “full cost accounting” and become self-financing.³⁸² This same sentiment was shared by Kronrod in a 1968 “official use only” pamphlet which argued for the rapid integration of free money transactions alongside official direct, command ties. Kronrod’s works from the late 1960s were starting to explicitly argue that the state could not set the law of value under socialism. Rather, until the prerequisites for Communism had been achieved, only a socialist market—in which the state-owned property but did not make direct decisions on output—could reflect the “law of value”

³⁸¹ Reprinted in A.M. Birman, *Operezhaia vremiia* (Moscow: Nauka, 1990), 103.

³⁸² *Ibid.*, 146-177.

under socialism. A socialist market system comprised of independent, worker administered enterprises could reflect the interest of the stakeholders of the socialist society—the working class and thus was the only legitimate source of price information under socialism.³⁸³

Yet if the *Tovarniks* were radicalizing, the difficulties encountered by the reforms gave increased support to a new, more microeconomic program of research spurred by the 1967 resolution on social sciences. This official push toward improving management and focusing on microeconomic and industry-focused studies was accompanied by increased attacks on the *Tovarniks* from the most “reactionary” of apparatchiks for the heterodox, theoretical bent of their research. *Kronrod* was criticized in the pages of the newspaper *Planovoe Khozaistava* for making claims that socialist laws were objective even if the actions of the state were not. The authors of the article admonished him for his opposition to mathematical research that, the authors believed, could harmonize individual enterprise actions with the “laws of socialist development” through the planning process.³⁸⁴ In 1967, V.A. Golikova, a worker in the Central Committee apparat, published a book called *Results and Perspectives on Soviet Agriculture Following the March Plenum* [Itogii i perspektivy o sovetksoi agriculturny posle martovskogo plenuma], which criticized the Academy of Sciences’ Institute for Economics’ leading agricultural economist, V.G. Benzher, for moving too far in the direction of making markets be the sole determinant of economic value in the *Kolkhoz* sector.³⁸⁵

³⁸³ M.I. Boivekov, *Kronrod: politicheskaia ekonomika i reshechniia socializma*” in *Phenomen Kronroda: k sto letiu ego den rozhdenia* eds. T.E. Kuznetsova (Moscow: Nestor-Istoriia), 139-196.

³⁸⁴ R. Zverev “O kharaktere ekonomicheskikh zakonov i rol sochialesticheskogo gosudarstva” *Planovoe Khozaistvo* no. 10, 1969, 45-54.

³⁸⁵ T.E. Kuznetsova, *K instorii instituta ekonomiki RAN (AN SSSR): Do mysli i realy* (Moscow: Institut Ekonomiki RAN, 2005) available at http://cdclv.unlv.edu/archives/articles/kuznetsova_institute.html [accessed 07/10/2016].

This environment was exploited by the crosstown rivals of the Institute of Economics and their *Tovarnik* wing: the MGU economics department run by Tsagolov. According to recollections published by his students, Tsagolov was keenly aware of his rivalry with the Institute of Economics as the central institution for developing the “Political Economy of Socialism.” Thus, he deliberately moved his graduates into party work in the Central Committee stocking its scientific, ideological, and cultural departments with adherents of his “deductive approach.” The result was the December 1971 Central Committee directive titled “On the Work of the Party Organization of the Academy of Sciences’ Institute for Economics on the Central Committee Proclamation ‘On the Improvement of Social Sciences and their Role in the Construction of Communism.’”³⁸⁶ It is hard to ascertain the exact chain of events behind the issuance of the directive without a further declassification of personal files in the state archive, but the language of the order gave hints as to what the Central Committee thought the main crimes of the Institute were. The Institute was accused of not producing works related to “long-term planning, economic forecasting or the integration of economic methods.” Its work was characterized as having “a descriptive tone which is for the most part very separated from the needs and realities of economic practice.” The Party organization was commanded to make improvements to direct research into the economics of developed socialism.³⁸⁷

L.V. Nikiforov, the head of the Institute of Economics’ party committee, responded to the directive and subsequent *Pravda* editorial that criticized the institute for “not conducting long-term, significant research into the ‘political-economy of socialism.’”

³⁸⁶ S.S. Drazov, G.P. Popov et. al. *Sudba sovetskoi politekonomiki i ego klassika*, 381-382.

³⁸⁷ “O Rabote parteinoi organizachii Institutata Ekonomikii AN SSSR v. ispolneniia postanovlenia TsK KPSS ‘O Merax po dalneishemu uluchenii rabot obshestvenyx nauk i ix role v komunisticheskom storitelstva’” *Kommunist* January, 1972, 3-5.

Nikiforov wrote directly to Brezhnev, acknowledging that “the institute must develop a theory of the economy based on the existence of developed socialism that derived from the contemporary problems and conditions.” Nikiforov explained that the reason that the Institute was not conducting good research was not a problem inherent to its staff but because it was being “flooded by requests [from other institutions] to work on specific problems having nothing to do with the Political-Economy of Socialism” and was isolated from other groups in the Academy of Sciences that were working on applied economic problems.³⁸⁸

This admission of guilt was not enough for the Party. In 1972, a special commission was dispatched to the Institute whose members included Fedorenko in his capacity as head of the Academy’s Section on Economics, Academy Vice-President P.N. Feedosov, Moscow Party Commission Y.K. Yagodkin and a series of outside academics, associated with the MGU department including Gavril Popov—the future liberal activist and first post-Soviet mayor of Moscow. Gatovsky, who was appointed the Institute’s director in 1965, and Nikiforov were removed from their posts. All in all, sixty Institute members who were “not up to the new standards and requirements” were removed from their positions. Among those was Yakov Kronrod, who was stripped of his post as Deputy Director in charge of the Section on the Theory of Socialist Political Economy and given the title of “Senior Colleague” which entitled no administrative power. In its materials, the materials of the committee argued that Kronrod’s conception of the applicability of Marx’s approach to the social structures of capitalism to socialism (but not Communism) led to the conclusion that “the exploitation of labor existed in the USSR” and “that the Soviet

³⁸⁸ RGANI f. 5 op. 63 d. 124 ll. 9-12.

socialist order was inherently defined by inequality.”³⁸⁹ Kronrod’s career was over and after suffering some illnesses related to the stress of the hearings, he retired, his writings never to see the light of day until the early 1990s. A few of his students including Nikiforov and, most significantly, Tatiana Zaslavskaya (whose doctoral dissertation he unofficially supervised) would move toward sociological analysis and reemerge in the mid-1980s.³⁹⁰

The attacks on Kronrod were as personal as they were ideological and theoretical. In his recollections, Popov argued that he participated in the purge of the Institute because he believed that the Institute’s approach was not countering the rise of mathematical economics, with its authoritarian bent, quickly enough.³⁹¹ Yet, this is at odds with Kronrod’s extremely passionate attacks on CEMI and its Socialist Optimally Function Economy (SOFE) approach to economics. MGU’s perspective was, in fact, more palatable to conservatives. At the heart of the dispute between MGU and Kronrod was a disagreement about Marxist political economy’s role in analyzing the socialist economy—while the former believed that the political economy of socialism should be studied “in the manner of Marx” in which the specific laws of socialism could be deduced from certain first principles and were thus different than those Marx applied to capitalism, while the latter believed that the tools of the Marxist criticism of capitalism could be directly applied to the analysis of the USSR itself. In this regard, the true subversive message that Kronrod and his school were moving toward was that the USSR, at the socialist stage of development, had more in common with Capitalism than it did with Communism. This

³⁸⁹ RGANI f. 5 op. 65 d. 107 ll. 45-73; E. Kuznetsova, “Zhizen v Nauke,” 114.

³⁹⁰ T.I. Zaslavskaya “Institute ekonomiki AN SSSR: Kontrastnii sredi” in *Phenomen Kronroda: k sto letiu ego den rozhdenia* eds. T.E. Kuznetsova (Moscow: Nestor-Istoriia), 231-241.

³⁹¹ S.S. Drazov, G.P. Popov et. al. *Sudba sovetskoi politekonomiki i ego klassika*, 384.

implied that labor, which for Kronrod was the base unit of value, was still exploited in the Soviet Union.³⁹²

This destruction of the Kronrod school was finalized by the appointment of Evgeny Kapustin, the former Deputy Director of State Committee on Labor (Goskomtrud) and Director of the Council of Minister's Scientific Institute for the Study of Labor, as the Institute of Economics' new Director.³⁹³ Under his guidance, in 1973, the Institute issued a large volume that established the new orthodox theory of socialist political economy. In it, monetary and commodity relationships, the Tovar'nik's central focus, were declared important but that:

it was a serious theoretical mistake to look for the basis of socialist cost accounting and enterprise performance solely in the monetary of commodity relationships. Cost accounting for enterprises must be based on a complex, systemic approach. This means that cost accounting [and thus the values that it accounted for] must be based on the socialist relationships that come primarily from the planned economy of which monetary relationships cannot be the defining criterion.

Thus, profit, "while remaining an important measure for the effectiveness of the use of labor and material" could not, "under developed socialism," be "the criteria for making optimal economic decisions." It continued that "in the context of the Scientific-Technical Revolution" the key to developing the Soviet economy was to make enterprise independence compliment "a more scientifically based" and "flexible system of central planning" which could be achieved with the introduction of "optimization methods" and the use of "mathematical economic models." Thus, contra-Popov, Tsagolov's conception of economic theory made it easier to bring in "Mathematical-Economics" into the USSR.³⁹⁴

³⁹² M.I. Boivekov, Kronrod: politicheskaiia ekonomika i recepciia socializma," 188-194.

³⁹³ T.E. Kuznetsova, *K istorii instituta ekonomiki RAN (AN SSSR)*

³⁹⁴ *Nauchnoi doklad: osnovnyi cherty razvitiia socialisticheskogo obshchestva v SSSR, dlia sluzhebnogo prosmotra* (Moscow: Insitut ekonomiki SSSR, 1973), 282-293.

Yet, while the 1973 volume was extremely good at defining what Soviet political economy was not, it never described what it was.

In his memoirs—released in 1994 to both defend SOFE and argue for its applicability to Russia’s turbulent nineties—even Fedorenko admitted that his program was a reform program that, at best, could sneak in radical concepts into the USSR without challenging the system’s political underpinnings. Comparing SOFE to “Euro-Communism,” he argued that his positivist version of Soviet economics offered “a way to integrate aspects of the market into a complex (all be it imperfect) economic system. In the end, this would have been a meeting in the middle of forces coming from opposite sides. It gave the opportunity to change the way the ideology of ‘the land of the Soviets’ operated solve the problems of socialism using methods like monetary-commodity relations.” Fedorenko added that “this was why SOFE was such a ‘bone in the throat’ of our opponents: it offered a way to reach the goals of socialism through other means.”³⁹⁵ Fedorenko’s statements defending SOFE betray the ease with which it could be integrated as the Soviet project, in contrast, the more radical critiques that, ironically, were coming from the Academy’s Marxists. Indeed, in a series of interviews former CEMI staffer and founder of the Higher School of Economics, Yevgeny Yasin, explained that his work on statistical programming languages between 1968 and had “mostly taken me away from actual economics.” In fact, Yasin also stated that many of CEMI’s doubters thought “all that stuff we were doing about mathematical languages was just intellectual fluff which they did not need. He added that “this criticism put me in a deep depression almost to the point I had a breakdown, probably because deep inside I understood that they were right.”

³⁹⁵ N.P. Fedorenko, *Vospominaiu proshloe*, 357-358.

Whatever SOFE's theoretical merits, its practice served to reify the political basis of the Soviet economy.³⁹⁶

In his monograph, Ben Peters has pointed out that by the late 1960s, some of the earlier, utopian energies of the early cyberneticists such as Anatoly Kitov and Victor Glushkov had been exhausted. Glushkov's "All-State Automated System of Management" (OGAS), developed in conjunction with Fedorenko, which aimed to not only physically integrate the USSR's enterprises with computers but also to provide a model for decision-making based on real-time data was cancelled in 1970 in favor of the more conservative system of the Unified State Network of Computer Systems (EGSVT) which only included the physical infrastructure of the former. As Peters documents, this shift was orchestrated by the ministries to limit intrusions into their operations.³⁹⁷ The outcome of this shift in emphasis was the introduction of the Automatic System of Management (ASU) project for which SOFE would be the theoretical base. The ASU's would be informational databases that could be manipulated and used by managers in large plants and combines to monitor their branches. This standardized set of data would feed into another database the Automatic System of Planning Decisions (ASPR) which would allow for a similar set of references for central planners.

This shift to a more microeconomic set of economic information management was championed by Fedorenko who argued in his memoirs that the ASU-ASPR program was a movement away from the "idealism" of earlier cybernetic initiatives toward a realistic application of mathematical-economic theory into industrial practice.³⁹⁸ The ASU-ASPR

³⁹⁶ Andrei Kolesnikov, *Dialogi s Evgeniem Yasinim* (Moscow: NLO, 2014), 62-63.

³⁹⁷ Peters, *How Not to Network a Nation*, 139-170.

³⁹⁸ *Ibid*, 146-148; N.P. Fedorenko, *Vospominaiu proshloe*, 178-184.

model was enshrined as the major direction of research into applied mathematical economics and “optimization” in a joint Academy of Sciences-Gosplan directive issued in 1969. The directive decreed that “all research into the integration of mathematical economics into economic practice will be conducted on single methodological basis” directed toward the creation of interlocking ASU systems. The decree specified that ASPR would act as a master list for a “human-machine system” in which the planner would still be the decision maker while the ASPR would be limited to being a source of data. Meanwhile, the ASU would be designed and tailored to each individual ministry due to their different places in the national economy which the ASPR would be able to eventually harmonize. These new data inputs would also serve as a basis for a long-term plan of development which would be approved by the Central Committee and serve as a set of guidelines for the five year plans to work toward.³⁹⁹ Thus, the interpretation of the ASU system provided by Gosplan was in line with its priorities to both maintain discretionary power over the distribution over resources and the ministry’s desires to maintain certain special cutouts and privileges for their particular industry.

Yet the question that damned the *Tovarniks* remained: how would the overarching goals of the economy be defined and what would be the dominant method of Soviet economics? It is within this context that we can see the formalization of SOFE from 1967 to 1969—as an attempt by Fedorenko to install his approach to economics as the central organizing theory of the USSR’s academic establishment. The debate over a new framework for Soviet economics came to a head at a 1974 meeting of the Academy of Sciences Section for Economics, to discuss recommendations to the Central Committee on

³⁹⁹ RGAE f. 4372 op. 66 d. 3201 ll. 4-40.

issuing a statement on the direction of economic science. Fedorenko, who had taken the chairmanship of the Section from Azumanian after the latter's death in 1971, most likely saw this as an opportunity to enshrine SOFE as the underlying theory of Soviet economics. Yet, at the meeting, he met resistance from Tirgan Khachaturov, the director of the Institute for Transportation Problems, and one of the founders of the Cost of Production School, who argued that SOFE could not serve as the basis for the basis of a socialist political economy. While SOFE could be used to describe problems of management it could not describe issues of "productive relations" and thus could not be an all-encompassing interpretation of Marxism. A.I. Pashkov of MGU noted that not enough has been done on reconstructing the theory of money-commodity relations. Despite the defeat of market socialist ideas, no new theory had emerged as a replacement for it. On the other hand, he defended the inclusion of some language about optimization since it reflected Brezhnev's own words at the XXIV Party Congress. M.I. Volkov, who worked in the Central Committee, expressed his frustration at the situation when he declared that "we talk about integrating cost accounting as a priority, but we have been doing that for years. Isn't it time we agree on how to do it and present the steps and time frames." The Academy of Sciences' various sections on social sciences, he concluded, "are hopeless from the point of view of operational work" due to their lack of clarity on definitions and programs. Fedorenko closed the meeting wishing that there was more support from the Central Committee on clearing up economic theory and policy; that they could "have someone working on these problems" there. In the end, SOFE was not incorporated into the body of the text.⁴⁰⁰ Soviet economics remained unmoored. Economists could conduct micro-research with no

⁴⁰⁰ ARAN f. 1849 op. 1 d. 200 ll. 3-56; A.P. Fedorenko, *Vospominai Proshlayia*, 290-291.

political content or spin ambiguous yarns about Marxism. Yet, the development of an economically grounded critique of Soviet institutions themselves was foreclosed with the “taming” of the subversive elements of reformism that emerged from 1965 to 1969.

Conclusion: Stagnation and the Soviet Project

Kronrod retired to his dacha after his removal from academic life. The experience had given him a heart attack and otherwise hurt his health in his rather advanced age. This, however, did not mean he stopped thinking. He wrote several tracts on political economy that did not pass censorship and were only published in the late 1980s and continued writing editorials on monetary policy in Soviet newspapers. His largest collection of post retirement writing, never even went to the censors and remained in his desk. Beginning as an essay titled “Socio-Oligarchism as the Pseudo-Socialism of the XXth Century” written in 1973, it would, over the course of the decade, grow into a long, disjointed manuscript entitled *Thoughts on the Socio-Economic Development of the XXth Century*. This work only saw the light of day in 1992 and for good reason. “Socio-Oligarchism,” and its subsequent expansion, did explicitly what Kronrod’s critics argued he had been doing implicitly in his work in the late 1960s. In his work, he argued that in the USSR “the connection between the control of production by the state and the capture of that state by a ruling group has led to a monopolistic state which excludes all democratic institutions.” Yet Kronrod remained the ever-optimistic Marxist. “In the 1970s,” this “neo-exploitative state” like “all complex social organizations” would enter a phase in which its “original ideals would be totally erased” and a search for new ones would begin. In its place, Kronrod hoped that a new kind of socialist order would emerge based on the separation of “the

national economy” from the “state apparatus.” One that would be run democratically by worker-producers with civic rights through systems of production councils.⁴⁰¹

Kronrod’s words were brutally honest and prophetic in their diagnoses of the ills of Soviet society. The USSR did enter a conservative phase in the “long 1970s” in which the socio-economic project of Soviet socialism, its core claim of being a society of a new type, became ill-defined. In with economics, as with other areas of life, practices fell into a kind of stasis. This was not a failure of Soviet ideology but a sign of its success. Stagnation, at least in its political-economic aspects, was a risk countenanced by Soviet leaders to relieve the pressures unleashed by the attempt to reform the system that had emerged in the mid-1960s and the potential they had to challenge the underlying project propagated by Soviet state institutions—the very basis for the existence of the Soviet elite. Yet, the era that the USSR was entering into—the long 1970s, which a recent work characterized as “the shock of the global”— would force this conservative order to interact with other states and intellectual groupings attempting to preserve their order in an era of change and, in the process, create a very different kind of Soviet economics that would restate Kronrod’s critiques using other, more politically ambiguous methods that embraced the contradictions embedded within the “Scientific-Technical Revolution” and “Developed Socialism.”⁴⁰²

⁴⁰¹ Ia. I. Kronrod, *Ocherki sochialno-ekonomicheskogo razvitiia XX veka* (Moscow: Nauka, 1992), 193-223; Details about Kronod’s post-retirement life were told to me by my close friend and colleague Artemy Kalinovsky who is a relative of Yakov Kronrod.

⁴⁰² Charles Maier, “Malaise: The Crisis of Capitalism in the 1970s,” in *The Shock of the Global: The 1970s in Perspective*, eds. Charles Maier, Niall Ferguson, et. al. (Cambridge, Mass: Belknap Press, 2011).

Chapter 5

Beyond Cold War Economics: The Making of a Technocratic International and the Globalization of the Soviet Project

In June 1967, McGeorge Bundy traveled to Moscow to meet the leaders of Soviet economic and management sciences. The President of the Ford Foundation, and Lyndon Johnson's former National Security Advisor, was touring Europe to promote a presidentially supported project for an East-West Center to study problems of industrialized societies. In Moscow, Bundy had lunch with Nikolai Fedorenko, the director of the Central Economic Mathematical Institute (CEMI), and Bundy's old contact, State Committee for Science and Technology (GKNT) Deputy Director for International Exchanges and Kosygin son-in-law, Djerman Gvishiani. In a communique to the Department of State, Bundy reported that Fedorenko freely admitted that "economic reform had not gotten off the ground" and that "the first eighteen months were only the beginning of a long process." Moreover, there was "significant disagreement" in the Soviet hierarchy about how to proceed with the reforms. Fedorenko complained that officials resisted the increasing use of computers in price-setting because "they did not fully understand the implications" of the new technology and "perhaps had a psychological barrier to it." Most of all, he was irritated about how much the Western press was paying attention to Fedorenko's rivals, Birman and Liberman, who he called "publicists not economists" who did not participate in important decisions. Most revealing were his statements on the problems of centralization versus decentralization. He disliked the simplistic view that "reformers" like himself "were for centralization" and opponents of his vision for reform "were for decentralization." He explained that he believed that "we need a pragmatic approach to this problem. Even you in the United States

recognize this. Some areas need more centralized control and others do not.” Finally, Fedorenko expressed interest in coming to the United States to visit American colleagues whom Bundy referred to as “the Leontiefs and such.”⁴⁰³

Bundy’s conversation with Fedorenko demonstrates how Soviet domestic reform intersected with international concerns and that Cold War competition could also foster the exchange of ideas. This chapter will show that figures who have been traditionally labeled as Cold War intellectuals formed networks that crossed the Iron Curtain by cooperating within international organizations, most prominently the United Nations, on projects of economic development and global planning. Tied together by a common interest in the application of cybernetics, econometrics, and management science to large, international social problems, these intellectuals and government officials (often occupying these niches at the same time) began to understand social orders as systems governed by common mathematical parameters. These networks, I will argue, were vital to the introduction of this “new planning” to the Soviet Union and to the generation of a socio-economic critique of Soviet economic practices built on the foundations of mathematical economics.

This chapter will argue that these networks were not only areas of intellectual exchange but that they took on a life of their own, institutionalizing themselves in formal and informal organizations on the many levels on which the Cold War played out: in national institutes, bloc specific organizations such as COMECON and the OECD, and international organizations such as the International Institute for Advanced Systems Analysis (IIASA). In the 1970s, these networks, despite their origin in the priorities of the Cold War and mathematical formalism, mobilized to offer a technocratic vision of a new

⁴⁰³ “Memorandum of Conversation with Academician Fedorenko,” 6/10/67, NSF Country File, USSR, Box 231, LBJ Presidential Library.

international economic system: one that sought to reinvent planning as a global humanist project aimed at liberating human potential rather than directing it.

In documenting these networks, this chapter will make two historiographic interventions. First, scholarly discussion about the origins of *Perestroika* give feature a prominent role to Western ideas and their influence on Soviet elites. In writings from the early 2000s, Soviet reformers are described as visionary proto-liberals who, in Robert English's account, began to re-conceptualize the West and Western ideas into something to look to for inspiration for the Soviet future.⁴⁰⁴ The same is true of Archie Brown, who has called reformist groupings in the Communist Party "chameleon institutions" which deployed liberal ideas within an illiberal environment.⁴⁰⁵ With the end of the liberal ascendancy of the late 1990s, this same narrative has been turned on its head by Russian reactionaries who argue that the Soviet Union was betrayed by naïve intellectuals poisoned by Western ideas.⁴⁰⁶ These narratives share a fundamental problem: in seeing the reformist branch of the Soviet elite as either brave internal opponents or traitors, they remove exchanges between Soviet and Western intellectuals from their historical context. These party officials and intellectuals did not see a discrepancy between their work in international organizations and their dedication to the Soviet cause. In fact, interacting with Western social scientists and adopting their methods was encouraged by the Soviet military-industrial complex as a means of improving domestic economic performance and

⁴⁰⁴ Robert English, *Russia and the Idea of the West Gorbachev, Intellectuals, and the End of the Cold War* (New York: Columbia University Press, 2000).

⁴⁰⁵ Archie Brown, "Transnational Influences in the Transition from Communism," *Post-Soviet Affairs* 16, no. 2 (2000): 177–200.

⁴⁰⁶ A standout for actual historical research in this genre is Aleksandr Ostrovsky, *Kto Postavil Gorbacheva?* (Moscow: Eskimo, 2010).

of acquiring foreign technologies needed to wage the Cold War.⁴⁰⁷ As well, these presentist readings also leave Western liberalism un-problematized, portraying it as a monolithic agenda unaffected by shifts in the international political economy. In fact, as we shall see, the highpoint of Soviet-Western cooperation in economics and social science came during a crisis of “embedded liberalism.”

Soviet economic theorists and their Western interlocutors attempted to adapt national industrial planning to the conditions of global financial interdependence that were emerging in the 1970s and to establish an intellectual agenda that would counter other alternative economic doctrines emerging from the West and the Global South. As such, this “technocratic international” argued that global planning should be the alternative to both the “neo-liberal” deregulation of international capital mobility and the New Economic International Order’s (NIEO) advocacy of the restructuring of the global terms of trade. The networks built by Cold War intellectuals were the culmination of the Soviet Union’s attempt to marry its domestic industrial politics with an international mission that started with the doctrine of “peaceful coexistence” and to keep that agenda relevant as the accomplishments of early Soviet heavy industrialization were being quickly overshadowed by the emergence of a “post-industrial economy” dominated by the information industry, lean manufacturing, and aggressive export driven growth in the East Asian “tiger economies.”

⁴⁰⁷ Tellingly, the Soviet state saw social and data sciences as a kind of “hard” technology rather than a “software.” This discussion is developed in Alexander Bykov, *Gramatika poriadka: Istoricheskaya sochialogia poniatii koptorye meniaut nashu realnost* (Moscow: HSE, 2014); Ksenia Tatarchenko, “A House With a Window to the West: The Akademgorodok Computer Center 1958-1993, Ph.D. Diss (Princeton University: 2014).

An examination of the East-West exchange of economic ideas also contributes to the new historiography of détente. Much of earlier writing on this period of international relations has focused on the machinations of the superpowers such as the “triangle diplomacy” practiced by Nixon and the incentives nuclear parity created for Soviet-American attempts to regulate the arms race. A newer strand of literature has broken out of this mold by focusing on “European Détente” and particularly examining Willie Brandt’s “Ostpolitik” as its own political agenda that not only had a more permanent political impact than the collapsing superpower détente but also was the incubator for new areas of political engagement such as “human rights” and the greater integration of Eastern Europe into Western European financial and economic networks.⁴⁰⁸ Yet, the Soviet experience has been overlooked, with Russian-speaking actors appearing either as negotiating partners, or only in the context of the Helsinki Accords. Even the rare book that pays attention to the social contexts of international exchange in the Soviet Union, Jeremy Suri’s *Power and Protest*, is based on few Russian primary sources.⁴⁰⁹ In fact, a more detailed look at the social context of Soviet economic thought shows that Suri’s interpretation of détente as a conservative backlash against the humanist rebellions of the 1960s does not hold. Rather, Soviet social scientists engaged in the détente project believed it to be a way of taking the ideals that emerged after 1956 to their logical conclusion—the triumph of a humanist version of the Soviet project that secured world peace.

⁴⁰⁸ M. E. Sarotte, *Dealing with the Devil: East Germany, Detente, and Ostpolitik, 1969-1973*, (Chapel Hill: University of North Carolina Press, 2000); Johnathan Zatin, *The Currency of Socialism: Money and Political Culture in East Germany* (Cambridge University Press, 2007); Daniel J. Sargent, *A Superpower Transformed: The Remaking of American Foreign Relations in the 1970s* (Oxford University Press, 2015).

⁴⁰⁹ Jeremi Suri, *Power and Protest: Global Revolution and the Rise of Detente* (Cambridge, Mass: Harvard University Press, 2005).

The reader of this chapter should keep in mind its role in the larger project. In documenting the interaction between international technocratic networks and domestic politics in the USSR, I show that while radical, market socialist, radical *Tovarnik*, reformism of the mid-1960s was eliminated by Brezhnev's agenda of a "global scientific-technical revolution," the term allowed those thinkers that were left to integrate their thinking into a global context, forcing once depoliticized mathematical research to expand its horizons to larger institutional and social issues. Through the efforts of Djerman Gvishiani, in particular, Soviet mathematical economics was integrated into the larger discipline of "systems analysis" and forced to deal with societal problems on both a national and global scale.

Econometrics, International Organizations, Development Economics and Multilateral Science

In 1962, Jan Tinbergen, the Dutch "father" of econometrics, published *Shaping the World Economy: Suggestions for an International Economic Policy* under imprint of the Twentieth Century Fund, the venerable New York-based progressive institution. *Shaping* presented an agenda for curing the "disease" of underdevelopment in newly decolonized countries through active state intervention in the economy guided by latest in mathematically derived planning techniques. This "medicine" would bring newly decolonized countries out of poverty and into modernity. The "doctors" who held the cure were the major industrialized powers: the USSR and the United States. These "two doctors," as Tinbergen called them, pedaled different formulations of a medicine but if applied with proper dosage guided by scientific research—mathematical economics—each

could be as effective a cure as the other. Tinbergen was no outsider or radical—his work was widely respected by the leading economic theorists of both superpowers and is the groundwork of modern economic theory. Indeed, from the perspective the early 1960s, there was nothing strange about what Tinbergen was writing. Development theorists in the West took some form of government industrial planning as given, often drawing upon their own experience in the “New Deal” or the formulation of the “European Economic Community.” Meanwhile, theorists from the East increasingly thought that a transition that kept certain market elements in place in newly liberated states was needed before central planning fully took over. What united both sides of this debate was not only the idea of an inexorable march of history toward some kind of ideal—either of embedded liberalism or of socialism—but that these ideals could be implemented around the world using the same mathematically driven planning techniques.⁴¹⁰ Western theorists of “the industrial society” freely spoke about how technocratic dominance in state socialist societies could resemble the West and how Western societies would be more planned. Their Soviet counterparts, though abhorring the idea of “convergence,” could opine how more state planning in the West was inevitable as capitalism reached its monopoly stage, thus foreshadowing the ultimate Soviet triumph.⁴¹¹

Tinbergen’s text represented a culminating moment in a long history of the integration of “econometrics,”—the use of formal mathematical methods to construct economic models—and international development. Soviet scientists were no outsiders to this longer history. Econometrics was born in the context of a late nineteenth and early

⁴¹⁰ Jan Tinbergen, *Shaping the World Economy: Suggestions for an International Economic Policy* (New York: The Twentieth Century Fund, 1962).

⁴¹¹ For the best study of discourses of economic convergence see Richard Day, *Cold War Capitalism: The View from Moscow 1945-1975* (London: Routledge, 1995).

twentieth-century international scientific community in Russian theorists were active. The story of econometrics begins in the “marginal revolution” of the late nineteenth century when Carl Menger, Leon Walras, William Stanley Jevons, and Alfred Marshall all, independently, formalized the concept of “demand” in addition to “supply” based on the economic subject who maximizes “marginal utility,” the personal satisfaction a consumer gets from consuming one more item of a good or the profit the producer gains from producing one more good over the previous good produced. For the purposes of our story, the most important of these was Walras, a French engineer teaching at the University of Lausanne who along with his colleague, Italian engineer Wilfredo Pareto, established an interpretation of supply and demand built explicitly on the foundations of the mathematics of thermodynamics. What was remarkable about the Lausanne interpretation of the marginal revolution was not only its Pan-European origin—in contrast to the very English, Ricardian tradition of Jevons and Marshall and the distinctly Austro-German legal tradition of Menger—but that, because of its mathematical origins, it was normatively neutral. In the Walras—Pareto world, the optimal level of supply and demand and the consequent distribution of goods was not a matter of particular institutions or practices. Either state or market could determine this ideal outcome.⁴¹²

Though mostly engaged with Austrian theory, Russian thinkers were active participants in the marginal revolution. Menger’s lectures were the basis of Petr Struve’s “legal” Marxism which substituted the labor theory of value with marginal utility. Struve’s comrade Mikhail Tugan-Baranovsky, a trained mathematician, built one of the first

⁴¹² Philip Mirowski, “Physics and the ‘Marginalist Revolution,’” *Cambridge Journal of Economics* 8, no. 4 (December 1, 1984): 361–79; Johanna Bockman, *Markets in the Name of Socialism: The Left-Wing Origins of Neoliberalism* (Stanford University Press, 2011).

mathematical models of a business cycle to meld Marx's critique of capitalism with Manger's "subjective" approach to behavior. The affinity of Russian socialists for marginalism, even its least mathematically sophisticated Austrian variant, should not be surprising. The marginalists were all dedicated social reformers who believe their research had applications to state projects that would advance social justice. Indeed, socialist intellectuals and parties across Northern Europe and Scandinavia embraced marginalism to make Marxism "work."⁴¹³

The early years of the twentieth century fueled innovations that formed the bridge between marginalism and econometrics. The First World War had led to advances in the use of applied, inferential statistics which motivated economists to begin filling out the abstract, thermodynamic supply and demand system invented by Walras with concrete statistical information on real economies and markets. Moscow was an especially important site of this move as it was one of the leading centers of the world for research into the key element of mathematics needed to make economics a "science:" probability theory. A.A. Konus developed the first calculation of the cost of living. Eugen Slutsky's seminal 1915 paper developed a technique for the measurement of substitution effects and in 1927 he would provide the basis for a stochastic theory of the business cycle.⁴¹⁴ Indeed, at Gosplan, economists such as Wassily Leontief, G.A. Feldman, and Viktor Novozhilov were at work developing "material balances," which would be the beginning of a research program that led to Leontief's Nobel Prize. Russian émigré economists such as former

⁴¹³ Vincent Barnett, *A History of Russian Economic Thought* (London: Routledge, 2005); Ian Steedman, ed., *Socialism & Marginalism in Economics 1870 - 1930*, 1 edition (London: Routledge, 1995).

⁴¹⁴ An approach that has returned to economics since the 1980s with the infamous RBC and DSGE macro-models, which failed to predict the "great recession" and whose foundation is mistakenly attributed to Ragnar Firsch whose own approach assumed fluctuations to be endogenous to capitalism.

Tarek Socialist Republic, Menshevik official Jacob Marshak, Simon Kuznetz, and later Wassily Leontief, entered institutes in Europe and the United States to lay down the foundations of mathematical economics.⁴¹⁵

The world that these Russian émigrés entered was one of transatlantic and trans-European networks anchored by new international institutions. At the heart of this connection was the friendship between the grand old man of marginalism in the United States, Irving Fisher, and a young Norwegian economist dedicated to give empirical backing marginalism's theoretical prescriptions with statistical study of real economic phenomenon, Ragnar Frisch. With support from Fisher, Frisch received funding from the Rockefeller Foundation to travel the United States and lecture on the subject he called "econometrics." Frisch's movement would get a boost from the sponsorship of a Colorado businessman, Alfred Cowles, who would finance the publication of the official journal of the Econometric society, *Econometrica*, and establish a research center, the Cowles Commission, which became the nucleus for research in mathematical economics in the postwar era. This American connection helped inject the new sub-discipline into a project at the League of Nations on the contours of the new consumption-driven economy that was emerging in the wake of the First World War. The unlikely start of these efforts was the League of Nation's International Labor Organization (ILO) study on "the cost of living" sponsored by the Ford Corporation to price their wages and the price of their products in Europe and to show the superiority of the American system of labor management. The Ford

⁴¹⁵ Robert Leeson, "The Ghosts I Called I Can't Get Rid of Now': The Keynes-Tinbergen-Friedman-Phillips Critique of Keynesian Macroeconometrics," *History of Political Economy* 30, no. 1 (March 20, 1998): 51–94.; Francisco Louçã, *The Years of High Econometrics: A Short History of the Generation That Reinvented Economics*, (New York: Routledge, 2012); Patricia Clavin, *Securing the World Economy: The Reinvention of the League of Nations, 1920-1946* (Oxford: Oxford University Press, 2013).

project required the development of statistical indices for the measurement costs across markets and consumer preferences.⁴¹⁶

This work, which required the construction of detailed statistical indices, was followed by a more ambitious set of projects funded by the Rockefeller Foundation: a survey of the literature on business cycle research, completed in 1937 by Austrian economist Gottfried Haberler. However, Haberler's traditional Austrian business cycle model was being thrown into question by the persistence of the Great Depression. In contrast to the theories of self-equilibrating markets, John Maynard Keynes used simple, non-statistical logic⁴¹⁷ to show that markets could be inefficient. The League's response to Keynes was written by Dutch econometrician Jan Tinbergen; who's interest in mathematical economics came from his belief in its use as a means to scientifically direct social reform. Following his PhD research, he worked in the Dutch statistical bureau where he was responsible for building the first national economic model. This experience sent Tinbergen to Geneva to develop the League's in-house econometric model of the business cycle. The model followed the political cues of Frisch who believed that the future of the economy had to be a finance-less, directly administered, planned system. This belief in planning as a panacea for the problems of modernity by the early econometricians contrasted with the Keynesians who were prone to less direct intervention and who accepted the permanence of financial markets in capitalism, which they, unlike many early econometricians, believed to be part and parcel of any modern economic system.⁴¹⁸

⁴¹⁶ Ibid.

⁴¹⁷ Keynes was a trained statistician and financier who doubted the usefulness of inferential statistics to illustrate human activity.

⁴¹⁸ Ibid.

The early integration of econometrics into the League of Nations and the networks built by the Rockefeller Foundation meant it was deeply intertwined with the birth of international development. Both organizations were deeply involved in efforts to modernize agriculture in Eastern Europe. With the Soviet alliance during WWII, many of the leading members of this organization looked forward to the day when they could restore their contacts with their Soviet counterparts whose scientific activity had been severely limited under Stalin. Later, much of the League's staff and networks continued into the newly founded United Nations. The expectation of Soviet participation in a global international project is evidenced by the early deliberations of the Economic Commission on Europe (ECE)—the first of the UN's regional economic commissions. Headed by Swedish Social Democrat and future Nobel Prize winning economist, Gunnar Myrdal, the ECE, from its inception, saw itself as an East-West Institution—even if in practice, Soviet social scientists did not participate in the commission's work when it formed in 1947. Indeed, almost immediately the ECE assigned a staff economist, Russian-born socialist Eugen Chussodowsky, to begin working out means for incorporating Soviet data into the ECE's work on economic modeling and forecasting. The problem, Chussodowsky and his superiors pointed out, was that most Soviet data was inaccessible, leaving the ECE to work with only published materials of limited usefulness and leftover data from the League of Nation's ILO, of which the USSR was a member before the war. In addition to gathering a catalogue for statistics, Chussodowsky also established a list of leading Soviet economists who could be invited to work with the ECE once diplomatic issues had been resolved.⁴¹⁹ Myrdal, who as Minister of Commerce negotiated the controversial Swedish-Soviet trade

⁴¹⁹ United Nations Archives and Record Management (UN ARMS), S-0441-0158.

treaty in 1946, insisted that the ECE have a Soviet deputy director of his choice which he got in the form of career diplomat Nikolai Petrovich Kotomov. This emphasis on including the USSR and Eastern Europe in the functions of the UN's first specifically economic body increased as it styled itself the only "neutral actor" fighting for European economic unity following the USSR's withdrawal from the Marshal Plan negotiations in 1947. Yet despite this outreach, while Soviet diplomats participated in plenary sessions of the ECE, using them mostly to attack the Marshal Plan, Soviet economists declined to work in the body's more important expert commissions.⁴²⁰

Things began to change drastically following Stalin's death. The 1954 Geneva Conference was the USSR's first foray into postwar multi-lateral diplomacy. This was followed by Khrushchev and Bulganin's whirlwind 1955 tour of Asia. This trip marked a change in Soviet policy that was formally announced at the XXth Party Congress. Decolonization was declared a major part of the anti-Imperialist struggle and the major front on which the socio-economic competition of the two systems would be fought. Indeed, Khrushchev argued that industrializing countries could take the "non-capitalist path to development"—a position that by 1960 would be codified as official Soviet policy toward newly liberated states. According to the new thinking, colonialism had left developing countries as largely agricultural states with small working classes. This meant that socialist movements had to ally themselves in a "wide front" with the nationalist bourgeoisie and the peasantry to establish the basis of national growth which would lead to a mixed economy that eventually would evolved into socialism. Keeping with this analysis, Soviet theorists envisioned a specifically Marxist model of economic aid that

⁴²⁰ William J. Barber, *Gunnar Myrdal: An Intellectual Biography* (New York: Palgrave-MacMillan, 2008), 86-92.

would be focused on exporting readily made heavy industry to newly decolonized states in hopes of fostering national economic independence from imperialists and to build the basis for a working class that would form the vanguard for socio-economic progress. Central to this development strategy was the export of planning techniques. Development experts explicitly used the industrialization of Soviet Central Asia as the ur-model for economic growth in newly decolonized states.⁴²¹

The Soviet vision of planning as the paradigm of economic development was not out of line with the thinking in the halls of the United Nations. In 1952, the United Nations adopted Trinidadian-American economist W. Arthur Lewis's "Two-Sector Growth Model" as the intellectual foundation of its approach to development economics. The two-sector model used the same "classical assumptions" as the foundational 1928 Feldman model of Soviet economics with both economists assuming the elasticity of capital and labor. Like Feldman, Lewis, and later Indian economist Parshanta Chandra Mahainobis, assumed there was a need to shift labor from the countryside in which it was "underemployed" by subsistence agriculture (thus the term "hidden unemployment" used in this class of models) into the making of producer goods which, in the long run, would allow for the initial accumulation of capital needed to shift the economy toward more investment in consumer goods and general prosperity. In the absence of the financial system that developed states used to marshal capital, newly decolonized states had to turn to central planning to spur the accumulation of capital.⁴²²

⁴²¹ Jeremy Friedman, *Shadow Cold War: The Sino-Soviet Competition for the Third World* (Chapel Hill: The University of North Carolina Press, 2015); Artemy M. Kalinovsky, "Central Planning, Local Knowledge?: Labor, Population, and the 'Tajik School of Economics,'" *Kritika: Explorations in Russian and Eurasian History* 17, no. 3 (September 21, 2016): 585–620; Ragna Boden, "Cold War Economics: Soviet Aid to Indonesia," *Journal of Cold War Studies* 10, no. 3 (July 1, 2008): 110–28.

⁴²² John Toye and Richard Toye, *The UN and Global Political Economy: Trade, Finance, and Development* (Bloomington, Indiana: Indiana University Press, 2004).

With Khrushchev's Thaw, the Soviet economics field and the Soviet government became ever more interested in working with international organizations and their staff. In 1956, Myrdal was invited to Moscow to discuss both the ECE and scientific cooperation between Soviet and European economists. In private conversations during his visit, Myrdal expressed hope that Soviet economists and statisticians could take an "active role" in the work of the ECE in compiling all-European statistics for use in continental development projects and proposed that the USSR participate in a "conference of European economists." As well as private conversations on scientific plans, Myrdal's visit to Moscow featured a lecture at Moscow State University (MGU) to an audience of five hundred people. This was not just an academic affair, as the Soviet side made major efforts not only to include members of the country's leading social science institutes on the invitation list but to explicitly invite embassy personnel from the west and the developing world in a show of Moscow's new openness. Myrdal's speech was also a blend of economic science and political agenda. Discussing how the EEC was creating a new statistical basis for understanding Europe's economies, Myrdal emphasized that the USSR, by making its statistics public and standardized, would not only have salutatory effects for international economic research but also encourage the expansion of trade between the socialist and capitalist states of Europe which, in turn, would spur peace and integration across the continent.⁴²³

The USSR's opening toward international cooperation in economic research and expert participation in international bodies plugged its burgeoning economics profession into networks of left-leaning economists around the world, at a time when the profession

⁴²³ RGANI f. 5 op. 35 d. 37 ll. 16-23.

was dominated by the left. Economists of East European and Russian heritage were key intermediaries in integrating Soviet specialists into this technocratic network. For example, at a 1957 UN conference on disarmament, Polish econometrician and former UN ambassador, Oscar Lange, introduced IMEMO's Deputy Director Vladimir Aboltin to Prof. Meadows of Rutgers who attempted to recruit Aboltin into founding a new journal called *Coexistence*. The journal's editors would be legendary left-Keynesian economist Joan Robinson and legal-economic comparativist Rudolf Schlesinger—both of whom had joined Lange in his polemics with the traditional anti-marginalist Marxist students of Morris Dobbs. In his report of the meeting, Aboltin acknowledged that while he believed his collaboration with this group might bring about positive results, he thought that some members of the editorial board were unacceptable—one member that particularly troubled was Wassily Leontief.⁴²⁴

It is not surprising that Leontief raised concerns for Aboltin. Leontief had started his life and career in the USSR and had been one of the economists engaged in early planning discussions in the 1920s. However, he was not a supporter of the Soviet regime, having sided with his professor, Pritim Sorokin, in a dispute with Soviet authorities in 1922 over academic freedom (both would meet again at Harvard where Sorokin helped found the sociology department and Leontief the econometrics research program) and was arrested several times. After a false diagnosis of a late-stage sarcoma, Leontief was allowed to leave the country in 1925 after which he continued his research at the University of Berlin and at Keil's Institute of the World Economy, where he conducted pioneering research into the statistical measurement of supply and demand. In 1931, he came to the

⁴²⁴ ARAN f. 1978 op. 1 d. 29 ll. 14-52.

National Bureau of Economic Research in New York and a year later became a faculty member at Harvard. It was there that Leontief made his main contribution to economics—the development of the “Input-Output” (IO) methodology which measured how the products of one industry were consumed by other sectors of the economy through a matrix of partial equilibria linear systems published as *The Structure of the American Economy 1919-1929* in 1941.⁴²⁵

With such a background, it was no wonder Leontief would be a problematic figure. However, this would not last long. When Nemchinov founded his laboratory for mathematical economics in 1958, he and his students used two texts—Leontief’s *Structures* and Kantorovich’s 1948 pamphlet on optimization.⁴²⁶ Nemchinov’s admiration seemed to be enough to have Leontief invited to the USSR in 1959 as part of a delegation from Harvard sent to establish an academic exchange program with Leningrad State University (LGU). From Leontief’s report to the Ford Foundation, his visit was less an administrative mission than a chance to meet with and informally train the USSR’s young economists. He was greeted by Nemchniov and Kantorovich and held an impromptu seminar for fifteen graduate students who had been working on mastering input-output models. These students, he reported, were going to Siberia to become the basis of an applied economics institute there—the core of what would become Abel Agambegian’s Institute of Economics and Applied Industrial Engineering. Another economist of note encountered by Leontief included V.D. Belkin, who he noted had the “odious task of

⁴²⁵ Olav Bjerkholt, “Wassily Leontief and the Discovery of the Input-Output Approach,” SSRN Scholarly Paper (December 19, 2016), <https://ssrn.com/abstract=2884686> [accessed 1/18/2016].

⁴²⁶ Author interview with Vladimir Kossov, Moscow, Russian Federation, November 25, 2014.

communicating between the computing and economics community.”⁴²⁷ Following his visit, Leontief sent translations of new research on mathematical programming in economics conducted at MIT and the RAND Institute to leading Soviet researchers including Nemchinov, Tsagolov, and Kantorovich.⁴²⁸

Leontief’s visit to Moscow and his interest in Soviet input-output research were not simply apolitical acts of a scholar excited to share his work with his home country. Leontief, despite his opposition to the Soviet government, was a passionate proponent of planning, believing that it was the future of the American economy. Leontief used the Soviet interest in input-output to plead his case for more funding and government investment in assembling the data needed to introduce more planning to the United States. In his report from Moscow he warned that the “failure of the United States Government to maintain its input-output tables” meant that the Soviet Union could soon overtake the United States in the effectiveness of its economic system. The politics were clear. A Rockefeller Foundation assessment of Leontief’s claims noted that “many in the business community see this [Leontief’s advocacy] as jamming government planning down our throat.” A second reason that Leontief presented for increased funding was his need to organize funds for the first International “Input-Output” Conference in Geneva, 1961 which would feature work from Gunnar Myrdal, Jan Tinbergen, and Nicholas Kaldor. Nemchinov would attend as the official observer from the USSR.⁴²⁹

If planning was facing pushback in some Western domestic venues, it had support from leaders on an international level. The United Nation’s “First Development Decade,”

⁴²⁷ “Slightly Edited Transcript of Random Notes Taken by W. Leontief Taken on His Trip to Moscow February, 1959” The Rockefeller Archives, Series 200, Box 512, Folder, 4378

⁴²⁸ The Papers of Wassily Leontief, The Harvard University Archives, HUG 4517, Box 21, Folder 3.

⁴²⁹ “Conversation with Thomas H. Carroll” The Rockefeller Archives, Series 200, Box 512, Folder, 4378.

launched by President John F. Kennedy and UN General Secretary U Thant in 1960, emphasized the importance of “development planning” in mobilizing resources for economic growth in underdeveloped countries lacking market institutions.⁴³⁰ This program, derived from the assumptions of the Lewis model, was perfectly compatible with the Soviet program of socio-economic development through industrialization and fit within the agenda of the “competition of the two systems.”

This international environment was extremely hospitable to the introduction of Soviet specialists into global circuits of development expertise. In 1959, Parshanta Chandra Mahainobis, director of the Indian Statistical Institute and architect of India’s Second Five Year Plan (focused on shock industrialization), came to Moscow to encourage IMEMO to cooperate in the creation of a volume called *Industrializing Underdeveloped Countries*. The work would be co-edited by IMEMO founder, Anoushavan Azumanian, and would include, amongst others, contributors from the UK, Iraq, and Guinea. This proposal was viewed extremely positively by the Central Committee’s Department of Science and Higher Education, whose report noted that “amongst Western specialists, it has become common to address the development of newly decolonized states within the current international division of labor” and for “economists from developing countries [themselves] to write about economic development without addressing the need for social [class] change.” The mission of Soviet economic advisers was to demonstrate “that complex problems of developing economies can only be addressed through wholesale

⁴³⁰ The United Nations Secretariat, *The United Nations Development Decade: A Proposal for Action* (New York: The United Nations, 1962) 14-25

industrialization and the transformation of the agrarian order” which would entail the creation of a progressive working class.⁴³¹

At the heart of East-West engagement on development economics was the tension between capitalism and socialism and a basic agreement on the usefulness of planning techniques. For example, a 1962 conference on “development planning” organized by General Secretary U Thant in Geneva divided its participants divided into three sections: capitalist countries, socialist countries and developing countries. The final report entitled *Economic Planning for Development* was approved by all members of the committee with the exception of the Soviet representative, M.Z. Bor—the same Bor who would go on to challenge the Vaag report on economic reform of 1965. Bor’s addendum emphasized the superiority of Soviet-style planning over that of either capitalist states or “the mixed economies” found in the developing world.⁴³²

While traditionalists like Bor still emphasized the divide between socialist and capitalist planning, economists working with the “mathematical-economics” paradigm saw no problems separating the matter of planning techniques from issues of social order. Indeed, such an approach wasn’t at odds with Soviet policy. Lectures such as Fedorenko’s 1966 presentation on long-term forecasting and industrial planning at the Denmark meeting of the United Nations Industrial Development Organization (UNIDO), were supposed to help boost the prestige of Soviet science.⁴³³ Leontief used a 1966 UNIDO Moscow conference on the economics of metallurgy for developing nations to expand his contacts and encourage his colleagues to attend international professional conferences as scientists

⁴³¹ RGANI f. 5 op. 35 f. 115 ll. 62-66.

⁴³² M.Z. Boz “Planning in the Soviet Union” in *Planning for Economic Development* (New York: The United Nations, 1962), 125-145.

⁴³³ RGAE f. 9480 op. 7 d. 953 l. 165-175.

as much as Soviet representatives.⁴³⁴ United Nations organizations thus formed an important site of professional contact in which Soviet and Western economists began to work as fellow experts in multilateral rather than bilateral contexts.

By the mid-1960s, Soviet participation in international organizations was allowing experts to begin understanding themselves as members of an international professional society associated with development and econometrics. In 1966, Tinbergen lobbied the Dutch government to donate six million dollars to the United Nations to fund the operations of a permanent commission called the “Committee on Development Planning (CDP).” Indeed, while both the British and Soviet diplomatic attaches to the United Nations Economic and Social Council (ECOSOC) agreed that the “United Nations had no idea of what to do with this committee,” the Dutch side and ECOSOC secretariat insisted that it be staffed with mathematically trained economic experts. Tinbergen recommended the Soviets send the Director of Gosplan’s Scientific Institute (NII), A.N. Efimov, to be their representative to this supposedly ideologically neutral expert committee. While Efimov did not become a permanent member of this committee, his deputy and successor, Andrei Kirilenko, was appointed to the committee where he would serve through the 1980s.⁴³⁵

The trends that had emerged through the 1950s and 1960s were summed up in a 1969 GKNT report on the future of Soviet technical support to developing nations. Its authors suggested that to keep up with advancements in the West, the USSR should send graduate students from CEMI to Tinbergen’s research center in Rotterdam to both improve the ability of Soviet specialists to participate in the formulation of industrial plans for the

⁴³⁴ The Papers of Wassily Leontief, The Harvard University Archives, HUG 4517, Box 31, Folder 11.

⁴³⁵ RGAE f. 9480 op. 9 d. 42 l. 91.

developing countries and to import modern planning techniques from the West into the Soviet Union itself. The need for better training in and contacts with the cutting edge of Western econometric theory was dire since foreign aid and technical assistance would most likely become “more multilateral” in the coming decade “which was at odds” with Soviet practice.⁴³⁶

Forging a Technocratic International

In 1969, a Soviet delegation attended a conference called “The Crisis of Planning” at the British National Center for the Study of Development in Brighton. Though ostensibly aimed at the problems of planning in developing countries, the Soviet delegation concluded that it was actually a meeting to defend the concept of planning itself in the wake of the failure of Harold Wilson’s “Plan for the Development of the British Economy.” The failures of this plan and the French Five Year Plan, as well as development plans around the world, were providing ammunition to rightwing critics of planning who, after being on the fringes of the Western economics profession, were coming back to afore. The purpose of the Brighton meeting was to show that it was not planning that was failing, but rather there was a greater crisis in the global economy that had foiled these plans. After their attendance, the USSR’s delegation suggested that to counter this worldwide attack on planning, the Soviet Union make the training of Soviet development cadres replicate those of their Western counterparts by expanding on the teaching of theoretical economics and to send graduate students to train at Western European university’s development economics programs.⁴³⁷ The Soviet delegation’s report from Brighton summed up the transformation of the relationship between the USSR’s experts and their sympathetic

⁴³⁶ RGAE f. 9480 op. 9 d. 1508 ll. 14-16.

⁴³⁷ Ibid., ll. 1-10.

Western counterparts. The increasing fluidity between domestic planning and international development was driving Soviet economists to see the battles fought by their Western friends as part and parcel of an international discussion over the future of not only planning but the international order itself.

Scholars have argued that the technocratic optimism of the 1950s and 1960s collapsed during the late-1970s. True though this maybe, the global technocratic networks did not surrender without a fight. Rather, the technocrats of the 1950s and 1960s moved the center of their movement from the United Nations to new institutions designed to produce an explicitly new, global, and, in their opinion, humane version of planning. New organizations, most prominently, “The Club of Rome,” and the International Institute for Applied Systems Analysis (IIASA) tried to promote an updated “new planning” as a response to the global crisis of the 1970s. Soviet officials and scholars played key roles in the formation of these organizations and hoped to use them not only to intervene in the crisis of embedded liberalism but to establish an alternative to traditional economic planning to advance the course of a humane socialism in both the East and the West.⁴³⁸

The story of these new institutions, formal and informal, can almost all be told through the biography of one man—Dzhermen Gvishiani. Aspects of Gvishiani’s remarkable career have been already discussed in other chapters of this dissertation but parts of his early life and career bear some repeating. Gvishiani was born to Soviet political royalty and his trajectory reflects the transformation of the country’s elite from mass murders to academics. His father, M.M. Gvishiani, a high-ranking Georgian KGB officer and close ally of Lavrenti Beria, was responsible for the deportation of the Chechens in

⁴³⁸ One example of this narrative is Mark Mazower, *Governing the World: The History of an Idea* (New York: Penguin Press, 2012).

1944, amongst other horrible crimes. His son's name was an anagram of the names Dzerzhinsky and Menzhinsky. The younger Gvishiani took on less bloody pursuits. He entered the Moscow State Institute for International Relations (MGIMO)—the incubator of the Soviet diplomatic elite—in 1951, where he met and married Ludmila Alexeievna Kosygina, Alexei Kosygin's daughter. After military service in Vienna, where he was a protocol officer in the Danube Flotilla, he did his graduate work in the philosophy of science at MGU. Gvishiani's research was atypical for a graduate student in philosophy—the sociology and methodology of American management science.⁴³⁹ His interests and expertise, as well as his family and oft rumored KGB connections, led to his appointment as Deputy Director for International Outreach at the GKNT. In 1963, he also headed up the GKNT's ad hoc committee on the introduction of cybernetics and modern management techniques into the Soviet economy, where he worked with Fedorenko on early versions of what would become CEMI's SOFE theory. In its first meeting committee immediately established a program to import western books on management theory, econometrics, and decision sciences.⁴⁴⁰ Gvishiani's interests, as well as his institutional and political clout, meant that he was uniquely positioned to become the conduit to give shape to the Soviet side of the “technocratic international.”

Gvishiani's role in assembling the “technocratic international” began in 1963 during his participation in the UN sponsored Conference on Science and Transfer for the Benefit of Less Developed Countries and the subsequent UN Advisory Committee on The Application of Science and Technology for Development (ACAST) established at that conference. It was there that he met his first Western contact—MIT management professor

⁴³⁹ D.M. Gvishini, *Mosty v budushie* (Moscow: URSS, 2004), 17-39.

⁴⁴⁰ RGAE f. 9480 op. 7 d. 1152 ll.105-106.

Carroll Wilson. Wilson, like Gvishiani, was not an economist but a management theorist. Wilson received his B.S. in Engineering from MIT in 1932 and had spent most of his career as a government and business administrator. In 1946, he was a moving force for the ill-fated United States proposal to transfer its nuclear weapons to the UN and, following its failure, became the first director of the United States Atomic Energy Commission. After resigning from the Commission and spending time in the uranium mining business, he accepted a post at MIT's Sloan School of Management in 1959 and quickly took an interest in economic development, establishing MIT's African Management Fellowship program that same year.⁴⁴¹

It was this belief in the potential of science and technology to create social change that made him quickly recognize Gvishiani as an intellectual and political ally when they met in Geneva in 1963. The problems that they were addressing for the United Nations—technology transfer and its applicability to developing economies—were inherently economic questions of the optimal technology mix for newly industrializing economies. Thus, it is not surprising that Wilson and Gvishiani quickly began to speak about MIT's leadership in “operations research”—later called “systems analysis” when applied to larger, multivariable processes and management problems.⁴⁴² Indeed, a Soviet assessment of ACAST's work in 1964 noted that the committee was developing an American-style “cost benefit model” for evaluating technology transfer and use which would be not only

⁴⁴¹ “Activist on the World Stage: Carroll Wilson Remembered” *MIT Technology Review* February/March, 1984 available at: http://web.mit.edu/idi/carroll_wilson_award/CLW-Activist.pdf [accessed 1/18/16].

⁴⁴² On the history of systems analysis at MIT and Harvard as well as its emergence as a specific multidisciplinary field related to economics see Howard Raiffa, “Decision Analysis: A Personal Analysis of How it Got Started and Evolved” *Journal of Operations Research and Management Science* 50, no. 1 (Jan-Feb, 2002): 179-185. Raiffa's career (including being IIASA's first director), exemplified the status of systems analysis as a multidisciplinary endeavor. Holding a Ph.D. in math, Raiffa branched into Bayesian analysis and Van Neumann and Morgenstern's *Theory of Games* eventually being appointed as a professor of business economics having never done a course of economic theory in his life.

be applicable for developing countries but also should be studied by Soviet specialists for domestic use.⁴⁴³ ACAST also became a way for Gvishiani to make contacts with the OECD, whose scientific director, the famed British chemist Alexander King, believed Wilson and Gvishiani could become the core organizers of an OECD-GKNT joint agenda on economic development.⁴⁴⁴ In 1964, Wilson had invited Gvishiani to drive to MIT with him after the 1964 ACAST meeting in New York to meet the Institute's leading management theorists.⁴⁴⁵

Though the MIT meeting had to be cancelled, Gvishiani's relationship with Wilson continued to blossom. In 1965, they co-authored an article on behalf of the members of ACAST on superpower cooperation and technology transfer for *Scientific American*.⁴⁴⁶ A year later they would develop an international exchange program where two young Soviet specialists, nominated by the GKNT, would be sent to MIT's Sloan School of Business to study operations research while two graduate students from Sloan would be sent to the Moscow Institute for Engineering.⁴⁴⁷ In 1966, UN Undersecretary for Economic Development, Phillip De Seynes, explained to a Soviet secretariat member that any opposition to technical cooperation on development issues between the OECD and CMEA by Western political appointees could be overcome through "informal channels" that had been developed between the scientific staff of these organizations such as "the Wilson-Gvishiani channel."⁴⁴⁸

⁴⁴³ RGAE f. 9480 op. 7 d. 952 ll. 285-290.

⁴⁴⁴ Ibid., 101-104.

⁴⁴⁵ The Papers of Carroll Wilson, MIT Institute Archives and Special Collections, Box. 29, Folder 1220.

⁴⁴⁶ RGAE f. 9480 op. 7 d. 954 ll. 63-97.

⁴⁴⁷ RGAE f. 9480 op. 9 d. 42 ll. 9-10.

⁴⁴⁸ Ibid., l. 98.

Wilson was not the only person in Cambridge interested in the young Soviet official whose State Department profile described him as “one of the nucleus pragmatists” in the GKNT “who favor adopting some Western management practices in order to solve problems in the Soviet economy as well as to reach a technological profile comparable with the West.”⁴⁴⁹ Leontief had the chance to meet with Gvishiani in the summer of 1965 to discuss his idea for “an agency in Vienna—modeled after the International Atomic Commission— which would advance and sponsor, under the auspices of the United Nations, research on the application of mathematical-quantitative methods [for the] solution of economic problems in both developed and developing countries.”⁴⁵⁰ Leontief’s proposals to Gvishiani explained that:

The experience of recent years has amply demonstrated that countries with quite different social and political systems still face similar, if not identical fundamental technical problems of the rational organization of productive processes, of the efficient distribution of economic activities, etc. It is now also widely recognized that the same basic scientific approaches can be efficiently applied to the solution of these problems in highly industrialized and economically less advanced countries.⁴⁵¹

What Leontief was proposing was the establishment of a technocratic international organization that would operate above ideology, replacing it with mathematical accuracy. Gvishiani passed along these proposals to Fedorenko, who responded positively but noted that a first step should be the organization of some smaller conferences that would allow Soviet and American experts to meet and establish the rapport necessary for the creation of such a center.⁴⁵²

While Leontief hoped for a mathematical de-politicization of the Cold War, he was

⁴⁴⁹ The Papers of Carroll Wilson, MIT Institute Archives and Special Collections, Box. 29, Folder 1220.

⁴⁵⁰ *Ibid.*

⁴⁵¹ RGAE f. 9480 op. 7 d. 952 l. 32.

⁴⁵² *Ibid.*, 49.

operating in an extremely political context. The United States was mired in the Vietnam war. Soviet-American negotiations on major issues that had started in the months prior to Kennedy's assassination had broken down. The Johnson administration, wishing to extricate itself from the mess in Vietnam, wanted to tie together these problems to restore trust with the USSR and to get Soviet assistance to bring the North Vietnamese to the negotiating table. National Security Action Memo (NSAM) no. 352 was issued in July of 1966 asking Federal agencies to provide proposals for bridge-building initiatives to rebuild trust between the two powers. Amongst the measures proposed by staff members under the heading "Multilateral Economic Initiatives" was "the establishment of an East-West Research Center or University."⁴⁵³

The task of organizing this initiative fell to Johnson's outgoing National Security Advisor, McGeorge Bundy. Bundy left the Whitehouse to head the Ford Foundation in 1966. In December 1966, he announced that he would be pursuing the establishment of an international East-West center to study "the problems of industrialized societies" as a private "special project" on the personal suggestion of the President but that was not an official United States government position.⁴⁵⁴ As part of a tour of Europe promoting the idea to intellectuals and business and political leaders, Bundy arrived in Moscow in May 1967. McBundy met with Gvishiani to advertise the project as an organization dedicated to the study of scientific method in general rather than of ideologically loaded issues of implementation. Bundy's staff was rightly concerned that the freeze in Soviet-American

⁴⁵³ Thomas Alan Schwartz, *Lyndon Johnson and Europe: In the Shadow of Vietnam* (Cambridge: Harvard University Press, 2003); AM 352 Bridge Building," National Security Action Memorandums, NSF, Box 8, LBJ Presidential Library.

⁴⁵⁴ The Rockefeller Archives, The Papers of the Ford Foundation, The McGeorge Bundy Papers, Box 440, Folder, 10994.

relations created by the Vietnam War and question of German-German relations would make negotiations difficult.⁴⁵⁵ On that trip to Moscow, Bundy and Gvishiani agreed that more details had to be presented and that the center needed to be organized along lines that would let it be neutral and independent of any government to solve the issues surrounding the two Germanys. The German problem continued to be a headache in official negotiations in June 1967 when the Soviet delegation was forced to withdraw from a multilateral conference discussing the center held at the University of Sussex due to the lack of an East German presence.⁴⁵⁶

These issues were solved through the deployment of the international technocratic networks that had been developed over the past decade. First, unknown to the Americans, Gvishiani had serious personal interests in the establishment of the center proposed by Bundy—a fact he made known to his father-in-law, Alexei Kosygin who, as reported in Gvishiani's memoirs, was also a keen enthusiast of the idea. Thus, shortly after the failure of the USSR's delegation to arrive at Sussex, Kosygin and Johnson met at Glassboro, NJ after the latter's visit to the UN general assembly. There Johnson "gave a little push" for the project to a Kosygin who was already fully briefed by Gvishiani. The "Spirit of Glassboro" opened possibilities not only for Soviet assistance in advancing the Paris peace process but also to other projects of mutual interest such as a nuclear non-proliferation treaty and the East-West center.⁴⁵⁷

⁴⁵⁵ Ibid.

⁴⁵⁶ "Letter from McGeorge Bundy," National Security Subject File The Ford Foundation, Box 51, The Lyndon Johnson Presidential Library.

⁴⁵⁷ "Memorandum for the President" National Security Subject File East-West Center, Box 15, The Lyndon Johnson Presidential Library; Gvishini, *Mosty v budushie* (Moscow: URSS, 2004), 134-137.

However, like most of the other initiatives of the emerging détente era, completing the institutions of the international technocracy needed a European intervention. As part of his effort to drum up publicity for his project, Bundy reached out not only to Soviet officials but to business leaders in the United States and Europe. One of these was former FIAT executive and chairman of Italian consulting firm, Olivetti, Aurello Peccei. Peccei's corporate career sent him around the world including to Moscow and Latin America. Peccei's limited knowledge of Russian and his past as an anti-Fascist partisan (he had probably once been a Communist sympathizer) meant that he was ideally positioned to be FIAT's representative to Moscow during negotiations on a joint project with the USSR (the future "Lada"), where he first met Gvishiani. In Latin America, Peccei worked in an Italian-US joint government backed venture called Adela, designed to provide consulting to Latin American governments interested industrialization. Adela had powerful supporters in the form of progressive Senators Jacob Javits and Hubert Humphrey, who hoped that Adela would assist Latin American governments in both jettisoning protectionism and in establishing policies that would help craft policies that would let Western firms invest in long-term, risky projects with socially progressive goals. In 1966, as part of his promotion of this endeavor, Peccei delivered a speech in Washington entitled "The Challenge of the 1970s for the World Today."⁴⁵⁸ Peccei's speech focused on the "progress of technology" and its impact on societies East, West and South—a change that meant human beings were facing a new era of development which "like the processes of living organisms, needs a regulator." The regulator envisioned by Peccei was a united Euro-American world

⁴⁵⁸ Gvishini, *mosty v budushie*, 88-96; Aurello Peccei, *The Human Quality* (Oxford: Pergamon Press, 1977), 37-43; Peter Moll, *From Scarcity to Sustainability: Futures Studies and the Environment, the Role of the Club of Rome* (Frankfurt: Peter Lang, 1991), 51-72.

which would “expand the area of prosperity” to the developing world through “a global plan.” Peccei’s conception of Europe explicitly included the USSR and the socialist states. Once this united “area of prosperity” could be achieved, the fruits of prosperity could be better exported to the developing world through planned technological transfer.⁴⁵⁹

This speech independently got the attention of White House official Dean Rusk, Alexander King, and Gvishiani who all worked to introduce Peccei to Wilson and Bundy. Gvishiani was so impressed with the speech that he invited Peccei to give it again in Akademgorodok in 1967.⁴⁶⁰ Peccei acted as middleman between Gvishiani and Bundy arranging for a meeting between the two in Vienna in 1968 to restart negotiations over the East-West center following the breakthrough at Glassboro.⁴⁶¹ The Vienna conference secured Soviet interest and cooperation on the project. However, negotiations on the specifics of topics and financing continued. There was still a great deal of disagreement between some American and Western European scientists, who believed that a research institute must work on specific problems, and the Soviets who, for obvious reasons, insisted that the program would have to be only methodological. To bridge this gap, both sides adopted Fedorkenko’s proposal for a Soviet-American seminar on management science to serve as a dress rehearsal for direct, multilateral cooperation. The venue for the first of these conferences, held in 1969, was the International Labor Organization (ILO) in Turin. Though the seminar was funded by the Ford Foundation and coordinated by the GKNT and CEMI, Soviet officials insisted that it be officially administered by the ILO so as not

⁴⁵⁹ Ibid.; Aurello Peccei “The Challenge of the 1970s and the World Today” available at: <http://clubofrome.fi/wp-content/uploads/2014/10/Dossiers.pdf> [Accessed 01/15/2017].

⁴⁶⁰ Ibid.

⁴⁶¹ “Letter from McGeorge Bundy, December 12, 1968” National Security Subject File East-West Center, Box 15, The Lyndon Johnson Presidential Library.

to establish any official government positions while negotiations on the center were ongoing. Another seminar was scheduled for 1971, this time to be held in Moscow, which would expand the discussion from a bilateral United States-USSR affair to a fully multilateral discussion with academics from Europeans and the developing world.⁴⁶² On October 4, 1972 the treaty that led to the creation of the International Institute for Applied Systems Analysis (IIASA), the official name for Johnson's center, was signed and the institute began operations at its headquarters in Laxemburg, Austria in 1973. Gvishiani was appointed chairman of the Institute's Board and Peccei as a board member.⁴⁶³

Peccei's organizational energies were not limited to founding IIASA. In 1967, he gathered his collaborators, including King and Wilson, at the Academia de Lincei in Rome to form an international scientific and political discussion circle that the attendants called "the Club of Rome." The Soviet position in the Club of Rome was ambiguous. On one hand, it was labeled a "fascist club" by propagandists who objected to its most famous, and controversial publication— *The Limits to Growth* which used modelling techniques developed out of systems analysis to warn about the problem of overpopulation and proposed the regulation of fertility. However, Gvishiani was present at the initial meeting and attended others as an unofficial observer, bringing along leading Soviet researchers such as Agambegian and O.T. Bomolov.⁴⁶⁴ Thus, through Gvishiani's efforts, by 1972, the Soviet Union and its technocratic elite were enmeshed in a series of multilateral institutions

⁴⁶² RGAE f.9480 OP. 9 D. 1509 ll. 1-31.

⁴⁶³ Gvishiani, *Mosty v budushie*, 218-227.

⁴⁶⁴ Ibid. 154-167; D.M Gvishiani *Rimskii klub: Istoriiia sozdaniia, izbranyie doklady, i vystupleniia, ofichalnye materialy* (Moscow: YRSS, 1997), 18-45; James R. Whitehead, *Memoirs of a Boffin: A Personal Story of Life in the Twentieth Century* available at: <http://www.whitehead-family.ca/drrennie/chap13.html> [accessed 1/18/2016].

dedicated to the advancement of rational governance through the application of planning sciences to global economic processes.

These programs had direct consequences for the domestic organization of Soviet social sciences. Initially, the organization of the Soviet delegations to IIASA was organized via an ad hoc committee of the Academy of Sciences. In 1976, this system was reorganized into a new institute called the All Union Institute for Systems Analysis (VSNIISI) was be explicitly designed to interface with IIASA. It was a special institute, founded by Gvishiani, whose work remains, for the most part, classified. Because it was run as a joint project of the GKNT and the Academy of Sciences, the VSNIISI had an amorphous oversight structure which made it an extremely independent institution and gave Gvishiani the leeway to do whatever he wanted with its research agenda and staffing. However, what really made the VSNIISI different was that it was explicitly designed to be a bridge between international research in economic and applied social sciences and the domestic economy. In fact, its charter specified that the institute had to prioritize “multi-disciplinary research” and “apply the practices and results of global science to the domestic problems of the Soviet economy.”⁴⁶⁵ Gvishiani used institute’s status as a conduit for important advances to sell his vision for an independent multidisciplinary institution. In a note to Ustinov, advocating for the creation of his new institute, Gvishiani explained projects undertaken by IIASA were “chosen with the input the Soviet delegation with the goal of having the most benefit to our economy.” Areas that IIASA was working on of special interest to the USSR included energy systems, regional planning, and natural resource usage. Gvishiani suggested to Ustinov that, not only should the powerful Minister of

⁴⁶⁵ RGAE f. 9480 op. 12 d. 373 ll. 80-81.

Defense Industries and main voice of the ministerial interests, support the further expansion of Soviet contacts with global social sciences but that he should encourage the production ministries to coordinate with the soon to be founded VSNIISI to better represent Soviet economic interests at IIASA and use the international organization to attract foreign expertise to the formulation of specific Soviet domestic projects.⁴⁶⁶

In addition to founding VSNIISI and IIASA, Gvishiani was active in establishing the CMEA sponsored International Institute for the Study of the Problems of Economic Management (MNIPU) in 1975. MNIPU was also an organization governed jointly by the Academy of Sciences and the GKNT, and in practice, MNIPU and VNIISI often had intersecting staffs and research projects. By the mid-1970s, a network of technocratic institutions, working on various levels, had been established.⁴⁶⁷ At the global level, IIASA and the Club of Rome formed the venues for the formulation of a project to revitalize international planning in the conditions of the 1970s. At the bloc level, the research arms of the OECD and MNIPU served as organizing bodies for social scientific research. Meanwhile, at a national level, VSNIISI and the network of management theorists that had emerged from MIT's Sloan School conducted on-the-ground research.

Soldiers of the Scientific-Technical Revolution between Soviet Planning and International Humanism.

Even before Kosygin explicitly said so at the September Plenum, Soviet officials looked to the United States for new innovations in planning techniques. Since the 1950s, Soviet social scientists had been especially impressed by the increasing use of operations

⁴⁶⁶ RGANI f. 5 op. 68 d. 491 ll. 1-33.

⁴⁶⁷ RGAE f. 9480 op. 12 d. 243 ll. 35-343; "Author Interview with O.I. Ananin" Moscow, Russian Federation, April 6, 2014.

research and its descendants—cybernetics and systems theory—in the planning departments of large American firms and in the military-industrial complex. In 1962, after a trip to the United States, V.A. Trapezdnikov reported with wonder, and some worry, about the advanced state of American military industrial planning to the Central Committee. Since 1958, Trapezdnikov explained, American academia, with the support of the military, has been developing “the management sciences” which has resulted in the expansion of operations research into large multistep projects. This culminated in creation of the U.S. Navy’s Program Evaluation and Review Technique (PERT)—a computer implemented project management method used to find the optimal arrangement of activities in a large engineering projects based on their average estimated time and cost. The use of such methods, Trapezdnikov noted, was not only compatible with Soviet ideology but in his opinion was predicted in Lenin’s writings about the simplification of the management of the economy. In Trapezdnikov’s opinion, the United States was ahead of the USSR in the use of digital computing in production management and this “gap” needed to be closed.⁴⁶⁸

Through the 1960s and 1970s, the fascination with American management and its potential to improve the Soviet economy only grew. Kosygin’s 1965 call to look to foreign experience found itself reflected in CEMI’s proposals for the “Kosygin Reforms”—the establishment of a “combine” system of enterprises linked together into a corporate structure explicitly modeled on large multi-branch American corporations such as Ford and DuPont. For the Soviet observer, the genius of the cybernetics-infused American management theory of the 1960s was that it solved the problem of simultaneously allowing

⁴⁶⁸ RGANI f. 5 op. 40 d. 177 ll. 97-104

individual units of a system to work autonomously while also allowing the center to set goals and priorities, thereby creating a road map for a practical implementation of democratic centralism. This obsession with computerization also had the benefit of papering over fundamental critiques of Soviet institutions that began to arise in the 1960s by pointing to the ways that modern management techniques could make these institutions work as intended. Therefore, it is not surprising that rhetoric about the need to introduce “electronic computing technology” into management was at the center of Brezhnev’s discussion of the “Scientific-Technical Revolution” (STR).⁴⁶⁹

The global nature of the STR and its status as both a social and technological process meant that the Soviet Union not only had to look to the West to better understand the physical development of computers but also how computing could be integrated into larger economic processes. What Soviet social scientists of the early seventies were finding troubling was that the “computing gap” was not contracting but rather expanding. The problem was not that the Soviet Union lacked the theoretical knowhow. A 1972 report from a Soviet delegation to IBM argued that “while USSR’s ideology of integrating computing was at a world-class level, the actual practices are lacking” as the USSR’s low productive capacity continued to delay the integration and production of hardware. As an alternative, the group suggested trying to buy licenses from Western firms which had already solved many of their production problems—a decision that was eventually taken and significantly retarded the growth of domestic computer development.⁴⁷⁰ What this and other reports

⁴⁶⁹ GARF f. 5446 op. 99 d. 1 ll. 70-82; Andrei Kolesnikov, *Dialogi s evgeniem Iasinim* (Moscow: NLO, 2014), 62-63. See discussions in the previous chapters.

⁴⁷⁰ RGANI f. 9480 op. 9 d. 1566 ll. 70-82; Felix Hermann, Zwischen Planwirtschaft und IBM: Die sowjetische Computerindustrie im Kalten Krieg *Zeithistorische Forschung* no. 9 (2012): 212-230.

show is that Soviet theorists saw computers not as just hardware but rather as instruments of fundamental social change.

The entanglement between global and social at the heart of the STR meant that it could be deployed to ask some fundamental questions about the postulates of economic theory. In 1969, IMEMO launched a working group to study the Western management experience in the context of the STR and apply it to the USSR. In its first meeting, IMEMO economist, Revold Entov, noted that in the past several years' new questions had emerged in Western theories of economic growth, and therefore, management. Entov was specifically interested in Edward Dennison's research, which argued that it was difficult to separate the contribution of technology to growth from "social goods" such as education and overall measures of "well-being." Unlike the old models of growth from the 1950s, this new research was emphasized the human factor as an element of growth. Thus, Entov argued, Soviet economists needed to think more about these questions of social provision and human behavior just as much as they thought about the optimal allocation of capital and labor resources.⁴⁷¹

This interest in the social implications of American management theory expanded as Soviet-US relations thawed during the *détente* era. In 1971, Robert Ash, the director of US defense contractor Litton Industries and advisor on the management and public policy to President Nixon, traveled to Moscow to deliver a speech to the GKNT's scientific collegium. Ash, who made insinuations that his firm was lobbying the US government to allow it to work in the Soviet market, came in a selling mood and talked up "the management revolution in the United States." The crux of this revolution was that "where

⁴⁷¹ ARAN f. 1978 op. 1 d. 272 ll. 143-172.

once labor and material were the key factors of production, today it is technology and the investment of capital.” The goal of modern management was to adapt organizations to rapidly changing technology by applying scientific analysis to decision making. Ash’s speech did not promote *laissez faire* as a solution to the new era. In fact, “the main challenge” to technical progress and its management was not competition. “Any idiot can lower prices to compete,” he explained, but real, “long term” progress depended on “the ability to predict demand” and adjust the company’s operation to fulfilling the needs of the future. Ash’s speech emphasized the changes that management theorists East and West were both observing: the increasing importance of technology and human initiative in economic decision making over the traditional factors such as labor time and raw material. In other words, Ash was explaining what was becoming known to management theorists in the West as a “post-industrial” economy.⁴⁷²

The importance of the American example for Soviet management theory meant that the leading research group for the subject was initially housed not CEMI or Gosplan’s NII but in Gregory Arbatov’s “Institute for the Study of the USA and Canada” (ISKAN). The team, formed in 1969 and headed by Boris Milner, had, through Arbatov’s extensive connections in the Politburo, not only the purview of studying developments in American “management science” but also to comment on domestic socio-economic issues.⁴⁷³ In September 1970, they issued recommendations to the Central Committee entitled “On Some Timely Questions Related to the Science of Management.” Milner and his colleagues found earlier American attempts to use computing as the sole method to regulate

⁴⁷² RGANI f. 5 op. 61 d. 252 ll. 83-92.

⁴⁷³ *Tritchak let institutu sistemnogo analiza: istoriia sozdaniia, razvitiia instituta 1976-2006* (Moscow: URSS, 2006), 313-314.

management ineffective. Instead, the Americans were moving toward the adaptation of “a systems approach” to industrial planning. Rather than being relegated to pure management theory this new approach took “each large decision as an intervention into a complex system of sub-decisions which could affect constituencies in different ways.” Consequently, planning in the capitalist world was moving from short-term business planning to long-term macro-planning. The Soviet economy which was “ever more complicated” could learn from this experience. Five year plans could start to be constructed on a “sliding basis” in which each year is projected based on a macro-economic model and then adjusted based on previous performance toward a goal established in the context of a long term, decade or multi-decade growth forecast. Moreover, the creation of a “systems approach” to central planning, would allow for the integration of socio-economic issues into the plans rather than just problems of industrial production.⁴⁷⁴

In 1977, Milner’s group was moved from ISKAN to Gvishiani’s VSNIISI. At VSNIISI, the laboratory found a more appropriate fit as Gvishiani was turning his organization into the locus of management research in the USSR.⁴⁷⁵ VSNIISI’s independence meant that Milner was not the only prominent economist to flee his previous institution for its more liberal atmosphere. In 1976, following a Party investigation into CEMI triggered by the immigration of many of its Jewish cadres, which found many “problems” with the institute’s “ideological health,” and very legitimate problems with the training of graduate students, Stanislav Shatalin was removed from his post as Institute’s Deputy Director.⁴⁷⁶ Within a few months, he was made laboratory leader at VSNIISI.⁴⁷⁷

⁴⁷⁴ RGANI f. 5 OP. 62 d. 60 ll. 100-123.

⁴⁷⁵ *Tritchak let instituty sistemnogo analiza*, 314-316.

⁴⁷⁶ RGANI f. 5 op. 69 d. 543 ll. 1-4.

⁴⁷⁷ *Tritchak let instituty sistemnogo analiza*, 318.

VSNIISI's alumni included many of the luminaries of the post-Soviet era including Petr Aven, Egor Gaidar, and Boris Berezovsky. Gaidar remembered his years in the Institute as an important formative experience and noted that its liberal atmosphere allowed him to read economic literature from around the world.⁴⁷⁸

However, Gvishiani and his associates were not closet "liberals" (in the classical sense). Rather, they were participants in a global project in which technocrats wished to tackle the problems of global economic development through a humanist alternative to both strict central planning and laissez-faire capitalism based on the latest research in management sciences and systems analysis. As such, Gvishiani's participation in the "technocratic international" and his creation of its Soviet node was the natural development of the discourse of "scientific technical revolution" and a Soviet response to the changes that were rocking industrialized societies and the international political economy in the 1970s.

Intellectuals from around the world were dealing with new concerns over the future viability and social consequences of economic growth. Growth had, in the 1950s and 1960s, been thought of as cure all, inspired by the perpetual faith in the salutary effects of the advancement of technology was now in doubt. The failures of global development projects, the inflation and energy crises, and the environmental costs of industrialization were straining the belief that growth would naturally guarantee prosperity for all. This intellectual turmoil provides the context understanding how the network built by Gvishiani was instrumental in moving Soviet technocratic thought toward an embrace of a technocratic-humanism determined to change central planning both at home and abroad. The project of reinventing planning and technocratic-led development in more complicated

⁴⁷⁸ Egor Gaidar, *Days of Victory, Days of Defeat* (Seattle: Washington University Press, 1999), 20-21.

times was undertaken on by Aurello Peccei and his Club of Rome in a statement called *The Problematique*.⁴⁷⁹ The basis for *The Problematique* was formally developed at the Club's founding conference at the Academia de Lincei by Austrian systems scientist Erich Jantsch in a paper titled "A Tentative Framework for Initiating System-Wide Planning on a World Scope"—a proposal to adapt the structures of the post-war national economic governance to a world that was rapidly globalizing and an intellectual climate that was rejecting regimentation for creativity. The paper argued that states in the developed world must begin cooperating to establish a system of "future planning" based on the systems modeling techniques developed in the US military and the RAND corporation. This approach would differ from earlier "econometric modeling" by incorporating social and ecological variables as well working toward "multiple, changing futures" rather than planning for specific outcomes like in traditional central plans. Jantsch hoped that such a framework for planning could avoid the problems of top down control and allow the preservation of individual agency in a time where ever scarcer resources would require greater social coordination.⁴⁸⁰

Jantsch's vision was expanded on at Alexander King's 1969 OECD "Symposium on Long Term Forecasting and Planning" held in Bellagio, Italy. At this seminar, Jantsch's original ideas were given a firmer shape by Turkish-American planning and management theorist, Hasan Ozbekhan, who was president of the RAND spin-off, the System Development Corporation (and later a professor at the Wharton School). Ozbekhan painted the picture of a modern society torn between its increasing hierarchical complexity and the

⁴⁷⁹ Matthias Schmelzer, *The Hegemony of Growth: The OECD and the Making of the Economic Growth Paradigm* (Cambridge University Press, 2016), 245–67.

⁴⁸⁰ Moll, *From Scarcity to Sustainability*, 62-67.

liberation of the individual which led to an “loss of the sense of continuity, logical order, and causal relationships” in the industrialized world. Ozbekhan noted that the upheavals of the 1960s presaged the rise of a new era whose complexity required a new, conscious approach to the planning of social life: one that not only focused on the relationship of technological change to social order and the closing of a “technology gap” around the world but also spurred the participation of the individual and society in the formulation of goals and actions. He contrasted this “human action model” of social planning with the old “mechanistic model” by the fact that instead of goals “set from outside” the new planner would set goals from “the dynamics of the plan itself” allowing it to be self-adapting to the shifting needs of a complex society and to capture individual preferences. For example, the ideal plan would respond to trends that would “double the population of Southern California in the next decade” not by automatically investing in more schools and housing in that area but first ask if there could be a more beneficial effect to having the population move to Northern California, and, if so, determine actions that could be undertaken to make Northern California respond to the preferences that were driving people south. This type of planning required continuous long term projections and the construction of multiple scenarios by governments and international bodies, reminiscent of Milner’s recommendations to the Soviet government.⁴⁸¹

Ozbekhan’s framework became the central ideological statement of the Club of Rome’s first decade of activity and a manifesto for the emerging field of “systems dynamics” and “global modelling” that would also be called “the new planning.” Peccei

⁴⁸¹ Hasan Ozbekhan, “Toward a General Theory of Planning” in *Perspectives of Planning: The Proceedings of the OECD Working Symposium on Long-Term Forecasting and Planning* eds. Erich Jantsch (Paris: OECD, 1969), 64-173.

called this program “revolutionary humanism” hoping that the greater social awareness of “man’s ranking as protector and moderator of all life on earth” would lay the groundwork for a global institutional transformation in which societies began to understand the impact of new technologies and social structures on health and ecology lest “man resign himself to push his numbers back and his quality of life fall to a level it was centuries before.” So far, new technical horizons had “left man disoriented and imbalanced with the human system in a state of disorder.” A new global society tied down by world-wide deliberative planning could forge the world into “a oneness of mankind” united by a “sense of globality, love of justice, and abhorrence of violence.”⁴⁸²

This same ethos related to planning was reflected in Gvishiani’s speech to the International Management Association in 1978. Gvishiani’s speech emphasized “the impact of the Scientific Technical Revolution” on all levels of production but also its negative side effects—a lack of resources to sustain an ever-increasing population and the “interdependence of man and the biosphere which has never of such a concern as it has been in the past twenty-five years.” These “global problems required new analytical methods,” for societies to be able to make decisions about long term economic and technical development—a method Gvishiani identified as “systems analysis.” The systems approach advocated by Gvishiani offered a chance to solve the “complex problems” presented by the STR to the “benefit of improving ecology, economy, society, and culture.” The key tool of the Gvishiani’s “system’s analyst” was “global modeling” by which Gvishiani meant a “mathematical description of global systems” and various paths in the future development of variables. As such, the model itself would be able to provide

⁴⁸² Peccei, *The Human Quality*, 129-133.

endogenous choices to policy makers and establish a framework for the “management of technical progress.”⁴⁸³

Bringing the Scientific Technical Revolution Home: The Technocratic International Between Interdependence and the Soviet Project

Mounting the podium at XXV Party Congress in 1976, Brezhnev could justifiably see his tenure as a success. Consumption was improving and the economic disruptions of the mid-1960s had been overcome. In international affairs, relations between the USSR and the West were “moving from the conditions of ‘Cold War’ due to a change in the correlation of power in the international arena.” This changing atmosphere “expanded the possibilities of scientific and cultural cooperation” between the socialist and capitalist worlds. “Trade between the East and West is finally building the material basis for peaceful relations.” In addition to bilateral trade Brezhnev looked forward to “complex commercial agreements” between the USSR and multinational enterprises or blocs. Brezhnev went to explain that, “there exist broader aspects of international affairs” than just trade or individual exchanges. “Global problems,” such as “the oil and energy crisis, the degradation of the environment, the regulation of oceans and space,” were emerging as a consequence of the “global scientific technical revolution” which demanded new kinds of multilateral solutions that socialist states should forge in the “interests of all humanity.”⁴⁸⁴

The General Secretary had, at least rhetorically, accepted many of the tropes that were being generated by East-West technocratic discourse in the era of détente. His highlighting of energy and ecology as problems that could not be solved within the borders of the nation state, or even within a bilateral framework, could have come straight from

⁴⁸³ RGAE f. 9480 op. 12 d. 98 ll. 129-140.

⁴⁸⁴ *XXV s'ezd: stenographicheskii otshot* (Moscow: Gospolizdat, 1976) 80-81.

Gvishiani's mouth. As Daniel Sargent has shown in his recent work, the term "interdependence" began to appear in the work of Western, particularly American, social scientists in the mid-1970s to signify that an economy could no longer be understood as only existing within its borders. Issues such as the increasing internationalization of finance, dependence of industrialized states on imported primary sources from the global south, exploding populations, and environmental degradation required global rather than national solutions. National economies were therefore integrated into a larger global economy and sovereigns could no longer make domestic economic decisions without understanding how these actions would be effected by larger global forces.⁴⁸⁵ The discussion of the "global" STR and its effects inside the USSR were Soviet analogue to the debate over interdependence in the West. New Soviet elites working within the networks established by technocratic internationalism were uniquely aware of the challenges posed by this new phenomenon. However, as with previous attempts by newly empowered experts to adapt the Soviet economy to the world of the "Cold War," the attempt to adapt the USSR to a globalizing world had to reckon with the powerful, old institutions of a state that were designed in the autarkic crucible of the interwar period.

The area in which questions of the extent to which the USSR was integrated into the global economy were most pressing and obvious was in the country's vast energy and raw materials industry. Much ink has been spilled on the issue of Soviet oil and gas and its export to both the West and Eastern Europe. Indeed, Yegor Gaidar has blamed the economy's dependence on revenues from exports on the inability of the USSR to complete

⁴⁸⁵ Sargent, *A Superpower Transformed*, 162-173.

Gorbachev's reforms.⁴⁸⁶ However, the question of the USSR's engagement in energy markets is much more complicated. As early as 1965, the Azumanian and Keldesh report on the state of the Soviet economy and the "competition of the two systems" (discussed in detail in chapter four) noted that 35% of the USSR's central capital investments went to extractive industries while the sector comprised only 5.7% of the economy. Despite the "huge outlays" spent on the industry, it was not providing financial returns to the state and this high opportunity cost was hurting the expansion of value added industries. The report suggested several steps for alleviating the situation using internal means, including studying American approaches to increasing the productivity of workers and moving away from coal to natural gas, but concluded that "the USSR's internal resources would not be enough to solve the problem." Thus, "it is necessary to acknowledge the need for the USSR to establish import-export relations with the developing world to obtain ores, energy resources, and primary goods" while also "encouraging the USSR and COMECON states to work together to conserve the use of raw materials in the production of new goods."⁴⁸⁷

Concerns about the USSR's integration into global markets for energy and raw materials preoccupied the country's leading researchers on international economics working in O.T Bogomolov's Institute for the Study of the World Socialist System (IMESS). The Institute was founded in the wake of Khrushchev's proposal for a "socialist international division of labor" in 1962 and was taken over by Bogomolov in 1969 after a stint in Gosplan's NII with such colleagues Shatalin and Aleksandr Anchishkin. IMESS' mission was to examine how socialist countries, and COMECON members in particular,

⁴⁸⁶ Yegor Gaidar, *Collapse of an Empire: Lessons for Modern Russia* (Washington, D.C: Brookings Institution Press, 2007).

⁴⁸⁷ ARAN f. 1849 op. 1 d. 51 ll. 81-86.

could integrate their economies and to advance research into “the international socialist division of labor.” Bogomolov was, in many ways, a classical *Tovarnik* less interested in high mathematical theory than in the real functioning of economic relations. His work on socialist trade, which began appearing in 1965, argued that there were inevitably market forces at play within any socialist integration due to the continued presence of commodity relations in the international sphere because all countries had separate planning bodies and different market needs.⁴⁸⁸ Indeed, a 1978 consultative note sent from IMESS to the Central Committee’s Department for Science and Higher Education explained that Marx’s labor theory of value could not be a practical, day to day guide for understanding trade between different countries, socialist and capitalist, since the cost of labor in various states was priced differently due to currency effects and because there was no way to isolate socialist economies from the “speculative” world market for goods. Thus, interstate prices were still effected by “subjective factors” created by the financial workings of the “capitalist world system.”⁴⁸⁹

One of Bogomolov’s chief concerns was how the USSR’s domestic economy was shaped by its energy trade with COMECON states. In a 1971 note to the Soviet ambassador to the COMECON council, IMESS raised concerns about how the export of raw materials and energy to Eastern Europe was both “insufficient to satisfy the increasing demand of raw materials therefore forcing [Eastern European Communist states] to go to the capitalist market” for their needs and “retarding the development of internal sources of primary inputs in COMECON countries.” For the USSR, the problem this created was that “while

⁴⁸⁸ O.T. Bogomolov, *Socialisticheskaya intergratchiia i mezhdunarodnoe razdeleniia truda* (Moscow: Ekonomika, 1976).

⁴⁸⁹ ARAN f. 1933 o. 1 d. 1966 ll. 2-8.

Soviet energy resources are taking on a more and more international character, the capital invested into developing these resources comes from only one country.” Some of the solutions proposed by the institute included the expand the issuance of trade credits to the USSR by its counterparties to restore the terms of trade and to establish jointly operated, internationally funded enterprises in highly resource intensive industries on Soviet soil. This would create a flow of capital back into the USSR from the COMECON states that were the consumers of Soviet energy. These solutions required the replacement of ad hoc barter contracts and unconvertible “transferable rubles”⁴⁹⁰ with a multilateral currency clearing system within COMECON. Another suggestion developed by IMESS was to develop multilateral economic contacts between COMECON and emerging countries in order to help the Soviet bloc supplement its supplies of raw materials and energy so as to relieve the burden on the Soviet Union’s extractive industries. An additional benefit of such an arrangement, would be that oil rich “developing states” could be convinced to open accounts at COMECON’s International Investment Bank (IIB)—an institution founded to finance joint projects for integration—providing the bloc with much needed hard currency. The final goal of a successfully integrated COMECON would be the creation of a market with prices that “while not dependent on the capitalist market are not divorced from the world economy either.”⁴⁹¹

In 1980, a ten-year projection delivered to the Central Committee by a joint team from IMESS and the GKNT warned that the increasing integration of the Soviet Union into the global economy was not going according to plan. The problem of Eastern Europe’s

⁴⁹⁰ Technically, all trade in COMECON was denominated in “transferable rubles” which could not be easily converted into local currency nor could it reflect movements in terms of trade making it functionally useless.

⁴⁹¹ ARAN f. 1933 op. 1 d. 141 ll. 83-94.

dependence on Soviet oil had only increased during the previous decade. The fact that energy prices were increasing in the world market meant that CMEA states were not only ever more dependent on Soviet resources but also that the unequal arrangement was depriving the USSR of capital. If the USSR were to meet its partners' growing demands, "the resources we would have to invest in the extractive industries would impossible for our country to sustain by 1990." Moreover, the increasing indebtedness of CMEA countries to Western markets and the expansion of Western trade into Eastern Europe meant that the USSR was essentially subsidizing their allies' deficits and trade with the West. All this meant that the USSR was wasting its capital by investing into low value added extractive industries rather into high returning industries such as machine building. The projected, increasing price of oil was slowly importing the global inflation of the 1970s into the USSR via the budget deficits that resulted. If the USSR were to protect its budget it would have to increase the price of energy at home and abroad, or it would be forced to continue to use its own capital to pay the implicit spread between the global market prices and domestic, administered prices.⁴⁹²

The energy problem described by Bogomolov and his colleagues was a symptom of a larger problem of modernizing the Soviet economy in an evolving global context. One response was to apply the techniques of long-term modelling to the Soviet economy. Since the 1965 September Plenum, the idea of long-term planning and forecasting in the Soviet economy was being floated as part of a larger overhaul of central planning. The way in which this would be done, however, was not uncontroversial. As Fedorenko explained to Bundy during his visit, Soviet economists and technocrats believed that long-term planning

⁴⁹² RGANI f. 5 op. 88 d. 197 ll. 11-18.

could be used to be used to reconcile the need to centralize disparate yearly plans with the five-year plans while also maintaining the initiative and independence of the individual enterprise. Therefore, any long-term plan meant undermining the power of the production ministries. Non-the-less in August 1972, the Central Committee and the Council of Ministers issued a proclamation on “The Development of Five Year (1976-1980) and Long Term Plans for the Development of the Economy of the USSR.”⁴⁹³

The 1972 proclamation was the result of lobbying by Deputy Chairman of the Council of Ministers and Chairman of the GKNT, Vladimir Kirillin. Kirillin was an unusual member of the party elite as he had come from a background in physics and became a vice-president of the Academy of Sciences before entering state politics—indeed, he would be the only person in the history of the USSR to voluntarily resign his high position and return to a career in science. This made him a natural supporter for the work being done by mathematical-economists and cyberneticists of the technocratic international. For Kirillin, and his allies such as Gvishiani, the “complex program for the development of scientific-technical progress (KP NTK)” that the resolution established would preserve the 1965 reform agenda by adapting the rhetoric of the “STR” to the questions of what socio-economic changes were needed for the USSR to use the “natural advantages of socialism” in an era of accelerating technical change. The KP NTR spurred a multi-disciplinary collaboration across Soviet social sciences including economists, sociologists, and public health experts from the Academy of Medical Sciences. The core staff of the project were all veterans of Gosplan’s Scientific Institute of Economics (NII) who had begun their work on mathematical forecasting in the late 1950s and often later moved into CEMI. The project

⁴⁹³ N.P. Fedorenko, *Vospaminau proshloe, zagliadyvau v budushie* (Moscow: Nauka, 1999), 369-370.

was led by Aleksandr Anchishkin who based himself out of CEMI. His close collaborator and co-editor was Shatalin, formerly of Gosplan NII and CEMI who now lead a research group on the economics of social well-being at Gvishiani's ISA. Other economists who began their career at Gosplan NII involved with the KP NTP included Bogomolov and Agambegian, who developed the project's sections on trade and regional development respectively.⁴⁹⁴

The project served as one of the means through which technocratic concerns of about social change and global interdependence began to enter domestic political dialog. In developing the 1972 proclamation and its aims, Soviet scientific and government officials explicitly formulated the KP NTR as a tool in a larger project of aligning COMECON's economies to larger common goals in order to adapt the bloc to rapidly changing international conditions.⁴⁹⁵ Speaking at the International Economic Association's 1976 Budapest conference on comparative integration, Bogomolov presented the CMEA wide trend of future planning as a means of integrating planning and market relationships in the region and presented the bloc-wide effort as a first step to building an alternative form of regional integration to the *laisse faire* approach taken by the European Economic Community (ECE).⁴⁹⁶ One of the common themes of the KP NTR was its focus on using expanded foreign trade to restructure and introduce new technologies into the domestic economy. In 1971, as the KP NTR was being first formulated, Yu. S. Shiraev, a specialist

⁴⁹⁴ Ibid., 370-383.

⁴⁹⁵ A.G. Bykov "Politika KPSS i pravovoe regulirovaniia planomernoii organizatcii obshestvenogo proizvodstva" in *A.G. Bykov: Chelovek, ucheniia, uchitel* eds. E.P. Gubin et. al (Moscow: Startup, 2013), 180-183.

⁴⁹⁶ O.T. Bogomolov, "Integration by Market Forces and Through Planning," in *Economic Integration: Worldwide, Regional, Sectoral: Proceedings of the Fourth Congress of the International Economic Association Held at Budapest, Hungary*, ed. Fritz Machlup (London: Macmillan Press, 1976), 306-17.

in economic integration and trade, proposed that the USSR begin to restructure its trade relations to let international competition force domestic producers to more effectively use their resources and produce higher quality goods. This recommendation for the program was removed by more conservative members of the committee who believed that such a move would “destroy the state’s monopoly of trade” and countered with the argument that if “domestic products were better” there would be no problem in trade in the first place.⁴⁹⁷ These same concerns came back in 1976 when the Academy of Sciences Economics Section discussed the next stage of the KP NTR. Yevgeny Primakov, the future post-Soviet Prime Minister and then Deputy Director of IMEMO, proposed that the KP NTR take into consideration Japan’s experience in using foreign trade to stimulate the “technically leading branches of the economy” suggested that it encourage plans to attract investment from resource rich developing countries. ISKAN’s Arbatov seconded this by noting that the United States was no longer producing most of its cameras and televisions domestically and instead looked to international trade to stimulate work in more promising sectors. Arbatov argued that “it was not an accident” that the United States was giving up on these industries as “even a country like America cannot be at the forefront of all technologies.” Investment “in these areas are being given up” in favor of areas in which the United States could produce new innovations more efficiently. Thus, Arbatov argued, the USSR should follow America’s example and shift its understanding of the role of trade in technical progress by “buying licenses for foreign technology” for areas in which it was lagging and channeling capital to areas in which the USSR could most efficiently compete in.⁴⁹⁸

⁴⁹⁷ Fedorenko, *Vospaminau proshloe, zagliadyvau v budushie*, 376-377. The belief in the primacy of domestic production in trade balance is a first order fallacy which ignores the simple notion that trade is an accounting residual. Something politicians do to this day.

⁴⁹⁸ ARAN f. 1849 op. 1 d. 229 l. 39-52.

The KP NTR also served as a means for trends being developed in venues such as the Club of Rome and the IIASA entered domestic discourse. The program was envisioned as a response to the forecasting research being conducted in the West. In his memoirs, Fedorenko explicitly states that CEMI had begun considering the formulation of a long-term forecasting program in 1968 in response to the work being conducted by the Club of Rome. As such, he claims “he did not come [to Kirillin] with empty hands” when the latter began making inquiries about work on scientific forecasting.⁴⁹⁹ Indeed, Evgeni Yasin, who was one of the junior researchers working on the program recalls that at the end of 1968, with the winding down of the Kosygin Reforms, he had left economics for apolitical “cybernetics” and “information studies” but that engaging with Western modelling literature, as part of the KP NTR, instantly led to “questions of an institutional nature.”⁵⁰⁰ Shatalin recalled that as the editor of the program’s volume of on socio-economic development, he “and [his] colleagues began to develop a research program into the theory of social goods” as a factor of economic growth for the USSR.⁵⁰¹ The KP NTR thus marks an important moment in which the “mathematical-economists,” the camp of reformists that survived the 1960s with the most clout, followed their international interlocutors in breaking free of a mechanistic conception of central planning, represented by such theoretical formulations such as Fedorenko’s Socialist Optimally Functioning Economy (SOFE), to a more holistic, socially rooted critique of economic practices. In the introduction to the 1983 volume of the KP NTR for 1986-2005 period, Shatalin and his collaborators explained that:

⁴⁹⁹ Fedorenko, *Vospaminau proshloe, zagliadyvau v budushie*, 373

⁵⁰⁰ Andrei Kolesnikov, *Dialog s Evgenii Yasinym* (Moscow: NLO, 2014), 79-82.

⁵⁰¹ Stanislav Shatalin, *Prervannyi Dialog* (Tver: Tverskoe Oblastnoe Knizhno-zhurnalnoe Izdatelstva), 132.

The complex problems of cultural and social development have, to this day, not been taken into account in central planning. Issues of the mismatch between contemporary and future consumption, of operative and long term social strategy, have been ignored. A program of social development has not been developed and the key task of socio-economic development—the development of social, cultural, and labor resources to their full potential, in other words the intensification of all social elements of economic activity—has not been studied by planning bodies. This intensification is the critical element of the further evolution of the developed socialist order and its movement toward communism, as well as a more intensive and efficient use of economic resources.⁵⁰²

The embrace of “the new planning” by the KP NTR’s author’s had a political subtext. If taken to its conclusion the KP NTR’s program meant that instead of the Party, the plan’s goals would be determined scientifically, from within the plan itself using the KP NTR itself and its rolling evaluation of “social goods” to set the feedback loop between society and the economy.

The KP NTR was just one component in a larger program that many Soviet intellectuals and officials hoped would revise Soviet planning to deal with issues of interdependence and lay the groundwork for a peaceful transition to global socialism. In a 1976 forum on “Global Socio-Economic Problems” in *Mirovaia Ekonomika i Mezhdunarodnoe Otnosheni*, Gvishiani argued for a specifically Soviet approach to global modelling that would “move beyond the focus of Western models [the Club of Rome Models] on human survival and establish models of international economic and ecological processes that engage in building mechanisms of human cooperation” which could lead to “action.” Action, Gvishiani explained, meant increasing the power “of the socialist world” and pushing for collective solutions that would weaken the power of the capitalist

⁵⁰² S.S. Shatalin, et al., *Kompleksnaya Programma Nauchno-Tekhnicheskogo Progressa: Razdel 3.2, Sochialnye problemy, probley blagosostoyania i kulturnogo razvitiia* (Moscow: Gospolizdat, 1983) available at: <http://statehistory.ru/books/Kompleksnaya-programma-nauchno-tekhicheskogo-progressa-SSSR-na-1986-2005-gody-Sotsialnye-problemy--povyshenie-narodnogo-blagosostoyaniya-i-razvitie-kultury/23> [accessed 1/18/2016].

market.⁵⁰³ The venerable dean of Soviet Geophysics and IIASA supporter, Academician Yevgeny Fedorov, was even more explicit in his assessment that the final aim of the kinds of calls for a multilateral planning system—such as Jan Tinbergen’s *Reshaping the Global Order*, presented to the Club of Rome in 1977—would logically end in socialism’s triumph.⁵⁰⁴ These authors were the inheritors of Khrushchev’s 1956 optimism that socialism would triumph of its own natural superiority but adapted it to the circumstances of détente and multilateral economic integration.

Yet, this utopian vision clashed with the actual practices of the Soviet state. A prime example was Gvishiani’s attempt to use systems analysis and the tools being produced in IIASA to solve the problem of the Soviet “Fuel-Energy Complex” and its exposure to the forces of the international economy pointed out by Bogomolov. Research in the problems of energy at IIASA began in the late-1970s eventually becoming its permanent “World Energy Program” in 1981. In 1976, the GKNT reported that Soviet scientists and economists working at IIASA’s Austrian campus were working with the Soviet developed IMPACT model for energy system construction and cost planning. The goal of this work was to integrate the IMPACT model with larger American designed macro-economic models such, as the Bechtel Corporation’s Energy Supply Model (ESM) and to use these to build the basis of the IIASA-Soviet developed INTERLINK model. These models, the report pointed out, were of high importance to the Soviet economy.⁵⁰⁵

⁵⁰³ D.M. Gvishiani, “Global’nye problem i global’noe modelirovaniia” for a forum “Obshechelovekcheskie problem i mezhdunarodnoe sotrudichestvo” *Mirovaia Ekonomika I Mezhdunarodnaya Otnoshenia*, no. 3, 1979: 83-86.

⁵⁰⁴ E. Fedorov, “Puti resheniia neotlozhnykh problem” for a forum “Obshechelovekcheskie problem i mezhdunarodnoe sotrudichestvo” *Mirovaia Ekonomika I Mezhdunarodnaya Otnoshenia*, no. 3, 1979: 96-97.

⁵⁰⁵ RGAE f. 9480 op. 12 d. 1399 ll. 19-24; Y.D. Kononov and A. Por, *IIASA Research Reports*, RR-79-8, October, 1979; I. Zimin, “INTERLINK: An Interindustrial Model for Simulating Regional Economic Development and Its Links to IIASA’s Energy Models” *IIASA Working Papers*, WP 80-0-95, April, 1980.

While Soviet researchers were at the forefront of both of these large international macro-economic projects, their problem was bringing them home. In 1977, when meeting with Dartmouth's Denis Meadows, ISA researchers noted that the energy models he was building for the United States were explicitly normative with policy prescriptions, which "would provide the President and his advisors a roadmap of decisions that they can make in the context of increasing global energy prices." Meadows emphasized to his Soviet colleagues that "the best model is one in which specialist in modelling and [political] decision makers are involved in its designs." This must have sounded like music to the ears of Soviet scientists who idealized this American practice (which itself was mostly an idealized version of reality) in reports to their political superiors.⁵⁰⁶ In a 1981 letter to the Central Committee, Gvishiani outlined the "Global 2000 Report to the President" ordered by the Carter administration to predict global environmental, energy, and economic trends into the year 2000. "While overall, a useful report," Gvishiani concluded, "parts of it carry a propagandistic or ideological purpose. It is the reaction of the leading capitalist country to the global environmental crisis and the retreat of its leadership, profits, and economic dominance." Gvishiani also listed the many institutes in the USSR working on versions to this type of model, encouraging the Central Committee staffers to begin thinking about creating a Soviet answer to the presidential report that would be as wide reaching and as integrated into government as the American version.⁵⁰⁷

The feeling of abandonment by that the technocrats felt from high officials can be encapsulated in one incident. In 1978, the Academy of Sciences and the GKNT established a special board called the "Committee on Systems Analysis" to coordinate efforts to

⁵⁰⁶ RGAE f. 9480 op. 12 d. 638 ll. 23-24.

⁵⁰⁷ RGANI f. 5 op. 84 d. 144 ll. 31-33.

transfer useful data collected in collaborations with Western scientists to relevant research institutes in the USSR. This had some notable success such as a collaboration on regional development models between Agambegian's team in Siberia and researchers working at the Tennessee Valley Authority. However, while data flowed one way, it did not flow the other. In 1978, Kirillin and Academy of Sciences President, Anatoly Aleksandrov, wrote a memo to the Central Committee pleading for Soviet specialists to be able to share closed energy data with their Western counterparts at IIASA. Without such data, Soviet specialists would not be able to fully participate in the project and the domestic economy would not be able to derive much benefit from this work. "If the Soviet side does not participate in this project" it continued "the section on the Soviet economy will be constructed using foreign experts and data which could result in inaccuracies and slanders." The support of even such highly placed officials could not break the deadlock surrounding official secrecy as the recommendations to share data were thoroughly rejected.⁵⁰⁸

Losing the World: Global Planning V.S. Globalization

The trend of Soviet economics to embrace the global modelling turn was deeply embedded in the larger international discussion on the future of the international order. The collapse of the Bretton Woods system and the increasing power of developing world states, especially energy producers, turned the 1970s into a period of contestation around the global economic order. Moreover, the optimistic promises of the first development decade had, by the early 1970s, had failed to make an impact in the disparities between the developed and underdeveloped world. Into this void stepped the Group of 77, and its project for the New International Economic Order (NIEO). The NIEO's agenda was, in

⁵⁰⁸ RGANI f. 5 op. 75 d. 357 ll. 21-23.

many ways, sympathetic to the Soviet cause. It emphasized the rights of sovereigns to regulate and expropriate the property of multinational corporations, a greater role for the state in making domestic decisions, and support for elements of planning. However, other elements of the NIEO left Soviet theorists baffled. They were uncomfortable with the fact that the G77 and the NIEO had divided the world into developed and underdeveloped countries which grouped COMECON countries with the industrialized West. Further, the NIEO's insistence on producer cartels to regulate prices on primary goods clashed with the Soviet belief that industrialization was the only means to gain independence from the capitalist world system.⁵⁰⁹ As such, while the USSR aligned with the NIEO's goals in political pronouncements, the analysis of Soviet intellectuals, such as O.T. Bogomolov, remained skeptical. In Bogomolov's work on the movement titled *Socialism and the Reconstruction of International Economic Relations* [Sochializm i perestroika mezhdunarodnih ekonomicheskikh otnoshenii] he remained skeptical of developing world claims on the division of the between industrialized and under-industrialized states arguing that the socialist system was a natural ally of the developing world and "not to be conflated with the capitalist world system."⁵¹⁰ Soviet specialists were particularly perplexed by the NIEO's demand for the indexation of primary goods to the cost of finished, industrial goods which they believed impossible in the kind of open, trade based economy that NIEO theorists wished to establish. Soviet authors admonished the program for not having any specific model in mind to establish a set of prices tied to planned goals for development.⁵¹¹

⁵⁰⁹ Friedman, *Shadow Cold War*, 193–211.

⁵¹⁰ O.T. Bogomolov, *Sochializm i perestroika mezhdunarodnyx ekonomicheskix otnoshenii* (Moscow: Mezhdunarodnyi Otnoshenia, 1982), 73-74.

⁵¹¹ A. Kostiukhin, "Syrevaia problema I znachenie reshenii priniatiakh v Nairobe" *Mezhdunarodnoya Ekonomika i Mezhdunarodnoya Otnoshenia* no. 4, 1977: 97-98.

What the Soviet Union's authors were much more comfortable with was the argument presented by Jan Tinbergen in his report to the Club of Rome, *Reshaping the Global Order*. Tinbergen and his expert committee recommended that the only way to solve global inequality while also preventing the depletion of the world's natural resources was strengthening international organizations to coordinate national development plans.⁵¹²

Given this preference, it is natural that the Soviet Union was much more comfortable working with the United Nations Industrialization Organization (UNIDO) than it was with The United Nations Trade and Development Conference (UNCTAD) where most of the debate on the NIEO was focused. Even in UNIDO however, the USSR found its position to be tenuous. The Soviet delegation to the 1968 UNIDO meeting on investment in foreign countries reported that the gathering was dominated by "American specialists and reflected the interests and practice of American private financial companies." To their chagrin, they found that "there was no disagreement between developing countries and Western financial firms." The two sides "agreed that there needed to be an information service established to present investors with projects in the developing world." The division that did exist was that investors emphasized immediate returns while developing countries emphasized longer term projects. The delegation thus recommended that the Soviet Union not oppose these meetings as they were "popular with developing countries" and that these agreements would happen with or without UN involvement. In fact, they even admitted that under controlled conditions, Western capital could be useful for industrial development.⁵¹³ What they did recommend was that:

Our politics should focus on preventing international investments from hurting the economic and social development of developing countries, and not tether their

⁵¹² O.T. Bogomolov, *Socializm I perestroika mezhdunarodnyx ekonomicheskyyx otnoshenii*, 90-91.

⁵¹³ RGAE f. 9480 op. 9 d. 489 l. 101-103.

politics to the interests of Western monopolies. We must develop this program which would receive support from developing countries.⁵¹⁴

The proposed program would push UNIDO to become more involved in guaranteeing that the agreements between Western lenders and emerging markets “guarantee the priority of the national interest in the distribution of profit.” As well, they suggested that UNIDO could be an area to “propagandize” the differences between Soviet and Western aid. In fact, they recommended that Soviet specialists be encouraged to produce materials evaluating these differences and consult developing countries on their interaction with Western financial firms.⁵¹⁵

These experiences reflected a larger dilemma faced by the theorists of the 1950s and the 1960s as they struggled to adapt the development planning framework to the failures of the UN development decade and the effects of increasingly liberalized interstate capital flows. One attempt at solving this problem was Leontief’s *The Future of the World Economy*, published in 1977. The study was the result of a long-term UN sponsored project on creating an economic forecasting model designed to correct the failures of the first UN development decade by establishing clearer targets and possibilities. The report was commissioned by the Economic and Social Council of the United Nations in conjunction with the Government of the Netherlands, suggesting the sponsorship of Tinbergen, and was developed in cooperation with Soviet economist and UN official, Stanislav Menshikov, who, before his stint in New York, had spent time at IMEMO and Agambegian’s institute.⁵¹⁶ The results of the model indicated that even though commodities

⁵¹⁴ Ibid. 107.

⁵¹⁵ Ibid., 108-109.

⁵¹⁶ Wassily Leonief et. al. *The Future of the World Economy: A United Nations Study* (Oxford University: Oxford University Press, 1977), 1-11; Stanislav Menshikov, *O vremeni i o cebe* (Moscow: Mezhdunarodnoe Otnoshenia, 2007), 267-273.

would most likely increase their prices into the 1990s and 2000s the increases would be too slow and too unevenly distributed to for most developing states to achieve the goals envisioned by the NIEO's goals by 2000. Following the development of the first Leontief model, a research team at NYU began working with it to help it provide various scenarios to achieve UNIDO's 1975 "Lima Goals" of having twenty-five percent of industrial production to come out of developing countries by 2000. The Leontief model was not yet capable of developing alternative scenarios and needed to be adjusted for this new project. In 1976, ECOSOC asked IEiOPP to send staff to UN headquarters in New York to assist in calibrating the input output model. Menshikov, who was directing the project in the ECOSOC secretariat, requested the institute send A.G. Gramberg, the Soviet Union's foremost expert in input-output modelling and regional development. Gramberg worked with the model through 1978 to expand its regional variations. Its results showed that even if the prices of primary goods increased, most countries would not benefit from these price increases as the investments needed to extract those new resources would take away from investments that could go to value added industries.⁵¹⁷

There were other people evaluating the Leontief model. In 1980, Leontief had asked for additional funding from the Ford Foundation and the foundation began speaking to the leaders of the field about Leontief's research. One of those the Foundation interviewed was Dr. Nicholas Carter, the chief economist at the World Bank. Carter thought little about Leontief's model "as it did not focus on the monetary and specifically debt side of developing markets." Moreover, Carter mentioned that in recent years "a Russian" had been "plugging away at the model." Carter thought that this Russian was "a straight

⁵¹⁷ RGAE f. 9480 op. 12 d. 976 ll. 151-187

forward econometrician and knew nothing of the world economy.” The big problem, Carter argued was that “the model has little to say on the monetary and specifically the debt side of developing markets.”⁵¹⁸ Carter’s skepticism reflected a structural change in the global economy and its institutional centers of power. As postwar capital controls began to fall, the nature of investment changed too. The kind of direct investments that UNIDO had been working to encourage in the 1960s were being replaced by portfolio flows which invested in short term instruments to make the spread on “carries” between interest rates in different states. This complimented by the inflow of “petrodollars”—money invested in Western banks by oil exporting nations—meant that borrowing was cheap for many developing countries. By 1980, this borrowing binge had turned into a worldwide sovereign debt crisis which defused the hopes for radical change issued by both the NIEO and the global planning. The power of the UN was reduced as institutions like the IMF and World Bank became more important in regulating the fluid, debt dominated world economy.⁵¹⁹

Soviet responses to these tendencies were halfhearted. In acknowledging the new realities and its impacts on the USSR, the GKNT established a commission to study issues related to the study Soviet foreign economic and scientific technical ties, the study of foreign countries, and the international credit-monetary relations. Chaired by Gvishiani and IMEMO’s director, Nikolai Iznomentsev, the commission also had representatives from every major economics institute and the ministries of finance and foreign trades. The goal of the commission was study the new “conjuncture in international economic relations” and its impact on the Soviet economy. The materials of this commission are not in the

⁵¹⁸ Peter Ruef to David E. Bell, May 2, 1980, The Archives of the Ford Foundation, Grant # 07500425, Reel 2627, The Rockefeller Foundation Archives.

⁵¹⁹ Harold James, *International Monetary Cooperation Since Bretton Woods* (Cambridge: Cambridge University Press, 1996), 547-586.

archive and are most likely classified.⁵²⁰ One indication of what might have been contained in these minutes can be gleaned from an IMEMO report to the Central Committee on the results of a 1979 expert meeting on “New Tendencies in the Monetary and Financial Spheres of the Capitalist System.” The report concluded that floating exchange rates “will negatively affect the socialist bloc” as they would make it more difficult to use planning techniques for foreign trade and make the debts of Eastern European states harder to roll over. The report concluded that while the Soviet Union was heavily involved in the international programs on planning and real-side economic relations, it would have little influence over the increasingly important financial and monetary issues. The USSR could move to have a limited internationalization of the ruble and expand CMEA-IMF cooperation with the caveat that this would further open the domestic economy to the fluctuations of the capitalist market.⁵²¹

Conclusion: What kind of Soviet economy? What kind of Soviet economics?

When Gramberg returned home from New York, his report to the GKNT explained that the “Lima model had significant domestic uses for the USSR” as it could inform tradeoffs between the export of raw materials and the production of finished, value added goods. In the ideal scenario, the USSR’s oil exports were cut by two and its production of value added goods increased by 60% by 2000. Gramberg’s findings testify to the extent that concerns about the efficiency of the domestic economy had taken on a global tone by the late 1970s. The slowdown in the Soviet economy was no longer an international problem because it boded badly in the competition of the two systems—the Soviet economy was now conceptualized as integrated into a global economy that it could not

⁵²⁰ RGAE f. 9480 op. 12 d. 1070 l 182.

⁵²¹ RGANI f. 5 op. 76 d. 246 ll. 6-23.

fully control. In the minds of many of the USSR's reformist elites, the two systems of the 1950s and 1960s were being replaced by an integrated global economic system.⁵²²

In a testament to the increasing international entanglements of what Soviet theorists called the *national economy* [narodnaya khozaistva], in 1983 Gosplan began to seriously consider proposals to use world market prices for energy to improve the efficiency of Soviet enterprises and to stem the vast amount of investments going into extracting oil and gas.⁵²³ This proposal was just one of many that would be considered as domestic reform agendas began to radicalize again. As in 1954-1956 and 1965-1969, the start of the 1980s began to see a domestic debate over the future of the Soviet economy interact with the need to rethink what the Soviet Union's role in the world would be. Again, a new leader was needed to synthesize these ideas. The intellectual legacy that Mikhail Gorbachev would eventually inherit would thus be a new kind of ideological vision—one that understood the Soviet economy as being a part of the world economy, which dictated the need for a transnational politics.

⁵²² RGAE f. 9480 op. 12 d. 976 ll. 91-93.

⁵²³ RGAE f. 4372 op. 67 d. 8548 ll. 110-111.

Chapter 6

Reform Amidst Stagnation: The Rise and Fall of Conservative Economic Politics in the Brezhnev Era

In 1982, a special commission entered Brezhnev's office in the Central Committee building on the Old Square. The General Secretary had died just a few days earlier, and it was time to clean out his desk. Inside a locked drawer, they found a rather remarkable document— a 1968 letter from then KGB chief and now Brezhnev's successor, Yuri Andropov, addressed to Brezhnev and the Politburo "on the state of the Party and the major challenges of governing that it will face in the near future." Andropov explicitly argued that the solutions to the problems that emerged between October 1964 and 1968 were short-term bandages covering long-term concerns. "The economists," he explained, "are arguing that improved yearly growth rates have not yet translated into general wellbeing." Problems such as the lack of consumer goods, low levels of innovation, and highly inefficient production were leading to social issues such as dissent in the intelligentsia and lethargy amongst the youth. The root of the problem was a continuing lack of "political organization" in the party. Andropov was disturbed by the fact that "the United States is pushing ahead of its socialist rivals in economic organization and the integration of new technological innovations" which "cannot be ignored in the development of our economy and long-run plans." While "we condemned Khrushchev" for "trying to beat the Americans with slogans," Andropov continued, no work was being done to address the technological and management gap. Andropov recommended that the Politburo appoint a commission of Kosygin, Ustinov, Smolentev, and Mazurova along with advisors from the Academy of Sciences to prepare for more radical steps to improve the economy. In Andropov's opinion,

efforts to improve the economy went hand-in-hand with bettering the education and upbringing of Soviet youth and an expansion of the mobilizing role of “democratic institutions” such as the Soviet Council of Deputies and the Supreme Soviet. Andropov lamented the fact that the deputies of the Supreme Soviet had little contact with their supposed constituents and that the supposed fountainhead of Soviet power was not involved in the drafting of “the solutions to the country’s social and economic problems.”⁵²⁴

What Andropov suggested was that the Soviet order needed serious revamping if it were to continue to function as an efficient political and economic entity. Andropov’s warnings echo the popular image of the future General Secretary as a conservative reformer struggling to establish an ordered Soviet state. Brezhnev himself understood that the way in which the USSR’s government operated needed change. The instability of the Khrushchev years and the unorganized manner in which the Kosygin reforms had been launched testified to a greater weakness in Soviet policy processes and Brezhnev believed that to rectify this the USSR needed a stronger legal basis for its policy making process. In 1970, the Council of Ministers passed a decree on the “Improvement of Legal Work in the Economy” which directed Soviet state organizations to base their administrative processes on existing laws, rather than over issue regulations. A year later Brezhnev forwarded a letter written to him by Academy of Sciences Vice-President for Social and Humanitarian Sciences, F.N. Fedoseev to the preparatory of the XXIV Party Congress encouraging the body to take into consideration its contents. Fedoseev’s note explained that despite “the provisions of the 1936 Constitution” which led to “regular elections” to the country’s

⁵²⁴ RGANI f. 80 op. 1 d. 314 ll. 8-40.

Soviets the presence of these “elected bodies” was “weak in economic and social life.” This meant that “state organs are not accountable before the Deputies” and that “party officials were increasingly taking on more direct roles in economic management,” leading to excessive control from above and irregularities in industrial operations.⁵²⁵ However, the initiatives of the 1970 proclamation foundered. In 1974, the Institute for State and Law explained to the Council of Ministers that the Ministry of Justice was not cooperating with it in reviewing the economic legal code. The same Fedoseev warned the Ministry of Justice about the dire state of Soviet economic and industrial regulation: “the USSR did not have legal framework for the economy for ten years.”⁵²⁶

In this chapter, I will argue that the political strategy of the Brezhnev era, the high point of what would be called stagnation, was an attempt to build a “conservative” political program for the Soviet economy. By conservative, I mean that while they distanced themselves from the radical restructuring proposed by supporters of the first wave of the “Kosygin Reforms” they did not see desire that Soviet economic practices be stuck in a stasis. In fact, they recognized that there were many problems for the USSR’s economic practices. However, the way to solve them was not radical institutional reconstruction but rather gradual, legally grounded, improvements in administrative practices. This was not, I would argue, out of line with how even the reformist wing of the Soviet economic profession understood the horizons of possibility in the mid-1970s. Tied together by a common belief in the “scientific technical revolution” and its transformative power, Soviet economists tried to work within this conservative framework while gradually expanding its possibilities. I argue that this conformity, driven by a combination of complacency and

⁵²⁵ RGANI f. 5 op. 63 d. 4 ll. 9-10.

⁵²⁶ ARAN f. 2 op. 1 d. 55 ll. 67-78.

powerlessness, was shattered in 1979, when the culmination of the economic policies of the late 1970s—a law some called “the second Kosygin reform”⁵²⁷—collapsed almost immediately following its adoption. The failure of this law due to resistance from ministries and central planning agencies which had no incentives to fully comply with the law, undermined the entire strategy of gradually “improving the economic mechanism” through administrative changes grounded in regularized legal procedure.

This instance of a failure to build the Soviet *Rechtstaat*, a state which rules through law but is not necessarily under law, was symptomatic of the Brezhnev era. The persistence of ad-hoc “administrative methods” undermined progress in establishing a regularized legal basis for the five-year plan based on non-direct, “economic methods” which aspired to use self-interest and incentives to control enterprise behavior. This problem was embedded within the democratic centralist model—there was no power outside of the party which could independently construct a basis for law. It was this that caused the generation of economists who emerged in the wake of the “Kosygin Reforms” to lose faith in the ability of the Soviet state and Communist Party in its current form to implement economic reform. Despite its apparent “taming,” mathematical economics began regaining its critical edge as a new generation of thinkers, raised in systems analysis, came of age in the 1970s. Understanding the economy as a “system” that could be optimized, created space for theorists to begin thinking of it as a “natural,” self-regulating sphere which as opposed to ad-hoc organs of the party-state. I will argue that the failure of conservative reform drove the “social” critique that the previous chapter described as implicit in the new “systems

⁵²⁷ Formally known as Joint Proclamation of the Central Committee and Council of Ministers no. 695 “On the Improvement of Planning and the Improvement of Economic Measures to Increase Industrial Effectiveness and Quality”

theory” to acquire an explicitly “political” edge. By the early 1980s, the economic critique of Soviet institutions that had been suppressed since the destruction of the Kronrod wing of political-economy had re-emerged. However, instead of Marxism, its language would be mathematized social science. The failure conservative reform drove the alignment of critical voices in Soviet economics with Andropov and his young protégés who had made their careers in the regional party apparat—including one Mikhail Gorbachev—who were themselves determined to crush the inertia they encountered at the center.

This tension between a state that was immune to law and the desire for legal rule has been present in research on the Imperial era. Much has been written about Imperial Russia’s “enlighten bureaucrats” and the origins of the Great Reforms. Works by historians such as Bruce Lincoln, Richard Wortman, and Nikolai Khristoforov have revealed that imperial officialdom, shaped within the pan-European traditions of cameralism and the *Rechtstaat*, were a the architects of the reforms of the 1860s.⁵²⁸ Moreover, they viewed autocratic power not as an impediment but as a tool which could set the ball rolling on breaking the resistance of the landed gentry and creating a new law-based society centered on the Czar as sovereign. Consequently, these figures and the institutions they were embedded in, such as the Ministry of Finance, struggled against both reactionary groups—such as the Ministry of Interior—and the contradiction at the heart of their project: to force a lawless state to rule through law. These works of Imperial history are useful for understanding how to study similar processes within USSR and the warring branches of

⁵²⁸ Richard Wortman, “Russian Monarchy and the Rule of Law,” *Kritika: Explorations in Russian and Eurasian History* 6, no. 1 (Winter 2005): 145–70; W. Bruce Lincoln, *The Great Reforms: Autocracy, Bureaucracy, and the Politics of Change in Imperial Russia* (DeKalb, Ill.: Northern Illinois University Press, 1990); Igor Khristoforov, *Aristokraticheskaia" oppozitsiia Velikim reformam (konets 1850–seredina 1870-kh gg)* (Moscow: Russkoe Slovo, 2002).

the Soviet party-state.⁵²⁹ Following their lead, this chapter will engage in a legislative history of attempts to reform and improve Soviet economic practice from 1972 to 1986, focusing on how each successive failure gradually radicalized political discourse and broke the consensus that Brezhnev built between 1969 and 1971. In doing so, it will show that, despite Gorbachev's claims of a break, there was a basic continuity between the final years Brezhnev's rule and the first stage of *Perestroika*, not only in the realm of ideas, but also in the acceptance of the need for a radical break from the preceding decade. Instead of a break, the solutions of 1985-1988 reflected a radicalization of previous approaches without a change in their underlying content.

It might be controversial to speak about "legislation" in the USSR. After all, the Soviet Union was in many ways a "lawless state," in that its own laws did not apply to its government. Even though it was no longer slaughtering its own people on a mass-scale, it was still not a state bound by law. Even the mundane minutia of Brezhnev's "Little Deal" with the population, the willful blind eye turned to the shadow economy and corruption, was based on selective enforcement of laws (not to mention the forced institutionalization of dissidents).⁵³⁰ However, the "lawlessness" of the state formed the dilemma of the Soviet leadership of the 1970s: how can one build an economic policy based on gradual, legislative change when the object of the law was the *state-owned* economy. In other words, how could this unrestrained sovereign rule *itself* through law without building a barrier between itself and the property it technically owned. This critical contradiction between desires for a *Rechtsstaat* and the economic vision of the Leninist economy as "one

⁵²⁹ See for example Francis Wcislo, *Reforming Rural Russia: State, Local Society, and National Politics 1855-1914* (Princeton: Princeton University Press, 1990).

⁵³⁰ James R. Millar, "The Little Deal: Brezhnev's Contribution to Acquisitive Socialism," *Slavic Review* 44, no. 4 (December 1, 1985): 694-706.

big factory” managed by a democratic centralist party drove the contradictions of Brezhnev-era politics. Even the organization of state archives bears out the fact that the Council of Ministers attempted to have some order to their discussions—compared to the ad hoc attempts of the 1950s and 1960s. Attempts at drafting proclamations displayed a uniform system of consultation and filing which is reflected in the orderly and predictable composition and organization of archival material from the period. The problem was not with drafting, it was making a system of institutions designed for mobilization and industrialization, what Alessandro Stanziani referred to as “achieving the Second Industrial Revolution through the methods of the First Industrial Revolution,” comply with the process of legislation and function through regular, legally codified processes.⁵³¹ Such contradictions only intensified as these same institutions were pressed into action to move the USSR into a postindustrial age.

The Outlines of Conservative Reform

In 1974, the major, often squabbling, factions of Soviet economic sciences came together to draft a letter to Brezhnev. In the letter, Kapustin of the Institute of Economics, Fedorenko of CEMI, Aganbegan of IEOPP, and Bogomolov of IMESS warned Brezhnev that the slow pace of economic reform had created a situation in which the growth of gross industrial output had fallen from 10% per annum in 1968 to 6.5% in 1971. The chiefs of the Academy of Sciences’ main economic institutes suggested that the USSR move away from its usual system of five-year plans and instead move to a “goal-directed planning” in which planners would first establish certain economy-wide outcomes based on a technical forecast and then begin establishing indicators and targets to reach those goals with no

⁵³¹ Alessandro Stanziani, *After Oriental Despotism: Eurasian Growth in a Global Perspective* (London: Bloomsbury Academic, 2014).

arbitrary “five year” planning horizon. This new system would require a significant reconstruction of the planning procedure. Instead of dealing with individual branches, Gosplan would have to begin working on “technical systems.” For example, instead of planning oil, gas, and coal as separate industries, Gosplan would have to begin integrating their development as a function of a long-term energy use plan for the Soviet economy. This new approach to planning would have to integrate the “most modern scientific methods such as systems analysis, optimization theory, and computer aided mathematical-economic modeling.” Administrative cadres would be reduced and replaced with smaller, more educated staffs. The letter suggested that Gosplan would have to be “liberated” from day to day planning and its many divisions reduced and those tasks delegated to various other committees of the Council of Ministers including new organizations dedicated to “multi-branch economic complexes” such as energy and the agro-industrial complex. The letter recommended that the creation of “self-financing combines,” large multi-branch production complexes created from multiple units, be accelerated, and given more independence from any production ministry. Most of all, the leaders of the Soviet economics profession begged Brezhnev to intervene personally to clear the logjams of the Soviet policy-making process. “As it stands,” they wrote, “all questions related to the improvement of the national economy are assigned to the ‘multi-branch state commission’ (MVK) under Gosplan which consists of a variety of representatives of large industrial branches. Therefore, questions related to the implementation of specific measures are solved by compromise. Thus, it is not surprising that many of the measures taken by the September 1965 Plenum and subsequent decisions of the Central Committee and the Council of Ministries are not fulfilled adequately.” The USSR needed to follow the

example of some East European states and take the matter out of the hands of interest groups and place it into the hands of a special body within the Politburo led by at least a Central Committee Secretary.⁵³²

In response to the letter to Brezhnev, Gosplan wrote a report to Kosygin which outlined its disagreements with the academics' position. Gosplan, the note explained, "had taken steps to include their recommendations in the development of the Tenth Five-Year Plan (1976-1980)" and had begun work on the Perspective Plan on the Long Term Development of Scientific-Technical Progress. However, some positions are "controversial or unacceptable." For example, "the use of systems analysis," though an important "step in improving planning," could "not be the only method used" and should be combined with other more "normative techniques" which also needed to be improved. Gosplan also objected to stepping away from price-setting, fearing it would create instability in deliveries and the prioritization of more profitable goods. As well, Gosplan agreed that the increased use of "self-financing combines" [Khozhraschetnye ob'edineniia] which reported directly to ministries instead of intermediate bodies was important but "could not be implemented in all branches of industry." Finally, Gosplan defended the MVK and its decisions as effective and "as a rule, implemented immediately."⁵³³

Gosplan's clash with the scientific establishment demonstrates that the debate between these two centers of power in the Soviet economy continued after the "radical" phase of the Kosygin Reforms. However, it also shows that the terrain on which this battle was fought was shifting. The ideas expressed in the letter represented the consensus of the

⁵³² RGANI f. 80 op. 1 d. 321 ll. 172-185.

⁵³³ RGAE f. 4372 op. 66 d. 6478 ll. 65-77.

Soviet economics establishment after the defeat of the radical Tovarnik camp in 1972. It was not ideologically radical—no one was calling for Council Communism, the Yugoslav model, or sending a greater role for markets and interest rates on capital. Moreover, many of the positions that they advocated were broadly acceptable to Gosplan. As early as 1970, Gosplan had been complaining about the fact that it was too involved in day-to-day operations related to enterprise and ministry planning. It wanted the Council of Ministers to take steps to let ministries and enterprises make their own decisions related to supply and establish direct inter-ministry delivery contracts rather than going through Gosplan, allowing the agency to focus on long-term planning and macroeconomic considerations.⁵³⁴ However, what one does detect is a difference between the two camps on more fundamental issues related to planning and the direness of the Soviet situation. The surviving reformist camps of Soviet economics were quickly adopting the discourse of systems analysis and goal-directed planning that was inspired by larger, transnational discourses on the future of planning in a world increasingly dominated by complex, postindustrial manufacturing processes.

As argued earlier in this dissertation, the 1969 December Plenum and the XXIV Party Congress did not end attempts to change the process of central planning in the USSR. Rather, “economic reform” was replaced with a much less politicized term— “the improvement of the management of the economy.” It implied that the prerequisites of the reforms had been established and what was left was to introduce them on a larger scale. In the conditions of “scientific-technical revolution” (STR), this also meant that the state had to begin investing in high end technology. Aganbegan laid out a vision of how to adapt

⁵³⁴ GARF f. 5446 op. 105 d. 8 ll. 5-6.

the process of economic reform to the post-1969 environment. In a note entitled “On the Project of the Main Directions of the Development of the Economy of the USSR for 1971-1975,” sent to the Central Committee’s Department of Science and Higher Education, he explained that the Ninth Five-Year Plan (1971-1975) needed improvements in four areas: steps to arrest the falling rates of growth observed in 1968-9, to “accelerate the scientific technical revolution,” increase the wellbeing of the population, and to further “improve the system of planning.” The STR had shifted the terrain of competition between the world’s two socio-economic systems. While the gap between the United States and the USSR had been closing in the 1950s, the slowing of growth in the second half of the Ninth Five-Year Plan was a bad portent given the United States’ rapid adaptation of more efficient production techniques. Moreover, it was not the United States that was the leading technological edge of capitalist production but “the countries of Europe and Japan, which Gosplan does not even mention in their reports.” Aganbegian was especially interested in the efficiency of Japanese enterprises which were on track to complete the “national development plan” a decade early, in 1975 rather than the planned 1985. The USSR, meanwhile, was using ever more budgetary and physical resources to just maintain its gross output level. To reach the kinds of efficiencies found in West European and Japanese companies, the USSR would need to cut its spending by 5% while increasing its growth by 7% over the next plan period. More importantly, to accomplish this the USSR needed to readjust how its industry was organized and push for the introduction of “self-financed combines.” This would allow the introduction of the same kind of long-term “financial planning” that was common in Japanese, American, and West European firms, ultimately

allowing the USSR to more effectively invest in new, labor-saving technology and thus reduce the cost of labor - the fundamental building bloc of value in a socialist society.⁵³⁵

The introduction of the “combine” became a priority area for Soviet economic reform in the early 1970s—a short term goal that both Gosplan and the Academic reformers could both agree was necessary as a first step to any future reform. The October 1965 proclamations had made provisions for the self-financing combine of various smaller enterprises the cornerstone of Soviet industrial organization. The move promised to establish more powerful, self-standing entities that could plan their own, internal resource uses and not require the outside interference of the production ministries. In 1965, Fedorenko had explicitly stated that this new structure would allow for the introduction of modern computer-based management, so popular in Western corporations, into the Soviet economy. The organization of combines from previously self-standing, small and medium enterprises was an uncontroversial step in the wake of the XXIV Congress. They offered a way of furthering the cause of enterprise self-financing and independence without threatening the interests of Gosplan, while theoretically shifting the emphasis of industrial policy to the efficient introduction of new productive technologies. Bachurin, Gosplan’s point man on economic reform, broadly supported Aganbegian’s position on combines and noted that their development would be at the center of the new five-year plan.⁵³⁶

The imperative to expand the number of combines in Soviet industry accelerated after the XXIV Party Congress’ declaration that scientific and technical progress were the state’s priorities for economic development.. In a 1972 briefing to the Central Committee on projected growth rates from 1976 to 1990, the Institute for Economics’ N.I. Notkin

⁵³⁵ RGANI f. 5 op. 61 d. 61 ll. 37-65.

⁵³⁶ RGAE f. 4372 op. 66 d. 3776 ll. 4-5.

argued that improved management and productive techniques fostered by “the reserves created by the STR” would allow the USSR to overcome the slowdown that was expected in the 1971-1975 Five-Year Plan. Indeed, the initial steps taken during the 1965-1969 economic reform “had arrested some of the declines in the growth of national income that had been observed in the 1964-1966 period.” This all meant that the USSR was not destined for a slowdown in growth due to its overdevelopment as some bourgeoisie theorists had been suggesting. Indeed, Japan’s miraculous expansion confirmed that technology meant that “slowing rates of growth was not destiny” [sic].⁵³⁷ The Institute’s 1972 programmatic statement on the future of the Soviet economy concluded that “the main thrust of improving the organizational structures of economic management now should be the gradual transition from the individual factory as primary unit of management to the self-standing combine composed of multiple technologically interlocking productive and research entities.” Under this scheme, the ministries would become “strategic entities” rather than day-to-day managers.⁵³⁸ Indeed, in materials prepared for Kosygin on the next stage of economic reform, Gosplan noted that “small factories do not effectively introduce new technologies” and “hinder the improvement of planning, technical progress, and the establishment of direct contracted ties.” These entities also wasted manpower and financial resources as they often replicated each other’s functions and contributed to the unnecessarily high levels of management staff and misallocation of specialist labor across the USSR.⁵³⁹

⁵³⁷ ARAN f. 1877 o. 8 d. 1113 ll. 5-69.

⁵³⁸ Iu. V. Subochkii, “Razvitie organizacionnyx form upravleniia obshestvennym xozajstvom” in *Nauchnyi doklad: osnovnye cherty ekonomiki razvitogo sochialisticheskogo obshevsta v SSSR* (Moscow: Institute Ekonomiki AN SSSR, 1973), 286-287.

⁵³⁹ GARF f. 5446 op. 105 d. 8 ll. 5-12.

Despite agreement across the spectrum on the need to expand the number of combines, the old problem of ministerial resistance reared its head almost immediately. The very same report to Kosygin explained that “ministries had not taken sufficient steps to reorganize their factories into combines.” Moreover, the ones that did often simply divided old factories into their existing shops and then relabeled them “combines.”⁵⁴⁰ In 1970, the Ministry of Finance concluded that even though combines were successfully reducing costs and finding efficient synergies, “many ministries were not only not taking steps to improve their management but also actively trying to disassemble existing combines.” Moreover, “individual factory and plant managers” resisted losing their independence as part of their integration into larger administrative units.⁵⁴¹ In 1971, Baibakov informed Kosygin that most ministries were simply not ready to move toward any of the new priorities defined by the plenum and the subsequent XXIV Party Congress.⁵⁴² A year later Baibakov and Finance Minister Valery Garbuzov informed the Premier that the ministries were trying “to weaken the government’s position on the establishment of combines by maintaining their [the combines’] dependence on the ministries” rather than expanding their independent financial decision-making powers.

The problem was acute enough that, in May 1972, the Politburo tasked the Council of Ministers with developing a proclamation to accelerate the formation of combines and the reduction of small factory enterprises.⁵⁴³ In January 1973, the Politburo approved the draft of two proclamations that were eventually issued in March.⁵⁴⁴ Combined, the two

⁵⁴⁰ Ibid. 1-3.

⁵⁴¹ GARF f. 5446 op. 107 d. 2 ll. 3-12.

⁵⁴² GARF f. 5446 op. 110 d. 3 l. 72.

⁵⁴³ GARF f. 5446 o. 107 d. 10 ll. 1-6.

⁵⁴⁴ The drafts of the proclamations were started in the Council of Ministers in January and sent for discussion in February. These drafts are available in GARF f. 5446 op. 107 d. 10 ll. 72-6. For the

documents specified that converting single standing enterprises into combines would be the priority of Soviet economic policy, directing the ministry to have plans ready in six months to move to the “new two- and three-level system of management.” The matter was brought up again at the December 1973 Party Plenum held to approve the yearly plan and budget. Unlike other plenums of this type, Brezhnev did not leave the comments to Baibakov and Garbuzov, intervening in the matter himself. Brezhnev berated the ministries for approaching the process of forming combines “in a purely formal manner” and admitted that “our economic mechanism” does not yet “correspond to all the tasks we must accomplish.”⁵⁴⁵

The December Plenum debate about why combines were not forming and what to do about that quickly turned to larger criticisms of Soviet economic politics as a whole. In 1974 Kapustin wrote to the Central Committee to explain that the problem of combines was a symptom of a larger problem of most proposals being “purely formal” without considerations of larger economic issues that incentivized against efficient implementation.⁵⁴⁶ Kapustin expanded on this in a speech to the Moscow City Party organization. Since the September 1965 Plenum, “the basic character of industrial management had not changed,” he lamented. “The principles of economic reform had not been incorporated into the Ninth Five-Year Plan.” As a result, “misbalances” continued in planning, resulting in shortages and the “expansion rather than the limiting of plan indicators.” Planners “still view the economy as a series of individual plants and branches rather than as a set of interlocking productive complexes.” If these attitudes did not change,

proclamations see http://www.lawrussia.ru/texts/legal_861/doc861a408x955.htm [accessed 04/27/2017] and http://www.libussr.ru/doc_ussr/usr_7987.htm [accessed 04/27/2017].

⁵⁴⁵ RGANI f. 2 op. 3 d. 320 ll. 10-13.

⁵⁴⁶ ARAN f. 1877 op. 11 d. 164 ll. 52.

“the formation of combines would not have positive results on enterprise financing and labor efficiency.”⁵⁴⁷ The Institute’s 1975 briefing to Kirilenko in preparation for the XXV Party Conference concluded: “There are a variety of factors that show that the creation of combines is not creating the desired economic effects.” In 1969, the average rate of labor productivity was 3-4 times higher in combines than in the rest of the economy. By 1972, however, these rates had grown only by .2% which was the same as that of the rest of the economy. The loss of the effects of the initial reforms was not just a problem of “the combines themselves,” but because of "external" factors which were “rooted in the organization of production [planning] itself which is incompatible with today's trend toward specialization.”⁵⁴⁸

The mounting inability of the Soviet political system to implement the widely-shared goal of making the combines the bedrock of industrial organization showcased how conservative reform could quickly disillusion its supporters and politicize what started out as technocratic discourse. These frustrations quickly spilled out onto the pages of mass circulation “thick journals.” Despite the cooling of the “Thaw,” economists continued to use mass circulation, popular journals to pursue economic politics. *Novyi mir*, for example, kept its reputation for being a forum for new ideas that skirted the ideological line by publishing CEMI economist Nikolai Petryakov’s 1970 article “The Management of the Economy and Economic Interests.” In that piece, Petryakov broke with the CEMI line on cybernetic socialism and emphasized the role of private initiative and contracts as the key management innovation needed for the Soviet Union. Citing the NEP, Petryakov wrote that “Lenin understood the economy to be a series of individual initiatives that are brought

⁵⁴⁷ Ibid. 56-65.

⁵⁴⁸ ARAN f. 1877 op. 11 d. 285 ll. 2-32.

to life through social actions.” For Lenin of the NEP era, “the struggle of the state to regulate financial and commercial ties, including through market means, was part and parcel of the struggle for socialism.” The changes in the Soviet economy that had occurred since the Second World War, particularly the expanded role of consumption, meant that the use price increases to break the producer monopoly on private goods while drawing down the cash holdings of the population was an increasingly important tool of planning. Yet, the “psychology of management” did not yet make room for individual interests or their reflection in money and prices that reflected consumer demand.⁵⁴⁹ Petryakov, though later a proponent of radical market reform, did not use the terminology “market” but rather explained these levers as “social systems” which did not exclude the fact that this system could be planned using the tools of “the new planning” popular in the international economic discourses of the early 1970s.⁵⁵⁰ The same year, *Novyi mir* published Fedorenko’s manifesto, “Management and the Scientific Technical Revolution,” which postulated the orthodox version of CEMI’s program. The STR, in Fedorenko’s assessment, signified a society in which “the flow of information was increasing many-fold.” This new volume of information required a rethinking of how the Soviet state would “manage the labor of society” as choices multiplied and the rate of economic activity accelerated. This was stressing the old price system as it was designed to maximize the production of certain goods and could not capture the new economic dynamic. A new system of prices based on real-time inputs managed by computers was needed. The barrier was not just technical but

⁵⁴⁹ N. Petryakov, “Upravlenie ekonomiki i ekonomicheskie interesy” *Novyi Mir* no. 8 August 1970: 167-186.

⁵⁵⁰ On the influence of “new planning” ideas from the West on Soviet economics see chapter five of this dissertation. On the “new planning” in the West see for example Paul N. Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America*, (Cambridge, Mass. London: The MIT Press, 1997).

also political. Fedorenko noted the success of CEMI's case study in the Main Moscow Transportation Organization (Glavmosk), which it had equipped with a computing facility to calculate expected costs and plan their rates accordingly. "Plan goals from higher standing organizations were still constantly changing and the organizations were too overwhelmed by a multiplicity of often contradicting plan indicators. "The experiment was cancelled" in Moscow—a symptom of the ways in which unresolved institutional interests hurt policy making.⁵⁵¹

Fedorenko and Petryakov's two broadsides showed that CEMI's mathematical economics, though now a dominant strand in reformist thought, was coming apart at the edges as it ran into political barriers. Younger economists like Petryakov understood that the optimality theorems developed by Kantorovich, which were the basis of Soviet mathematical-economics, were, in Petryakov lab member Yevgeny Yasin's words, "a special case of general equilibrium."⁵⁵² Indeed, by the early 1970s, this connection between CEMI's SOFE model and a "general equilibrium model," or a vision of the economy in which optimal outcomes come from agent interactions rather than set goals, was being formalized at the Institute by Viktor Polterovich in a series of 1973 papers.⁵⁵³ However, what makes these two articles politically salient is that, despite the growing theoretical divide between CEMI's director and its leading young theorist, the politics of the two pieces was the same. With the kind of market reform that Petryakov would later be associated with off the table, both sides could agree that the influence of the economics

⁵⁵¹ N. Fedorenko, "Nauchno-Tekhnicheskaya Revolutchiya i upravleniia" *Novyi Mir* no. 10 October 1970: 153-171.44

⁵⁵² Andrei Kolesnikov, *Dialogi s Evgeny Yasinym* (Moscow: NLO, 2014), 91-92.

⁵⁵³ Ivan Boldyrev and Olessia Kirtchik, "General Equilibrium Theory behind the Iron Curtain: The Case of Victor Polterovich," *History of Political Economy* 46, no. 3 (September 21, 2014): 435-61.

profession was to be directed against Gosplan and its approach to planning as a centrally directed activity dependent on traditional divisions of industry by branch.

The inability of the USSR to implement a combine system was also being covered by *Pravda*. At the 1976 XXV Party Congress, Brezhnev called for a new effort to “improve the management of the economy.”⁵⁵⁴ A new generation of economic journalists writing for the major Soviet dailies took up this call. One of the most dogged of them was V.D. Valavoi. Valavoi held a *Doktorskaia* in economics and, during the 1960s, was deputy editor of *Ekonomicheskaja gazeta*, which began its life as the house newspaper of the reformist State Committee on Science and Technology (GKNT), before coming under the auspices of the Central Committee. In 1976, he moved to *Pravda* where he became the new deputy editor in charge of economics. Valavoi began his career at the Soviet Union’s flagship daily with a bang, publishing an editorial titled “On the Further Development of the System of Indicators.” Behind the bland title was a scathing critique of the actions of planning bodies and ministries for continuing to maintain gross production indicator, whether measured physical output or total cash sales. With no incentive to save capital and labor, the mantra of enterprise managers was “the more expensive, the better.” He blasted Gosplan’s drafts for the 1976-1980 Five-Year Plan for talking about making the cost of delivered goods an important indicator but not making it the universal indicator “enshrined in legal code.” Neither had Gosplan taken on board the results of many experimental enterprises which put profit and remuneration ahead of gross output.⁵⁵⁵ Valavoi returned in 1977 with a three-part piece entitled “Improving the System of Economic Management” in which he continued his assault on Gosplan. He slammed the agency for constantly

⁵⁵⁴ *XXV s’ezd KPSS: Stenograficheskij otshchot* (Moscow: Gospolizdat, 1976), 82-85.

⁵⁵⁵ D. Valavoi, “O dalneishei razvitii sistemy pokazatelei” *Pravda* no. 230 August 17, 1976: 2-3.

delaying its standards for evaluating enterprise compliance with direct contracts from 1974 to 1978. As they stood in draft form, these directives included neither the cost of production nor its quality in evaluating whether an enterprise did, indeed, fulfill its obligations to its counterpart. All this meant that “despite the objective conditions” of “a shrinking labor supply” nothing was being done to increase the productivity of laborers, therefore, sapping both growth rates and the wealth of society.⁵⁵⁶

Gosplan did not sit by idly in the face of press attacks. In 1974, its public journal, *Planovoe khoziaistvo*, published an attack on Fedorenko for “undermining the institutions of central planning” by critiquing Gosplan and therefore giving ammunition to Western critics of the Soviet system, such as Sovietologists Vladimir Tremel, Barry Konstinsky, and Dimitry Gallik. Their book *Perspectives for the Soviet Economy in the 1970s* cited his critiques of Gosplan favorably and argued that he was expressing attitudes toward Soviet-style planning amongst the intelligentsia. Fedorenko fired back in a complaint to the Central Committee calling this article slander and noting that his work was done in conjunction with the directives of the party to improve the economy through the greater use of economic methods. *Planovoe Khozajstvo* stuck by its guns, accusing CEMI of replicating the position of “Bogdanov and Bukharin, that Lenin had critiqued in his writings” and citing many of SOFE’s critiques to prove that it was providing ammunition to bourgeois critics. The editorial board concluded that “it was imperative to render judgment” on Fedorenko’s activities, “intentional or not.” This assessment was joined by the head of Gosplan’s Department for Ideology, who stated that Fedorenko and CEMI were

⁵⁵⁶ D. Valovoi, “Sovershenstvovaniia Khozajstvennogo Mekhanizma” *Pravda* no. 314, November 10, 1977: 2; D. Valovoi, “Sovershenstvovaniia Khozajstvennogo Mekhanizma” *Pravda* no. 314, November 11, 1977: 2; D. Valovoi, “Sovershenstvovaniia Khozajstvennogo Mekhanizma” *Pravda* no. 316, November 12, 1977: 2.

“leading mathematical economics astray” and creating a backdoor “for theories of economic self-regulation through market mechanisms.” The Central Committee’s Section on Science and Higher Education calmed the debate, clearing Fedorenko’s name and asking that he write a clarifying piece in Gosplan’s journal condemning “the misuse” of his research by Western critics of the Soviet Union. This was not the end of Gosplan’s attempts to push back on its public critics.⁵⁵⁷ In 1977, an internal Gosplan memo advised that “officials” of the agency needed to publish more in the press. The authors of the memo pointed out Valovoi’s work as especially concerning, since Gosplan believed that “many of the suggestions made in the articles [written by Valovoi] were unacceptable and harmful.” What Gosplan’s leaders needed to do was respond to these accusations by publishing in the press and showing examples of how the agency “was fulfilling the directives of the XXV Party Congress.” A press strategy would allow Gosplan’s collegium “to express the agency’s point of view on a variety of issues.”⁵⁵⁸

By 1976, what had begun as an administrative change of Soviet industrial organization had erupted into a public political debate between at least two well defined camps. Despite its seeming hegemony, the conservative consensus that Brezhnev had crafted at the XXIV Party Congress was fraying at its edges. These political battles would only become sharper as the scope of the legislation being proposed by the Council of Ministers expanded.

Drafting the Conservative Economic Reform

In 1976, the Council of Ministers was going back to the drawing board. Records of the 1971-2 ministry reports to Gosplan on fulfilling the tasks of the XXIV Party Congress were

⁵⁵⁷ RGANI f. 5 op. 67 d. 152 ll. 167-198.

⁵⁵⁸ RGAE f. 4372 o. 67 d. 861 ll. 130-131.

pulled out of the State archive and then reviewed to assess what changes had happened in those years as part of an effort to prepare a new set of proclamations that would then address the directives of the XXV Congress. Something had gone wrong in the intervening years. The body's return to the documents of 1971 indicates an interest not only in formalizing its legislative procedure but also in actively using regularized processes to create change. Indeed, the engagement of the Council of Ministers' staff and the XXIV and XXV Party Congresses testifies to how Soviet Party and State institutions were attempting to function in a legislative manner. The Council of Ministers, as the highest operational organ of state power, would be tasked with bringing to life the directives of the highest organ of the Party—the Party Congress. What the Congress, and larger economic discussions, had concluded was that the path laid down in 1971 was not working.⁵⁵⁹ The new system of combines was not introducing more self-financing, greater computer networking, direct contracts, nor the improved introduction of new production techniques. Between 1975 and 1979, the very public failure of the combine system created the conditions for an attempt at a larger overhaul of central planning which became the stage for legislative battles between the post-1965 reformers and the institutions of the Soviet state. This attempt to legislate “conservative reform” showed both the possibilities and the limits of the Soviet state in its most institutionalized period and ultimately became an inflection point for economic policy as its many failures began to create coalitions of actors interested in disrupting the *status quo*.

Discussions in the Council of Ministers on a new proclamation began in 1975 as the failure of the Ninth Five-Year Plan's initiatives on economic organization became

⁵⁵⁹ GARF f. 5446 o. 110 d. 3 l. 105.

clear. Early that year, Gosplan submitted a proposal for steps to “Improve Planning and the Stimulation of Economic Activity,” which suggested a devolution of day-to-day planning to the ministries with Gosplan being assigned only large-scale planning across the Five Year Plan. Further, Gosplan placed an emphasis on “investing capital in upgrading old plants” rather “building plants from the ground up.” Gosplan’s note was rather narrow as evidenced by a criticism sent by Gosbank which argued that even if new investments were undertaken, these ignored the central problem of “the purchasing power of the ruble.” Gosbank suggested that enterprises be forced to create reserves of goods in a proportion of two percent to their liquid funds to make sure that there was excess supply when the population’s desire for products increased, thereby balancing the Soviet money supply. Further, Gosbank advocated for branch-specific and regional sub-banks to be allowed to make their own credit decisions rather than rely on the directives set by the plan for monetary emission. Gosbank would level these criticisms into 1976, explaining to the Council of Ministers that the drafts that they were working with ignored the oversupply of circulating cash in the Soviet economy making all indicators measured in money, such as productivity and profit, meaningless.⁵⁶⁰

The XXV Congress also served to mobilize the economics profession and particularly those elements of it interested in introducing the new “systems approach” to economic planning. Fedorenko responded to the Central Committee’s various proclamations on improving the planning of combines with a note to Gosplan’s Bachurin emphasizing the need to establish a system of planning in which “indicators of performance are brought into line across planning horizons, in Five-Year Plans, yearly plans, and longer-

⁵⁶⁰ GARF f. 5446 o. 111 d. 3 l. 1-12, 37-89.

term programs of national economic development.” He proposed that the Complex Program for Scientific and Technical Progress (KP NTR) be adapted as a basis for a wholesale program of long-term planning, updated every five years, which would set the goals of the Five-Year Plan itself, and thus, supersede it legally.⁵⁶¹ In 1976, the XXV Congress approved the KP NTP, and Fedorenko and his allies began working on a draft of the Academy of Sciences Section on Economics’ program for improving the Soviet economy. In his directives on the results of the Congress, Fedorenko explicitly argued the need for a new program which considered the NTR’s impact on “the global order,” international markets, and the ways that long-term forecasting and mathematical planning could improve the Soviet economy in these conditions. The draft proposal’s text demonstrated how concepts of long-term planning and systems science had entered Soviet domestic planning discourse and the increased importance that considerations about international markets were entering the leading edge of economics. The draft praised the increasing use of long-term forecasting in Western economies, including the United States, as a response to challenges posed by the “scientific technical revolution.” The proposal recommended a redrafting of Soviet law to “define the roles and interactions of long-term forecasting plans and more immediate planning” through the drafting of a “law on state planning.” One goal of this new system would be to establish reserves of goods and raw materials to counter fluctuations in price which might interfere with the long-term development plans of the USSR. Several sections later, the draft explained that such fluctuations might come from “changes on the international markets” such as that for oil “which necessitated an increase in Soviet domestic prices.” Another theme running through

⁵⁶¹ ARAN f. 1849 o. 1 d. 202 ll. 18-33.

the proposal was the need to calculate labor productivity based on value added, or in Soviet parlance, *Normativ Chistyj Pribili* (NNO), which not only included the marketed price but the cost of raw materials, wages, and amortization. Such a target would prevent enterprises and ministries from meeting profitability goals simply by increasing the price of their marketed goods without introducing cost savings. Finally, the draft proposed a major restructuring of power in Soviet industrial practice through the reorganization of Gosplan along “goal directed lines” rather than its traditional branch divisions and the integration of the Academy of Sciences and other experts directly into the planning process.⁵⁶²

The proposal’s radicalism was highlighted at a plenary meeting of the Section on Economics. O.I. Volkov critiqued the program for trying to create yet more committees to oversee economic reform which resulted in an interjection from the floor by a frustrated colleague saying “we have so many other programs [from other groups such as Gosplan] that just redistribute resource or responsibilities. There are a lot of proposals but no one is willing to implement them.” Kapustin was particularly frustrated by the constant reference to the United States as “the measuring stick” for modern Soviet economic practice. After all, he explained, “we have other goals than the Americans—the building of the material basis for Communism.”⁵⁶³ Kapustin and Volkov’s outbursts summed up the key problems of Soviet economic science and its relationship to reform policies. The state remained too weak to fully address the structural problems of the USSR’s economy and instead relied on a series of unenforceable half-measures which were ignored on the shop floor. Stuck with such an inert system, the place that Soviet theorists looked to more and more for advice on planning was not the USSR but rather the work coming out of the West.

⁵⁶² ARAN f. 1849 op. 1 d. 251 ll. 164-189.

⁵⁶³ ARAN f. 1849 op. 1 d. 229 ll. 26-53.

Into this morass, stepped Leonid Abalkin who Kosygin tapped as head of his own group of advisors. Abalkin was a revealing choice for the Chairman's committee testifying to the limits of political-economic theory in the USSR of the mid-to-late 1970s. Trained as a "political economist," his work was conservative in the true sense of the word, advocating gradual improvements without challenging orthodoxy.⁵⁶⁴ Abalkin's 1970 book, *Political Economy and Economic Politics* [Politicheskaiia ekonomika i ekonomicheskaiia politika], became a "textbook" on the relationship between the state and the economy under the conditions of "developed socialism." In it, he defined a socialist economy as having two elements, first "a large mechanized and developed division of labor," guided by planned processes—something it shared with the most developed capitalist economies. Second, it "brings in line economic relations with the socialization of the society as a whole," therefore "eliminating atomization and allowing the economy to work on a plan-directed basis [*planomernost*]." Unlike capitalist planning, socialist planning was not restricted by the contradictions embedded in private property giving it scientific, rational characteristics. This meant that Soviet planning not only "eliminated the market mechanism" but that its contents changed as the society moved toward Communism. What Abalkin's writings of the 1970s implied was that changes in economic arrangements could be justified through the evolution of society as the USSR passed through the Marxist "stages" of development. He vigorously opposed Kronrod's argument that the state is an entity "not engaged in production" and his suggestion that the basis of economic politics should "the aggregate interests of all workers" represented by the engagement of these workers in the goals of the plans. Rather, for Abalkin the existence of the Socialist state, the "dictatorship of the

⁵⁶⁴ Joachim Zweynert, "'Developed Socialism' and Soviet Economic Thought in the 1970s and Early '80s," *Russian History* 41, no. 3 (July 21, 2014): 354–72.

proletariat,” and its policies was what allowed heterogeneous individual workers’ interests and economic arrangements (including cash and contracted relationships) to coexist in fulfilling a single, directed goal. Therefore, the dichotomy between state-directed planning and markets wasn’t important to him: in the end, it was the socialist state that directed all activity through law as the resolver of “all economic interests.”⁵⁶⁵ The Abalkin of the 1970s was thus the perfect spokesman for the strategy of conservative economic reform which, while accepting criticisms of planning processes, did not challenge central planning in-and-of itself.

His work caught the attention of Kosygin’s Chief of Staff, Anatoly Karpov, and, in 1972, Abalkin was asked to help ghostwrite Kosygin’s article for *Kommunist*. He later helped write part of Kosygin’s speech to the XXV Party Congress. Abalkin’s relationship with Kosygin helps explain how Abalkin moved from the Plekhanov Moscow Academy of Economics to the more politicized Central Committee Academy for Social Sciences (AON)—the USSR’s highest standing “party school” dedicated to the education of the Party’s most senior activists—where he also received support from Academy director and future Gorbachev Politburo member V.D. Medvedev who defended him against Suslov’s powerful allies.⁵⁶⁶ AON was brought in early to consult on the development of economic reforms in the wake of the 1973 and 1974 Plenums. It produced a thirty-page set of recommendations whose practical was lowering the number of plan indicators, bringing in longer planning horizons, and placing more stress on indicators associated with quality control and value-added indicators rather than gross output. However, unlike Fedorenko’s

⁵⁶⁵ L.I. Abalkin, *Izbranye trudy tom 1: Politicheskaiia ekonomika* (Moscow: Ekonomika, 2000), 45-73.

⁵⁶⁶ L.I. Abalkin, “Tema strechi mne ne byla izvestna” in *Fenomen Kosygina: Zapiski vnuka, meneiia sovermenikov* eds. A. Gvishiani (Moscow: Ekaterina, 2004), 261-266; V.A. Medvedev, *V komande Gorbacheva* (Moscow: Algoritm, 2016), 11-12.

draft issued by the Academy of Sciences, AON's program self-consciously refrained from talking about structural issues "associated with the integration of modern scientific technical progress" into the economy and limited its recommendations to specific elements of industrial practice.⁵⁶⁷

A draft of the proclamation of an overhaul of Soviet planning was first issued to the Council of Ministers in June of 1976 and was written by staffers from Gosplan. It read that despite some accomplishments the XXIV Congress' orders on "the stimulation and modernization of production and its planning are being fulfilled more slowly than expected. In practice, the introduction of economic methods into planning is not being done in a manner that corresponds to the tasks related to the intensification of production and the improvement of its effectiveness." The Council of Ministers rejected this version for having language that was too critical. Instead, a commission headed by Nikolai Tikhonov was formed to rewrite the draft which, in September, produced a report written by Gosplan's Bachurin with less critical language. This draft was sent to a review for another commission headed by Baibakov.⁵⁶⁸

In contrast to Gosplan's cautious statements, Abalkin's advisory group tried to push for a more ambitious agenda to push the planned legislation into a more radical direction. It completely rejected any gross production indicators, replacing them with a universal indicator of "net normative production" (a measurement of value added, rather than produced goods), an indicator of labor productivity that connected any bonus payments to savings in material used, and subtracting profits into the state budget based on a long-term

⁵⁶⁷ RGANI f. 5 o. 68 d. 549 l. 2-30.

⁵⁶⁸ GARF f. 5446 o. 111 d. 5 l. 49, 133-134; GARF f. 5446 o. 111 d. 6 l. 134-135; RGAE f. 4372 o. 67 d. 134 l. 96-97.

repayment plan across branches rather than arbitrary arrangements across industries—virtually the same as Fedorenko’s earlier suggestion. The expert group criticized Gosplan’s drafts for not offering consistency between indicators in yearly plans, which remained in gross output, and Five-Year Plans which would be in marketed output. None of the old indicators were eliminated, just de-emphasized. Further, Gosplan’s draft did not ban outright changes to the enterprises’ payments into the budget outside of the five-year plan period. These problems insured that despite “claiming to be dedicated to increasing the role of long-term planning, Gosplan’s actual steps would ensure that the practice of yearly corrections to plans continues unabated.”⁵⁶⁹

Yet Abalkin did not go as far enough as the Academy of Sciences economists in criticizing the role of Gosplan in the drafts. Using Fedorenko and Fedoseev as their conduits to the committee drafting the reform, headed by Deputy Chairman of the Council of Ministers, Valdimir Novikov these groups called for an expansion of their role in the drafting of the plan. Writing to committee member Fedoseev in June 1977, Fedorenko suggested that the commission should focus the thrust of its work on including the research institutes of the Academy of Sciences system, in particular, CEMI, as stakeholders in the formulation of the Five-Year Plans. This meant that research in all the Institutes of the Section on Economics be moved onto the basis of “goal-directed planning” which would determine output based on the goals of the Five-Year Plan, which in turn would be set by a rolling fifteen-year development plan.⁵⁷⁰ In further recommendations, Fedorenko suggested that all planning be done using a mathematical macro-economic model which could act as a road map to coordinate the relationship between yearly plans and the larger

⁵⁶⁹ GARF f. 5446 op. 135 d. 5 ll. 59-108.

⁵⁷⁰ ARAN f. 1849 op. 1 d. 250 ll. 148-170.

five-year plan. Fedorenko explained that the lack of such an initiative in the drafts of the proclamation meant that there were not yet enough guarantees that the “financial plans” and the “productive plans” could be brought into line, therefore having negative consequences for the state budget and the enterprises’ return on equity.⁵⁷¹ Gosplan responded to these criticisms arguing that “the Academy of Sciences was going far beyond the remit” of the proposed proclamation. The Academy Gosplan continued, “seems to think profit should be the only regulator of enterprise behavior.” Nevertheless, the report noted that these divides were not unbridgeable as both sides were “in agreement about the main goal of economic reform—the need to move branches onto a new system of industrial management as soon as they are ready, and, on this basis, integrate cost accounting and self-financing in the most developed sectors.”⁵⁷²

Bachurin filed a final report to Kosygin on behalf of Novikov on September 27, 1977, which combined many of the elements of the Gosplan and Abalkin proposals. The main recommendation of the group was to “change the way that plans are reviewed by replacing the current practice of reconstructing all indicators on a yearly basis” to one in which “indicators are set for a five-year period.” This would be backed up with a more regularized legal framework in which the Supreme Soviet would be routinely informed of the progress of the five-year plans but would not have to re-vote on a yearly plan every year. Bachurin included text about integrating more financial indicators into planning and agreed with the academics that there had to be a re-working of wholesale prices and a greater consideration for the prices of natural resources and raw materials.⁵⁷³ In October

⁵⁷¹ ARAN f. 1849 op. 1 d. 269 ll. 68-73.

⁵⁷² RGAE f. 4372 op. 67 d. 859 ll. 112-119.

⁵⁷³ GARF f. 5446 o. 135 d. 7 ll. 39-49.

1977 Kosygin approved the draft but asked Novikov to continue working to incorporate language from that month's Central Committee Plenum on the new Soviet constitution into a final report.⁵⁷⁴ That report, delivered on December 24, 1977, indeed had more language specifying the role of the Supreme Soviet in confirming the five-year plan and the role of the Council of Ministers as the legal agent executing and presenting the plan to the Supreme Soviet. Gosplan was conceptualized as the agency in charge of developing plans while separate proclamations were envisioned to confirm the rights and roles of ministries and Republican governments in the planning process and in relation to Gosplan.⁵⁷⁵ This report was sent to the Central Committee in January of 1978 and then to the ministries and research institutes for a “comment period.”⁵⁷⁶

The excruciatingly slow pace of the drafting process of the overhaul, and its emphasis on accommodating the interests of the ministries and Gosplan irked the economists in the Academy's institutes who believed the drafts as only re-enforced the status quo. During the comment period, Gvishiani and his team at VSNIISI laid out a substantive critique of the draft based on a reading of it that emphasized the need “to create a system of planning that had its ‘hierarchical’ elements interlaced with ‘horizontal elements’—or spontaneous direct ties between enterprises.” Despite progress over the past drafts, “the proclamation had not reached a level of development which would allow for the satisfactory implementation of its goals.” First, it did not have a strict explanation of the difference between Five-Year Plans and long-term planning “over a fifteen-year horizon.” While the working group's materials emphasized the importance of long-term

⁵⁷⁴ GARF f. 5446 o. 135 d. 9 ll. 9-10.

⁵⁷⁵ GARF f. 5446 o. 135 d. 12 ll. 1-12.

⁵⁷⁶ Ibid. 133-134.

planning, there was no legal framework for defining its interaction with the five-year plans. In the opinion of the VSNIISI and its systems theorists, it was the “long-term plan,” in other words the KP NTR being developed at VSNIISI and CEMI, that should be the most important plan, and set the goals of the individual five-year plans within its planning horizons. Gvishiani and his team suggested that the very idea of discrete Five-Year Plans be rejected in favor of “continuous planning based on interlocking long-term assessments of large scale social goals and available financial, physical, and labor resources.” Rejecting the working groups emphasis on price stability, VSNIISI argued that enterprises should be allowed to set their own prices to “compensate for [the] risk” they took in introducing innovative methods, thereby helping Soviet economy modernize industrial practice and increase productivity.⁵⁷⁷ What was left unsaid in the VSNIISI reaction to the draft was that if the long term plan would set the goals of the Soviet economy and prices be allowed to float, neither the Party nor the planning agencies would be needed—the economy, though directed would be a self-enclosed system. Fedorenko chimed in several months later with complaints that the draft did not have any language on how the goals of the five-year plans would be set, the reflection of these goals in wholesale prices, or the interaction of five-year planning with the KP NTR. Fedorenko also suggested that all plans be drafted in conjunction with a “general financial plan” which would integrate both enterprise and household money balances into a general long-term investment schema.⁵⁷⁸ This point of view was not however shared by the ministries and agencies. For example, Ministry of

⁵⁷⁷ GARF f. 5446 op. 135 d. 13 ll. 32-45.

⁵⁷⁸ ARAN f. 1849 op. 1 d. 269 ll. 67-69.

Finance resisted any long-term integration of financial and productive plans as it believed “that this would both eliminate its flexibility and would be too complicated.”⁵⁷⁹

The growing between the agencies, ministries and the academic institutes testified to the fact that underneath the façade of orderly decision making tensions were increasing and, as ever, there was mechanism to resolve them. Instead, a morass set in which only irked the reformers more. Indeed, the review process took all of 1978 with a draft that included all inputs from ministries and institutes ready in May 1979. It would take another month for the Council of Ministers to agree on exactly how to adjust prices.⁵⁸⁰ The document that was finally approved in 1979, known officially as Joint Proclamation Number 695, “On the Improvement of Planning and The Improvement of Economic Measures to Increase Industrial Effectiveness and Quality.” Proclamation 695 was a massive document totaling sixty-five points most with several sub-points. It finally acknowledged the concept of “value added,” which had been debated since the 1950s. The new central indicator was indeed the *Normativ Chistyj Pribili* (NNO) suggested by Fedorenko and Abalkin, which enshrined the practice that enterprise profitability would be calculated using a conception of value that included not only the wage bill, but also expenditure on capital goods (through guidelines on amortization) and raw materials.⁵⁸¹ However, many issues remained unresolved. For example, the language of the proclamation did not specify how strategic goods, whose output remained set in gross terms rather than valued added terms, would be determined and whether the calculation of labor productivity in those enterprises would be calculated in gross output or NNO per worker.

⁵⁷⁹ GARF f. 5446 op. 135 d. 3 ll. 129-131.

⁵⁸⁰ GARF f. 5446 op. 135 d. 21 ll. 171-172.

⁵⁸¹ <http://economics.kiev.ua/download/ZakonySSSR/data02/tex13841.htm> [accessed 05/01/2017].

Neither was the issue of pricing resolved, making NNO an indicator that could not carry accurate information about the needs of the Soviet “market.” Moreover, the sheer complexity of the USSR’s economy required administrative action in setting average branch standards for NNO and NNO per worker, a task which would simply overwhelm agencies. Proclamation 695, the apex of the conservative project of “improving the economic system.”⁵⁸² It integrated many of the critiques of Soviet planning, earning praise from commentators such as Valovoi, who believes to this day that had it not been derailed in the 1980s by Gorbachev, it would have worked.⁵⁸³ However, it did not change the underlying power relationships of the Soviet economy. The failure or success of this bargain would determine the legacy of the Brezhnev period’s economic program.

Epic Fail: Order 695 and the Collapse of the Conservative Economic Program

In October 1980, Baibakov addressed the Central Committee about the course of the Tenth Five-Year Plan. Following the standard formula of presenting a brief triumphal account of positive results, the Gosplan Chair moved onto the crux of the plenum’s business: the fact that “many goals that have been set out in the five-year plan have not been achieved.” The growth of national income over the past year had been 2.7% vs. the planned 3.5% and 17% over the five-year period instead of the planned 25%. This was the result of the “misuse of financial and physical resources.” Repayments to the state budget for capital investments for 1980 were below target, meaning that the state budget had lost 33 billion rubles in income. The supply of raw materials was a particularly pressing issue. Misuses and over-

⁵⁸² Morris Bornstein, “Improving the Soviet Economic Mechanism,” *Soviet Studies* 37, no. 1 (1985): 1–30; Philip Hanson, “Success Indicators Revisited: The July 1979 Soviet Decree on Planning and Management,” *Soviet Studies* 35, no. 1 (1983): 1–13.

⁵⁸³ D. Valovoi, *Ot Stalina i Roolzvelta do Putina i Busha* (Moscow: Terra-Terra, 2007), 159.

ordering of resources meant that “because of a lack of raw materials, the chemical industry was underperforming, leaving agriculture without fertilizer.”⁵⁸⁴

Baibakov’s report on the final year of the Tenth Five-Year Plan was part of a wave of anxiety that swept the USSR’s elite in the early 1980s due to the consequences of Order 695 and the fate of the previous plan. The failure of both initiatives to modernize the Soviet economy and move it from extensive to intensive production placed a capstone on an era. At the XXVI Party Congress of 1981, Brezhnev admitted that “the years since the XXV Congress have been difficult ones in both international and domestic affairs.” Moreover, Brezhnev explicitly framed “the Seventies” as a period of transformation which saw the demographic, technological, and geographical center of the Soviet economy shifting to Siberia and the Urals due to the increased weight of the petro-chemical complex and the importance of energy conservation. Despite the supposed success in “re-organizing the economy and improving planning” there were still serious issues “of disproportions of the economy” due to the “failures of individual ministries and party organs in oversight and the adaptation of new measures.” The powers of “inertia, tradition, and habits” were the greatest obstacle to change and it was the Party’s mission in the new plan period to root out these habits.⁵⁸⁵

Brezhnev’s speech at the Congress can be read as a moment in which mobilization returned to the forefront of Soviet political-economic thought. Indeed, it is difficult to separate the soon to be dead General Secretary’s words from his successor Andropov, and the early period of Gorbachev’s term in office. To understand this shift from the politics of conservative reform to mobilization one must look at the implementation process of Order

⁵⁸⁴ RGANI f. 2 op. 3 d. 541 ll. 3-4.ob.

⁵⁸⁵ *XXVI S’ezd KPSS: Stenographicheskii otschot* (Moscow: Gospolizdat, 1981), 49-56.

695. In hindsight, the most consequential step of the proclamation was to create a body, under the Council of Ministers instead of Gosplan, to review the implementation of the order which was headed by Novikov. In December 1979, the commission delivered its first report, and the news was not good. “Individual ministries and Republican Councils of Ministers [were] proceeding extremely slowly in their preparatory work for the reform.” Most disturbingly, the two ministries that were going to have the most impact on the planned intensification of the Soviet economy, the Ministry of Energy and the Ministry of Transportation Machinery, “had not, as of December 18th, developed any plans to fulfill the measures of the June proclamation.” The Ministry of Light Food Production, a key organization for improving output in group B industries, had “inadequate programs for long-term planning and the improvement of production quality.” Inspections revealed that the Ministry’s enterprises were still being forced to change their production plans mid-stream with little warning or explanation. Meanwhile, Gosplan and Gossnab (the state supply agency) had both missed the October deadline for developing guidelines on new technology integration, delivery, and amortization. One of the problems was that the ministries were still resisting any changes from the center. For example, Novikov’s committee explained that “guidelines on credit and interest rates were objected to by forty ministries causing them to be delayed in review.” This had the effect of delaying the introduction of the combine and “two-level management” even further. In 1979, only 46.8% of production in the USSR was being done by enterprises organized in combines.⁵⁸⁶

The news did not get better by the following year. Gosplan began a series of inspections of Ministerial compliance with the order and found that the Ministry of Milk

⁵⁸⁶ GARF f. 5446 op. 136 d. 1396 ll. 2-7.

and Meat Production had not taken steps to “mobilize its productive reserves” by encouraging direct, horizontal delivery agreements between its enterprises, or taking steps to eliminate manual labor with new technology. The same was true of the Ukrainian Republican Ministry of Heavy Construction where measures to improve labor productivity had failed to take hold with the rate growing by only 8.1% versus a 31.8% planned increase for the 1976-1980 period. Return on investment had fallen from 13.6% to 9.2% over the same timeframe. Larger issues of planning also troubled the Soviet leadership.⁵⁸⁷ In 1980, a Poliburo commission on drafting the Eleventh Five-Year Plan had concluded that one of the main reasons that the USSR, “despite having the largest complex of lathes and metal presses in the world,” had less output than the United States, Japan or major Western European economies was because “global experience shows that it is inefficient to build a new plant every time there is a new model or item that needs to be reproduced.” Soviet industry needed to stop constantly expanding and focus on re-equipping existing plants for flexible manufacturing.⁵⁸⁸ However, Gosplan reported in 1981 that because of the short time between the issuance of Order 695 and the new directives for the Eleventh Five-Year Plan, it did not have time to fully develop new guidelines for the next plan period. The materials presented to them by the Ministries during the “counter planning process” for establishing plan targets “reflected the continued dominance of old methods and did not reflect the need to move to greater intensification.” This meant that both sides needed to go back to the drawing board “greatly shortening the time for the development of the new plan.” Thus, Gosplan did not have the opportunity to “fully develop the measures of Proclamation 695 in improving capital construction [the construction of new production

⁵⁸⁷ F 5446 O 140 D 1485 l. 3.

⁵⁸⁸ RGANI f. 81 op. 1 d. 150 l. 112-114.

sites requiring investments from the state budget].” Moreover, “the directives of the XXVI Congress on reducing the number of new enterprises and increasing the rate of re-equipment rates of existing factories” were being ignored by many Ministries. According to Gosplan’s received ministerial production plans, between 1983 and 1985, there would be three thousand new plants built costing three billion rubles which was more than the expenditures on new capital construction for the entire period of Tenth Five-Year Plans.⁵⁸⁹

The problems encountered by Proclamation 695 required a higher-level explanation from the academic economics community which now sharpened its critique of the Soviet planning. In 1982, the Academy of Sciences’ Institute for Economics argued that the proclamation had not dealt with the Achilles Heel of the planning system—prices. The order “was correct to try to make price an important lever for planning” but continued the old method of price-setting in which prices were calculated via previous average expenditures, meaning that enterprises could claim high profitability by boosting their expenditures in one period and lowering them in subsequent ones, rather than consistently saving on labor, financial, and raw resources.⁵⁹⁰ Nikolai Petryakov chimed in on the problems of Proclamation 695. In a note to Gosplan, he argued that the order did not create the conditions in which economic decisions could be made to prioritize investment or to force enterprises to conserve resources in production therefore continuing USSR’s falling return on equity. Future economic reform had to prioritize effective returns to counter the declining growth that Petryakov saw as the dominant trend in the Soviet economy from 1960 onward. The heart of the problem was that Soviet policy makers were “attempting to use organizational changes in individual branches to get better productivity and plan

⁵⁸⁹ RGAE f. 4372 op. 67 d. 3504 l. 62.

⁵⁹⁰ ARAN f. 1877 op. 11 d. 788 ll. 1-114.

balance.” This erroneously assumed that “individual sectors were self-standing rather than considering the complex inter-sectoral ties that exist in the economy.” Despite repeated warnings by economists, nothing was being done “because of the inertia of the economic system and the inadequate theoretical approach to economic policy making.” Policymakers needed to accept that their plan norms needed to “reflect the subjective nature of the internal market”—in other words flexible prices set by demand, or a marginal theory of value.⁵⁹¹

The critique leveled by the economics community was part of a larger wave of reflection by Soviet elites about the policy failures of the 1970s. The battle against “the power of inertia” that Brezhnev called for at the XXVI Congress heated up after the General Secretary’s death in 1982. His successor, Yuri Andropov, was a very different kind of politician. While Brezhnev was a consensus builder with a background in the Party *apparatus*, Andropov built his career as an enforcer for Soviet influence in allied Communist Parties and then as head of the KGB. Unlike Brezhnev, whose emphasis on “the stability of cadres” after Khrushchev’s tumultuous reign foreclosed major changes to the power structures of the USSR and allowed important interests to throttle both economic reforms and the careers of the reformers, Andropov was a man who believed in the need to break these interests through the enforcement of discipline both from above and from below.⁵⁹² This approach to economic policy came across in Andropov’s first speech to the Central Committee upon being “elected” to the post of General Secretary. Andropov freely admitted that “for many important indicators, the plan has not been fulfilled.” The problem

⁵⁹¹ ARAN f. 1959 op. 1 d. 861 ll. 17-54.

⁵⁹² R.G. Pikhoia and A.K. Sokolov. *Istoriia sovremennoi Rossii: Krizis kommunisticheskoi vlasti v SSSR I rozhdeniia novoi Rossii 1970-1991* (Moscow: Rosspen, 2008), 139-144.

Andropov noted was that “there are still many managers who, while quoting Leonid Illyich [Brezhnev’s] maxim that ‘the economy should be economical’ do nothing toward accomplishing this task.” In a clear reference to the series of reforms and proclamations on the Soviet economy of the past decade, Andropov added that “new decisions are taken without old orders being fulfilled.”⁵⁹³

Andropov’s call for action coincided with a larger campaign by his allies, with the KGB and young regional party secretaries at its forefront, to clamp down on corruption and waste that had been proliferating in the Soviet elite as Brezhnev’s health and influence was collapsing.⁵⁹⁴ The press, which had been critiquing the ministries and agencies since the mid-1970s, was a key site for this new politics, extending Andropov’s call for discipline to one of mass action. In October 1982, *Izvestiia* published a front-page editorial entitled “The Economy Must be Economical” which praised “enterprises that took measures to conserve raw materials, fuel, electricity, and other physical inputs” and encouraged activists to “lead a mass movement for the encouragement of thrift in production.”⁵⁹⁵ The same issue contained a feature by “economic correspondent” E. Spiridonov entitled “The Right to Decide: Or What We Can Learn from the Practices of the Skorokhod Shoe Combine.” Spiridonov noted that though Skorokhod was one of the premier Soviet shoe production complexes, it was not always the most efficient one. “Smaller enterprises often responded more effectively to the demands of the consumer market and changes in fashion.” The problem was not with the enterprises’ workers but rather because the ministry forced the plant to “plan to an abstract consumer rather than the really existing

⁵⁹³ RGANI f. 2 op. 3 d. 604 ll. 3 ob.- 4.

⁵⁹⁴ Luc Duhamel, *The KGB Campaign against Corruption in Moscow, 1982–1987*, (Pittsburgh, Pa: University of Pittsburgh Press, 2010).

⁵⁹⁵ “Ekonomika dolzhna byt’ ekonomichnoi” *Izvestiia* no. 294 October 21, 1982: 1.

tastes of the Soviet public.” Thus, the more efficient combine could not use its “might” to satisfy the Soviet consumer as he/she really existed because instead it had to “fulfill 200 obligations from the ministry a day.” Instead of helping, the initiatives set by Proclamation 695 were just making the situation worse as ministries were using “reviews of new indicators” to interfere in the operations of their enterprises and combines. The indicators for which Skorokhod was responsible had thus increased by three times because of this process. Unfortunately, the article concluded, “the market is not interested in the ‘abstract consumer’ envisioned by the ministry in their decrees but rather the real shifting taste of the Soviet customer.” Only letting the enterprise have more freedom to choose its own actions, rather than fulfilling the proclivities of the Russian Republic Ministry of Footwear Production and its managers would allow the Soviet enterprise to work efficiently.⁵⁹⁶ Spiridonov’s article made an impression on Soviet officials. Aleksandr Tikhonov, who succeeded Kosygin as the Chairman of the Council of Ministers following the latter’s resignation and then death in 1980, ordered a review of the situation described in the article. The reply to the inquiry recommended that the Ministry of Light Industry begin looking into the allegations of the report, which it did in January 1982, noting that the ministry was busy developing new procedures to avoid the kinds of practices that *Izvestiia* outlined.⁵⁹⁷

Izvestiia’s report was not the only one to catch the attention of the Council of Ministers that testified to the role of the press in pushing for an attack on the conservative practices of state institutions. In February 1983 Tikhonov reviewed the transcripts of a Valovoi led a debate in *Pravda*’s in-house “discussion club” on the failure of Proclamation

⁵⁹⁶ E. Spiridonov “Pravo Reshat’: ili chto govorit praktika raboty proizvodstvennogo ob’’edineniia ‘Skorokhoda’ *Izvestiia* no. 294 October 21, 1982: 2.

⁵⁹⁷ GARF f. 5446 o. 142 d. 5 ll. 2-6.

695. Valovoi critiqued the original resolution for not going far enough in eliminating the problems of gross output. Regional production complexes (an institution the act created) were still supposed to calculate their output in gross terms but branches were shifting to quantitative, norm-based indicators. This meant that many enterprises continued to prioritize gross rather than marketed output as their primary target. Because of this, “48% of the enterprises that have been surveyed have failed to meet their contract obligations to other enterprises.” The market for consumer goods was not being fulfilled and the population was hoarding cash. “This is not just an economic problem,” Valovoi explained “but a political one” as it testified to the pent-up consumer demand of an unsatisfied population that would lose its faith in the state. Valovoi then asked, “what is Gosplan doing to better fulfill the Proclamation 695” and improve the Soviet consumer market? One representative of Gosplan, a staffer noted as a Comrade Illiin, responded in a depressed manner that while rank-in-file Gosplan officials try to enforce contracted deliveries of consumer goods, any attempt to solve the problem by low-ranking cadres gets shutdown by their superiors. Illiin described the attitude of Gosplan’s leaders as more interested in appearances than results. “They say what is this? The Soviet Union is not producing the right kinds of goods for the economy and not satisfying consumer demand? This is not correct, we cannot say that.” When problems with deliveries are brought to, “for example First Deputy Chair [of Gosplan] Voronin” he will say “let’s do it this way. We’ll judge the performance of enterprises and combines on marketed goods, ministries and territorial production complexes on realized, gross cash flow.” This scheme made the numbers look better but the plan indicators would not work with one another and only exacerbate the bottlenecks in the consumer goods market. Illiin concluded that to better deal with these

issues, the entire order should be rewritten with clearer instructions and without the opportunity for agencies and ministries to play with the numbers. In answer to an inquiry by Tikhonov on the discussion, the Council of Ministers' Commission on Implementing Proclamation 695 responded by acknowledging the order's problems. The order's "initial principles as well as its implementation," the letter read "was carried through without thought to consequences. The order did not create a legal basis for expanding the independence of enterprises and their standing, leading to a reform that was simply issuing new orders, if the agencies and ministries issued anything new at all."⁵⁹⁸

The new urgency surrounding the failure of economic reform helped launch a much more assertive language from economic reformers which blamed poor economic policy for a social and cultural morass. The ever savvy and loquacious Fedorenko immediately fired off a letter to Andropov entitled "On Developing a Complex Program for the Improvement of Economic Management." Fedorenko's central suggestion was that after a series of piecemeal reforms brought in by Proclamation 695, "the time had come for a wholesale, unitary program for the reconstruction of the entire economic system." The lack of such a reform, Fedorenko continued, was responsible for a culture of waste which caused "a lack of prestige of the socialist planned economy and hurts the social and moral values of our societies and thus political-educational Party work."⁵⁹⁹ Similar sentiments were expressed by NII's Kirilenko in a January 1984 letter to the Andropov's protégé and newly appointed Politburo member, Mikhail Gorbachev. Kirilenko argued that the main technical problems behind improving the Soviet economy and accelerating technological change had been worked out and understood but the problem that remained was "the improvement of the

⁵⁹⁸ Ibid., 37-69.

⁵⁹⁹ ARAN f. 1849 op. 1 d. 313 ll.174-189.

general social climate” which was leading to the inability to implement changes to the economy. The introduction of “socialism as a way of life and a social system” which acknowledged that members of society had different interests and that individuals should be rewarded for their contributions to society. This meant emphasizing personal responsibility. “Socialism,” Kirilenko wrote, “is not a people’s welfare line” in which citizens get rewarded for not working at their highest capacity. Efforts needed to be taken to increase labor productivity through the introduction of automation, increases in social spending to take certain groups such as new mothers out of the labor market, and the strict enforcement of rules tying enterprise and worker pay to the quality of goods produced and their final sale. Finally, Kirilenko proposed a 1946-style monetary reform to re-value the ruble and force Soviet households and workers to respond to economic incentives.⁶⁰⁰

It is in this context of the discussion on the incentives of Soviet institutions and culture following the failure of Proclamation 695 that we should understand the famous “Novosibirsk Report” written by Tatyana Zaslavskaya which was leaked to the Western Press in 1983, despite its “for official use” designation. Zaslavskaya, who was trained in part by Yakov Kronrod, based her attack on the social dimensions of Soviet economic mismanagement on her fieldwork with Siberian collective farmers during her time in IEOPP. For Zaslavskaya, the institutions of the Soviet economic system had grown out of touch with the social realities of the USSR. In the 1930s, when the planning system was established, workers had “a limited choice of economic behaviors” due to the relative backwardness of the country. However, in subsequent decades the Soviet worker’s “education, culture, general information, and awareness of his rights have grown

⁶⁰⁰ The Gorbachev Foundation Archives f. 5 op. 1 d. 1412.

incomparably,” leading to the need for a new socio-economic structure that would be able to capture the interests of a more mobile and complex workforce. This did not mean, however, that the state could retreat:

The tenacity of workers’ social attitudes does not remove the necessity for their purposeful formation by socialist society, first and foremost by way of perfecting the social mechanism of development. For although this mechanism is not capable of changing the existing type of workers as is necessary for the short term, the results achieved in the long run would have significant influence on the development of society as a whole.⁶⁰¹

Zaslavskaya, like Petraykov and Kirilenko, was conceptualizing economic reform not only as a piecemeal improvement of management but a fundamental social program which would eliminate the institutional blockages that had prevented action from the mid-1960s onward through a rejuvenation of the Soviet subject as one that responded to the incentives of a more humane, modern economic system. The prominence of the social factor in Soviet economic inefficiency not only testified to the well-known demographic concerns of low birthrates, alcoholism, and absenteeism faced by the USSR by 1983 but also to the way in which the “systems approach,” or the “new economic planning” had penetrated all branches of Soviet economic reformism and allowed for a reintroduction of wholesale critique of Soviet social and institutional practices. Indeed, Zaslavskaya’s concern with the economic implications of a more educated and complex workforce coexisting with an economy dominated by administrative methods that incentivized manual labor was part-and-parcel of the kinds of studies that STR-related discourse had inspired in Soviet economic science. As shown in earlier chapters, Soviet socio-economic

⁶⁰¹ T. Zaslavskaya, “The Novosibirsk Report” *Survey* 14 no. 3 (March 1984): 83–109.

theorists were more and more concerned with “the human factor” understood as unleashing creativity and efficiency in the context of new, more advanced forms of production sweeping the global economy. As early as 1972, projections for the USSR’s economic growth noted the growing importance of education as an input into economic activity and the challenges that a more educated workforce would present to central planning. As the STR unfolded, Soviet economic policy would have to shift to emphasizing higher technology, highly automated industries that required an educated workforce. New kinds of management techniques were needed to plan for this kind of economy.⁶⁰²

This same concern about the future of the Soviet economy in the context of a changing socio-economic structure was present in Gvishiani’s ISA. Speaking to the Institute, the director of the GKNT, G.I. Marchuk, pleaded that “the Institute had taken aboard work on the KP NTP but we have not yet achieved results: economists, including at this Institute, have shown that our growth figures are far below those projected by Gosplan due to our inefficient labor practices.” The Institute had to take the KP NTP and develop the next steps for economic reform. He pointed to a study done by Gvishiani and Boris Milner on “the factors of intensification in the Japanese economy” which had been “well received in the Council of Ministers” and had “uses in certain aspects of our own economy.”⁶⁰³ This kind of knowledge needed to be deployed in the next five-year plan. Gvishiani concluded the meeting of the Institute by saying:

We must deeply analyze the global problems of our present, the experience of the developed capitalist countries, analyze their economic macro-models, and without complete imitation, apply them to the problems of our economy. We must begin to use foreign experience in interactive planning and on global modeling.⁶⁰⁴

⁶⁰² ARAN f. 1877 op. 8 d. 1113 ll. 5-18.

⁶⁰³ TsGA f. 8560 op. 1 D ll. 51-57.

⁶⁰⁴ *Ibid.*, 59.

The failure of Proclamation 695 and the subsequent recriminations over responsibility had done two things. First, it put mobilization back on the table for the first time since Khrushchev's removal as Andropov took the reins of government. Second, it restored the political prominence of economics as a science of the state guided by international experience and the embeddedness of the USSR in larger global processes. By late 1983, an alliance between academic economists trained to understand the economy as a socio-economic system and younger Soviet political elites brought in by Andropov from the regional Party organization had formed.⁶⁰⁵ Both sides were ready to use whatever means necessary to break through the institutional morass that had delayed and neutered earlier economic reforms.

Conclusion: Using the Tools of the First Industrial Revolution to Prepare for the Postindustrial World?

Brezhnev's death in 1982 punctuated the end of an era in which the Soviet state tried to base its legitimacy on predictability and private security. Indeed, with Andropov's new regime came new campaigns against corruption, and with them, arrests of once high-standing Party officials including Brezhnev's infamously corrupt immediate family. The contradiction between the desire to build a state based on rules and predictability and the actual reality of how this predictability was practiced—the systematic avoidance of the enforcement of rules and mass corruption—stymied the efforts of conservative reformers. The dualism in political norms was more than hypocrisy—it testified to the weakness of

⁶⁰⁵ Nikolay Mitrokhin and Teresa Polowy, "'Strange People' in the Politburo: Institutional Problems and the Human Factor in the Economic Collapse of the Soviet Empire," *Kritika: Explorations in Russian and Eurasian History* 10, no. 4 (January 14, 2010): 869–96.

the USSR as a state. Soviet law was not capable of enforcing change without direct, mass coercion of the elite—judicial or extrajudicial. For the first time since the October 1964 Plenum with its condemnations of Khrushchev’s “subjectivism,” the specter of not only reform but reform that would shake the foundations of Brezhnev’s political compromise was suddenly on the table.

However, the failure of the legislative elements of the Brezhnev agenda did not destroy the ideological elements of Soviet economic reform. Rather it accelerated the prominence of an economic theorist who had different conception of the USSR’s place in the world than his (and it was usually a him, given the Soviet Union’s gendered hierarchy) Cold War predecessor. The USSR was not just fighting to prove the superiority of its socio-economic system; it was part of a larger global set of transformations—the “scientific technical revolution” that promised a future of post-industrial automatization that would “build the foundations of Communism.” What this meant was that the USSR wasn’t just directly fighting Capitalism but dealing with a world-wide reorganization of “productive relations.”

Unlike the first generation of economic theorists engaging with Western economic theory as a tool to strengthen existing Soviet institutions, this new generation shaped within “systems theory” was beginning to ask questions about the relationship between institutional arrangement, not just particular practice, and economic growth. The experience of attempting to work within a conservative framework during the late 1970s and failing laid the foundation for an alliance between them and regional Party bosses like Gorbachev and Ligachev who were eager not only to deal with the failures they were seeing in day-to-day management but also to replace the geriatric leadership at the top of the party.

The problem that remained, however, was that if institutional structures, the very basis of Soviet governance, were to be changed, what would be the basis of socialism in the USSR? What new political narrative would be needed for the Soviet Union to undertake a fundamental reform of the economy in a multilateral world? This problem would be particularly vexing as the economists that were pushing for a restructuring of the Soviet economy for it to be more flexible and open to advance it into the new postindustrial era and the new generation of Party leaders wanted to restore discipline through mass action. These tensions would dominate the tenure of Mikhail Gorbachev.

Conclusion

Building a Ruin: Cold War Political Economy and the Post-Soviet Experience in the Soviet Mirror

Stepping out of the Moscow Metro at Yugozapadnaia station, one is greeted with a strange sight—a glass skyscraper of the type one would find containing the offices of an insurance company in a medium-sized Midwestern American city, with its glass panes all broken, as if one is looking at the set of a post-apocalyptic movie brought to life. This building, known to locals as the “blue tooth” due to the hue of its remaining glass panels and its shape, stands next to the campus of the Russian Presidential Academy of National Economy and Public Administration (RANEPA), where the author was a visiting scholar while conducting research for this dissertation. RANEPA itself was founded in 1977 as the Russian Republican Government’s Academy for the National Economy, meant to train industrial cadres in the latest advancements of management science during the height of the Brezhnev era’s obsession with the curative powers of the “Scientific-Technical Revolution.” In 1989, the Academy’s rector, the ever-ubiquitous Abel Aganbegian, began planning a new program to teach international business and its associated practices to managers of the future Soviet, market economy—a modern MBA course. The campus for this Soviet Wharton School was meant to be a new kind of institution which contained both educational and commercial facilities working in synergy. Such a grand project required a campus that was just as radical a break from Soviet architecture as the new business curriculum would be from contemporary Soviet education. The new campus, a modern glass tower, would be a marked contrast with the concrete Soviet buildings that made up RANEPA’s existing facilities, thereby signaling the new era of management education and

the birth of a new, “modern” elite. Problems began immediately. As the Soviet Union collapsed and the new institution was spun off and privatized, a dispute arose over the ownership of the underlying land. With the loss of state budget support, delays in determining property ownership, and rapid fluctuations in the price of the ruble, the Italian firm contracted to do the construction was not getting paid and abandoned the half-finished project. Meanwhile, in the chaos of the 1990s, it became a hotspot for squatters and its windows a source of target practice for Moscow’s youth. In 2007, the land finally reverted to the Russian Federal Government and in 2017 rumors of the structure being soon being finished were reported in the Russian press.⁶⁰⁶

The saga of the “Blue Tooth,” a literal ruin, encapsulates many of the issues that Post-Soviet Russia faced because of the Soviet legacy and the mix of ad hoc measures and hope with which it entered the market. It is fitting that, with the advent of today’s Putinist system, the structure reverted to state control in 2007, as did much of the Russian economy, which recent estimates say is 70% indirectly or directly owned by the state or state associated figures.⁶⁰⁷ Indeed, the line between state and private ownership of medium and large enterprises has been virtually erased with most ostensibly non-state enterprises being owned by political figures as the very ownership of significant Russian businesses has become a political act. There are several theories on how Russia arrived at this state of affairs. From the right, critics like Anders Aslund have argued that it was the failure of the USSR to “lustrate” state institutions, and the security services, in particular, that was

⁶⁰⁶ “Vlasti daiut dengi na dostroiku sovetskii vysotki na yugozapode Moskvyy” *RBK Business*, October 21, 2007 <http://www.rbc.ru/business/31/10/2016/58173a3c9a79479dc215fd6c> [accessed 05/16/17]; Dolgostroi na Verdnadskom mozhet byt’ dostroen v etom godu *Interfax News*, February 27, 2018 <http://realty.interfax.ru/ru/news/articles/78664> [accessed 5/16/17].

⁶⁰⁷ Gosudarstvom i goskompanii kontrolirovuiut 70% Rosseiskoi ekonomiki” *Vedomosti*, September 29, 2016 [accessed 5/16/17]; Lucy Chernykh, “Ultimate Ownership and Control in Russia,” *Journal of Financial Economics* 88, no. 1 (April 2008): 169–92..

responsible for the reversion to repressive patterns of economic control.⁶⁰⁸ From the left, critics of “shock therapy,” such as Boris Kagarlitsky, have argued that Putinism was an inevitable outcome of a “neo-liberal” looting of Russia in the 1990s which both consolidated a new oligarchic elite and gave it the tools to discredit democracy.⁶⁰⁹

It is not the place of this dissertation to confirm or deny either of these explanations or present a detailed alternative to these theories of post-Soviet political economy. However, in this conclusion, I would like to present some paths for further research that can help shed light on these issues through the understanding of the rise and fall of “Cold War Economics.” I will suggest that one of the problems that emerged in of the failure of “conservative reform” in the mid-1980s was a fundamental inability to articulate the place of the USSR’s economy in a new “post-industrial” world and that this inability to reinvent the economic basis of state power also influenced a deinstitutionalization of the post-Soviet state as official agencies, institutes, and other organizations were replaced by personalities as rallying points for political interests. The inability of the Cold War paradigm and its descendants to move beyond a debate over planning and its discontents made questions of institutions and financing secondary to questions of markets in the abstract. As such, modern Russia entered capitalism with none of the financial infrastructure needed to effectively launch a market economy. The result was the increased influence of state and semi-state financing pools which reduced private property to a fiction and created what Neil Robinson has called “a patrimonial capitalism”—or a system of property relations in

⁶⁰⁸ Anders Åslund, *Russia’s Capitalist Revolution: Why Market Reform Succeeded and Democracy Failed* (Peterson Institute for International Economics, 2007).

⁶⁰⁹ Boris Kagarlitsky, *Russia Under Yeltsin and Putin: Neo-Liberal Autocracy* (Sterling, Va: Pluto Press, 2002).

which non-liberal actors use liberal techniques to maintain their power and ownership of the economy's assets.⁶¹⁰

A revealing exchange on the role of actual markets in Soviet economic thinking occurred at a 1985 meeting of the Council of Ministers' Commission on Improving the Economic Mechanism. Boris Katchura, Chairman of the Central Committee of the Ukrainian Republican branch of the Communist Party, told Chairman Nikolai Ryzkhov, "the general direction of the scientists is for more autonomy [for enterprise finances and decision making] but when I meet with them individually and say, 'ok we have more autonomy for the enterprises, what do we do next?' they seem to have no answer." Ryzkhov responded, "I have read through what they are saying and they have an answer. They are not saying it but what they are really proposing is an open path to the free market."⁶¹¹ The exchange between the two officials, both with roots in the management of heavy industry, encapsulated the dilemmas of radical economic reform. By 1985, when Gorbachev had taken over the post of General Secretary, a new generation of Communist Party officials had forced out earlier conservatives like Baibakov and Tikhonov. The priority of these new officials was to remobilize the population to make it work again. Following the April 1985 Party Plenum, Mikhail Gorbachev told an assembled group of reporters "I am getting letters from common workers every day talking about corruption and waste. The people demand I be merciless."⁶¹² However, the thinking that the new leadership engaged with to understand the future of the economy did not go beyond that of the program of conservative economic reformers.

⁶¹⁰ Neil Robinson, "Economic and Political Hybridity: Patrimonial Capitalism in the Post-Soviet Sphere," *Journal of Eurasian Studies* 4, no. 2 (July 2013): 136–45.

⁶¹¹ GARF f. 5446 op. 148 d. 19 ll. 143-144.

⁶¹² RGANI f. 9 op. 5 d. 16 l. 15.

This is evident when one examines the program of *Uskorenie*, literally acceleration, which has been largely blamed for some of the later failures of Gorbachev's economic reform. Later critics, and contemporaries, especially those in Gosplan, argued that the boost of investment that accompanied *Uskorenie* for burdening the Soviet budget with wasteful investment into heavy industry, rather than eliminating inefficiency. Recently, Chris Miller has attempted to explain why, despite ample knowledge on the part of Gorbachev and those intellectuals around him of the fiscal and institutional constraints on the efficiency of new investment, economic reform started with a boost in investment into heavy industry rather than a reform of agriculture or a drive for economic efficiency. Miller argues that Gorbachev believed that reinvesting in heavy industry was the path of political least resistance which would then allow him to engage in more fundamental reforms later.⁶¹³ While Miller is correct that the politics of Soviet interest groups precluded an agriculture-first strategy or one focusing on budget deficits, this purely political calculus does not address the larger ideological conundrum that Gorbachev found himself in.

In 1983, following Andropov's ascent, discussion began on a revision to the Party Program. A draft of its section on economics came across Gorbachev's desk that same year. The document argued that the Party's goals should be "to increase the productivity of labor by 25% in the 10-15-year horizon" through the introduction of new, more productive technologies. The key to this was to improve the "machine-building complex,"—the branches of industry responsible for building fixed capital inputs, and the establishment of "an energy program." In the context of increased scarcity of both raw material and labor, this program was supposed to build the technological basis for an intensification of the

⁶¹³ Chris Miller, *The Struggle to Save the Soviet Economy: Mikhail Gorbachev and the Collapse of the USSR* (UNC Press Books, 2016).

Soviet economy in which fewer resources would be spent on output. Increased enterprise independence was formulated as an adjunct goal to efficiency in order to encourage the “interest of workers’ collectives” in conserving resources.⁶¹⁴

The impulse toward efficiency did not just come from a mobilizing streak in the Andropov leadership but also an analytical framework baked deep into the Soviet worldview. The STR—an assessment of the “objective conditions” of the world economy - acted as a common reference point and catalyst for all factions of Soviet economic policy-making. The 1983 focus on “Machine Building” and the “Energy Complex” had a long precedence in discussions about “intensification” that had been most prominently discussed at the XXV and XXVI Party plenums. As noted earlier in this dissertation, the STR was implicitly a global phenomenon on which “the competition of the two systems” was now projected and thus became the means through which discussions of “postindustrial” labor conditions entered the USSR’s political discourse. This intellectual context is critical to understanding the first steps of Gorbachev’s program. Even though many of those around the new General Secretary reportedly had more expansive views of the future of the economy, their priority was to move to invest into new branches of industry. This strategy was outlined in a 1985 report from the Academy of Sciences Section on Economics that was received by Gorbachev’s office, entitled “The Main Directions on the Improvement of Industrial Organization” by S.A. Kheiman. The note argued that “only scientific and technical progress could create the material conditions for the improvement of industrial organization.” Enterprise independence and efficient management required the use of “micro-computers” (desktop processors) and “flexible production” that could

⁶¹⁴ The Archives of the Gorbachev Foundation f 5 o. 1 d. 14574

switch production on and off and retool quickly. This re-equipment of Soviet industry was a necessary precursor to having direct contracts take over from planned supply as the major engine of the economy. The re-tooling of American plants during the 1970s, it argued, was the reason that the United States' economy continued to grow while Soviet output was stagnating in the era of the STR. This was especially true in the critical area of machine building where Soviet enterprises were under-specialized, often had redundant functions, and often still relied on outdated technologies and manual labor.⁶¹⁵ In 1986, Aganbegian, often credited as a major intellectual force behind Gorbachev's policies, wrote that in a period of diminishing natural and labor resources, the USSR both had to boost its investments in new technologies while at the same time beginning steps to "restructure the economic mechanism."⁶¹⁶

By 1987 these efforts had failed to produce results. While experimental enterprises, that had been working under "normative plans" and were self-financing since 1984, had shown good results in increasing labor productivity in the first year, these gains were disappearing in the second year of their operations. This was because of problems in their initial conditions such as the fact that credit and financing rules were not overhauled and because of this, results were mostly related to the supply priorities of enterprises rather than better financial practices or investments in more technology-intensive production processes. Gosplan's new Deputy Director, Doctor of Economic Sciences S.A. Sitraian, pointed out that "enterprises had not yet moved to full internal cost accounting" as

⁶¹⁵ The Archives of the Gorbachev Foundation f. 5 op. 1 d. N/A "Analiticheskii doklad podgotovlin otdelenium ekonomiki AN SSR 'Osnavnye napravleniia sovershenstvovania proizvodstvennoi organizatchachii SSSR.'"

⁶¹⁶ "Generalnoi kurs ekonomicheskoi politiki," *Ekonomika i organizatchiia promyshlenovo proizvodstvo* no. 11, (1985): 3-31.

“ministries still stick their head into their business.” The next phase of the reform had to move to installing a “system-wide” approach to cost accounting and financing rather than focusing on the processes of individual branches and enterprises.⁶¹⁷ In November 1986, the Council of Ministers concluded that “inspections have shown that there have been significant inadequacies in the preparations of various ministries in the steps they have taken to move their enterprise onto a cost-accounting and self-financing system and that many are approaching the question of enterprise independence only formally.”⁶¹⁸

In April 1986, a frustrated Gorbachev exclaimed to a meeting of the Politburo “remember back in 1947 we had a law about socialist property. If you took a loaf of bread, you got five years in prison. Today, everyone just takes things and why not, the management steals so why shouldn’t the workers. We need to create a law that defends socialist property but through economic means.”⁶¹⁹ Gorbachev’s outburst testified to the larger problem of legality and state capacity at the heart of economic reform. Since Khrushchev’s failed attempt at establishing a legal basis for Soviet enterprises’ rights, the question of “state property” and its final owner, so central to the very conception of the Soviet economic system as “a mechanism” had never been resolved. In the absence of such a law, economic reform was carried out under the power of administrative decrees from the Council of Ministers and the Central Committee. This left the question of the “rights” of the enterprise open and required the implementation of economic reform to move on a case-by-case, ministry-by-ministry basis. The lack of an economic code, which had once bothered Brezhnev, was now coming to haunt Gorbachev.

⁶¹⁷ GARF f. 5446 op. 147 d. 19 ll. 96-100.

⁶¹⁸ GARF f. 5446 op. 147 d. 18 ll. 146-147.

⁶¹⁹ A. Chernayev et. al. *V politburo KPSS: Po zapiskam Anatolii Cherniaeva, Vadima Medvedeva, i Gregorii Shakhnazarova* (Moscow: Alpina Business Books, 2006), 36.

The work on a Law on State Enterprise began to accelerate in late 1986. At a meeting of the Politburo that September, Gorbachev specifically stated “that the people are awaiting a law” on enterprise autonomy that would move enterprises “to full cost accounting.”⁶²⁰ In October, Gorbachev went further, explaining to the Politburo that in his view of enterprise reform, enterprises would be able to sue their suppliers in court and seize the property and capital of their counterparties for failed delivery or loan payments. Anatoly Dobrynin was shocked: “Are we going to create a new form of property now? Is this now ‘a threat to socialism?’ We need to ask ourselves how these new practices will begin to have an impact on our theoretical understandings of what a socialist society is. This is something we need to speak to the Academy of Sciences about.” Gorbachev agreed: “This is a fair question and the logic of self-financing will bring up many issues. We may even have to begin talking about bankruptcy. This is something we should put to the [Academy of Sciences].”⁶²¹

Dobrynin’s question encapsulated the existential questions of political economy that re-emerged once the Soviet state began to try to codify its system into law. The presence of these new concerns meant that the technocratic impulse that had dominated the post-*Tovarnik* economic sciences began to recede into deeper questions of social organization. The law that emerged in March 1987 was complex and ambiguous. Commenting on the draft, the Academy of Sciences Institute on State and Law concluded that “as it stands, many of the positions outlined in the law are either formulated as economic demands or general principles. The draft lacks detail on the realization of this idea.” The law needed “a stricter definition of the rights of the enterprise” which could

⁶²⁰ Ibid., 79.

⁶²¹ Ibid., 91.

form a basis for “guaranteeing their interests and coordinating their actions with other enterprises.” The lawyers warned that “this law must just be just one of the stars in the legal universe.” “The experience of the 1960s,” they continued, “had shown that without other acts that would change the functions of the ministries, Gosplan, Gosstnab, and other higher standing organs, the law would not function.”⁶²²

This opening led to a far more open discussion of options available for the USSR’s economic system. For example, a 1986 report by Petryakov and his colleagues at CEMI, entitled “Steps to Create a New Economic Mechanism,” argued for a wholesale reorganization of planning under which the primary instrument for state economic policy would be the twenty-year plan for technical and scientific progress. Ministries would be eliminated and turned into organizations working on integrating new technology rather than directly planning and organizing industrial and enterprise practice. Moreover, enterprise independence should be accompanied by a major overhaul in the credit system and an expansion in the use of bank loans to finance new investment, rather than direct infusions from the state budget. Under these conditions, Gosbank needed to step away from its role in directly issuing funds and become “a bank of banks”—in other words, a Western-style central bank. This would mean that an economic reform was not just a matter of enterprise independence but a “reform of the state budget” to exclude bank reserves from the total budget line, allowing them to operate as an independent source of funding.⁶²³ This same sentiment was shared by Abalkin when he forwarded a note to the Central Committee’s Department on Economics and Planning, advocating the advantages of the creation of “commercial credit”—a system of banks that would issue profit-based loans—

⁶²² GARF f. 5446 op. 148 d. 33 ll. 153-154.

⁶²³ ARAN f. 1959 op. 1 d. 1115 ll. 3-29.

as the underlying necessary step for the establishment of enterprise independence and self-financing.⁶²⁴

Just how quickly things were changing was on display with the 1988 “Law on Cooperatives,” which effectively legislated the right of citizens to form “cooperatives” or essentially, private small businesses. The terms on which leading Soviet economists spoke about this decision is revealing about how they thought about the existence of private enterprise. Writing in the introduction to a 1989 book called *The Individual Cooperative Sector: Perspectives for Development* [Individual’no kooperativnyi sektor: prespektivy razvitiia], Aganbegian noted:

The cooperative movement and 'small business' play an important role in developed economies. They also have a strong social significance. The flexible response of cooperatives and small businesses to changes in the economy, in other words, changes in demand gives them very good economic results. In many sectors, in both socialist and capitalist economies, they respond to consumer demand much more effectively than state enterprises or large firms. The foreign experience shows that small businesses not only adopt new technology faster than large companies but also play a major role in innovation.

A co-author continued that, “large corporations (in the USA, Japan, and Western Europe) do not destroy small businesses but rather work with them in a single system of production. “Many countries,” it continued, “have developed a national system of financially stimulating the development of small business. Such programs provide small businesses with tax breaks, provide them with credit at lowered rates and with direct financial aid. For example, in Great Britain, the government pays 30-35% of the expenses associated with

⁶²⁴ ARAN f.1877 op. 11 d. 939 ll. 104-106.

the creation of new jobs by small businesses.” While capturing some of the surface necessities of a system of private business, it never argued how to adjust the concept of a “national economy”—the economy as one big factory—would integrate the existence of these new entities. The authors assumed that these new institutions would simply integrate into the Soviet financial and banking system rather than create inertias and pressures of their own.⁶²⁵

Yet, things did not go so smoothly. An example of how these problems played out came in the form of a report from the Ministry of Finance:

Fig 7.1: Planned and Unexpected Sources of Income to the Population for 1988 in Billions of Rub.

Source	Planned for 1988	Expected actual sum From 1988	Difference from Planned
Wage Fund	11	22.5	11.5
Unplanned uses of Central Funds		6	6
Bonuses for Increasing Labor Productivity	6.9	11.6	4.7
Monetary Incomes from Kolkhoz Sales of Ag. Products	2.3	3	0.7
Income from Financial Assets	0.7	2.7	2
Other Incomes Including those that cannot be captured in balances	-0.98	5	5.98

Source: GARF f. 5446 op. 150 d. 1 l. 58

The Ministry of Finance reported that three areas were most responsible for unexpected overruns in the money gained by the Soviet population—increases in paid wages, incomes

⁶²⁵ Abel Agambeygian et. al., *Individua'lno kooperativnyi sektor: perspektivy razvitiia* (Moscow: Ekonomika, 1989) 27-52.

from financial assets, and incomes unaccounted in surveys—were tied to both the perennial problems of economic reform but also to qualitative change unleashed by the economic reforms. Half of the unplanned increases in the wage fund were related to the old problem of enterprises rewarding their workers for increased profitability caused by their ability to increase prices while not changing their overall productivity. What was new, however, was that a significant portion of this (3.2 billion rubles) was linked to the growth of the cooperative sector which was deriving its profits by purchasing goods from wholesale markets, often using non-circulating enterprise script currency, and selling them for circulating rubles on the consumer market. This meant that claims in non-circulating currency were now redeemable in circulating state currency, appearing as a debit on the government's balance sheet. The spread between these currencies was not important throughout the postwar period as Gosbank was very good at preventing seepages from one unit of account to another making them a largely fungible and thus maintaining a uniform money supply. However, with new intermediate institutions now legislated into law, these spillovers began to have an effect, creating arbitrage opportunities and therefore an increase in the issuance of liabilities non-state liabilities redeemable in state currency. Acts to liberalize bank lending were backfiring as consumers took out bank loans to finance the purchases of consumer goods rather than to force the expansion of private housing construction, as had been intended. Given these changes, the ministry admitted that five billion rubles of these accounts were coming from sources that could not be captured by their accounting methods due to the emergence of new kinds of financial practices.⁶²⁶

⁶²⁶ GARF f. 5446 o. 148 d. 1 l. 55-57.

A report issued later that year further detailed what was happening. “Measures to increase the independence of enterprises” had created “an inflow of means of payments” that “were outstripping the total value of goods on the markets.” Enterprises were taking advantage of their monopolies by increasing prices and thereby worsening the situation. As a result, the population was holding more and more of its savings in cash, which as a liability of the state, was increasing the budget deficit. The situation was complicated by the fact that the Law on Cooperatives had allowed privately run “cooperatives” to access enterprise script currency and convert it to circulating currency. This channel of monetary expansion was estimated to be at three billion rubles over the course of 1988.⁶²⁷ In the period from January to May 1989, this sum had reached six billion. The problem, Gosbank reported in a 1989 summary of household finances, was that the five-year plan had not expected the added volume of money supply coming from the cooperatives.⁶²⁸

During this crisis of the fiscal state, Aganbegian admitted that Soviet economics did not have the answer to these problems. Unfortunately, the newly appointed head of the Section on Economics said, the “transition to the new system in 1988 was not going well.” The problem was Soviet economists and policy makers were “taking one step back for every step we take forward.” Rather than “having a real financing system” based on banking and credit for example, Aganbegian noted, “we have a new system of redistributing the state budget.” Bogomolov expressed his frustration by saying that “we now acknowledge that markets are a part of our socialist economy but things still somehow

⁶²⁷ RGAE f. 1562 o. 41 d. 3262 l. 9-22.

⁶²⁸ RGAE f. 2324 o. 33 d. 741 l. 54-58.

don't advance. Markets are still associated with something alien to our ideology. This is a significant brake on our economics.”⁶²⁹

The emergence of a greater role for markets through enterprise self-financing and cooperative activity eventually brought in social questions about the future of the Soviet state. How would an institutional infrastructure designed under Stalinist industrialization, whose contours guided the process of state power in the USSR, transition to any kind of market society? In 1989-1990 two officials presented ideas for a future Soviet political economy. One, written by Gorbachev's advisor, Georgii Shakhnazarov, wrote his boss a note arguing that the government needed a new social base of support: the managers of large industries and cooperatives. This group, Shakhnazarov argued, was “awakening to its influence” and could become the backbone that supported Gorbachev's policies of transition to a market economy—the Soviet Union's own capitalists.⁶³⁰ Another was written by Sitraian of Gosplan, who proposed a new system for organizing industry outside the traditional institutions of the Soviet state while maintaining political stability and the power of the government as the prime mover of economic life. The most “strategic” areas of production, such as gas, oil, nickel, and agro-chemicals, would be converted into quasi state-owned enterprises with market monopolies. These companies would be the “financial and economic bedrock of state power” with the equity and assets of the company held hands of politically loyal managers and government approved private figures. This would allow the government of the USSR to regulate the economy through “direct distribution rather than the free market” while still taking advantages of market efficiencies in other,

⁶²⁹ Ibid.

⁶³⁰ The Archives of the Gorbachev Foundation f. 5 o.1 d. 529.

“non-strategic” areas.⁶³¹ Sitraian’s note was prescient. Russia’s economy indeed became a system dominated by insiders whose access to the fruits of private property became determined by the state while a consumer market has indeed come into being.

Does this mean that the economic reformers failed? Perhaps, as critics of Yeltsin-era reforms argue, the most radical agenda and the shock privatization of the 1990s were an overreach that spurred a response in which the population accepted a slow retreat into authoritarianism in exchange for the delivery of consumer goods. Perhaps embedded security interests did subvert the liberal moment, as defenders of shock therapy have argued. However, a tantalizing possibility is that contemporary Russia is the ultimate fulfillment of Soviet economic reform as it came to be conceptualized in the 1970s. It is a state-run economy that ultimately gains some efficiencies from markets and does not depend on direct orders from the state. Control over state enterprises and the larger economy is indeed transmitted through financial systems rather than through gross targets. Following Charles Maier’s dictum that we treat economic ideas as informed by the power of interest groups, we can begin to understand the failure of the liberal experiment in Russia and the post-Soviet space as at least partially determined by the fact that it was being implemented by illiberal actors whose interests were structured by the Soviet institutional system, stripped of its ideological context.⁶³² In other words, Russia’s contemporary illiberal political economy was baked into the very “liberal” economic ideas that dominated the post-Soviet space in the wake of the USSR’s collapse. Indeed, a telling feature of post-Soviet economic discourse is the continuing absence of a viable financial-institutionalist

⁶³¹ GARF f. 5446 o. 162 d. 2 l. 63-64.

⁶³² Charles S. Maier, *In Search of Stability: Explorations in Historical Political Economy* (Cambridge: Cambridge University Press, 1987), 6–7.

approach to economics of the type championed by Yakov Kronrod. Answering the exact processes of how and why these processes occurred, however, requires further research.

These questions testify to the ongoing importance of the many permutations of the Soviet legacy for understanding what came after it. Over the course of the Post-Stalin period, the Soviet state worked to incorporate new ways of conducting economic policy without undercutting the institutional practices that were becoming indistinguishable from Marxist-Leninist ideology itself. Faced with a changing global order that increasingly emphasized the importance of prosperity and economic development, Soviet leaders, for a time, successfully changed the narrative of the USSR's competition with the West to accommodate openings for innovative thinking and promoting stability. The Soviet Union would now beat the West—particularly its leader—the United States at its own game, prosperity, thereby showing the world the superiority of the socialist planned economy. This, however, opened rifts between the institutions created under Stalinism to industrialize the Soviet Union through the mass mobilization of material and people—the production ministries and the planning agencies—and new organizations staffed by second generation Socialist intellectuals dedicated to transforming the Soviet order to win the “peaceful socio-economic competition” with the West. This fracture over economic policy was difficult to resolve as the Soviet Union lacked a legislative apparatus which would allow these tensions to be resolved in the drafting of policy. Thus, the practice of economic policy making in the USSR turned into a carousel of initiatives that were never carried out as widening fault lines between factions within the elite throttled attempts to radically rethink the practices of central planning and to stymie the implementation of those limited reforms that were attempted. The result wasn't just economic stagnation but an increasingly weak state whose

formal institutions lacked depth forcing it to rely on *ad-hoc*, informal arrangements rather than statutory law.

This framework allows us to insert the Soviet Union into the larger history of the Euro-American political-economy following the Second World War. While not a participant in the Bretton Woods system or the financial globalization that followed its collapse, it had its own, parallel issues. The Soviet Union tried to use its particular economic institutions to try to create an analogue to post-war embedded liberalism and then to tackle the problems of a postindustrial society. The USSR's failure at some, though not all, of these goals should not exclude it from being a central part of this larger history. Indeed, hindsight has obscured just how potent the USSR's economy looked at its height and how popular ideas of an updated, humanized planned economy was on both sides of the Iron Curtain. While a global history of economic planning remains to be written, the lens of political economy lets us see that the international dimensions of Soviet history must be taken seriously both for understanding the history of the USSR and the history of the post-1945 global order

APPENDIX A: Consolidated Income Statements of Major Economic Sectors

*Standard T accounts with assets on the left hand side and liabilities on the right

Figure 8.1: Pre-1965 Income Statements

Household Sector		Consolidated State Budget		Enterprise	
Wages	Labor	Tax Income	Interest Payments on Bonds and Sverkassa Deposits	Enterprise Fund at Ministry	Turn Over Tax
Bonus Payments		Loan Repayments	State Bank Loans	Goods Produced	State Goods Orders
Fringe Benefits	Taxes	Physical Goods Received	Foreign Exchange (Hard Currency) Holdings	Capital Investments	Wages
Sverkassa Deposits	Turn Over Tax	Current Account	Capital Investments	Loans From State Banks	Loan Repayments
State Bonds		Net Balance			
Cash-in-Hand					

Figure 8.2 Income Statement Post-1965 Reforms

Household Sector		Consolidated State Budget		Enterprise	
Wages	Labor	Tax Income	Capital Investments	Wage Fund	Turn Over Tax
Bonus Payments		Loan Repayments	Interest Payments on Bonds and Sverkassa Deposits	Socio-Cultural Fund	State Goods Orders
Fringe Benefits	Taxes	Repayments for Capital Investment	State Bank Loans	Technical Development Fund	Wages
Sverkassa Deposits	Turn Over Tax	Physical Goods Received	Foreign Exchange (Hard Currency) Holdings	Goods Produced	Loan Repayments
State Bonds		Current Account	Capital Investments	Capital Investments	Repayments for Capital Investments
Cash-in-Hand		Net Balance		Loans From State Banks	Accounts Deliverable
				Accounts Receivable	

Figure 8.3 Post-1988 Income Statement with Cooperative and the Private Sector

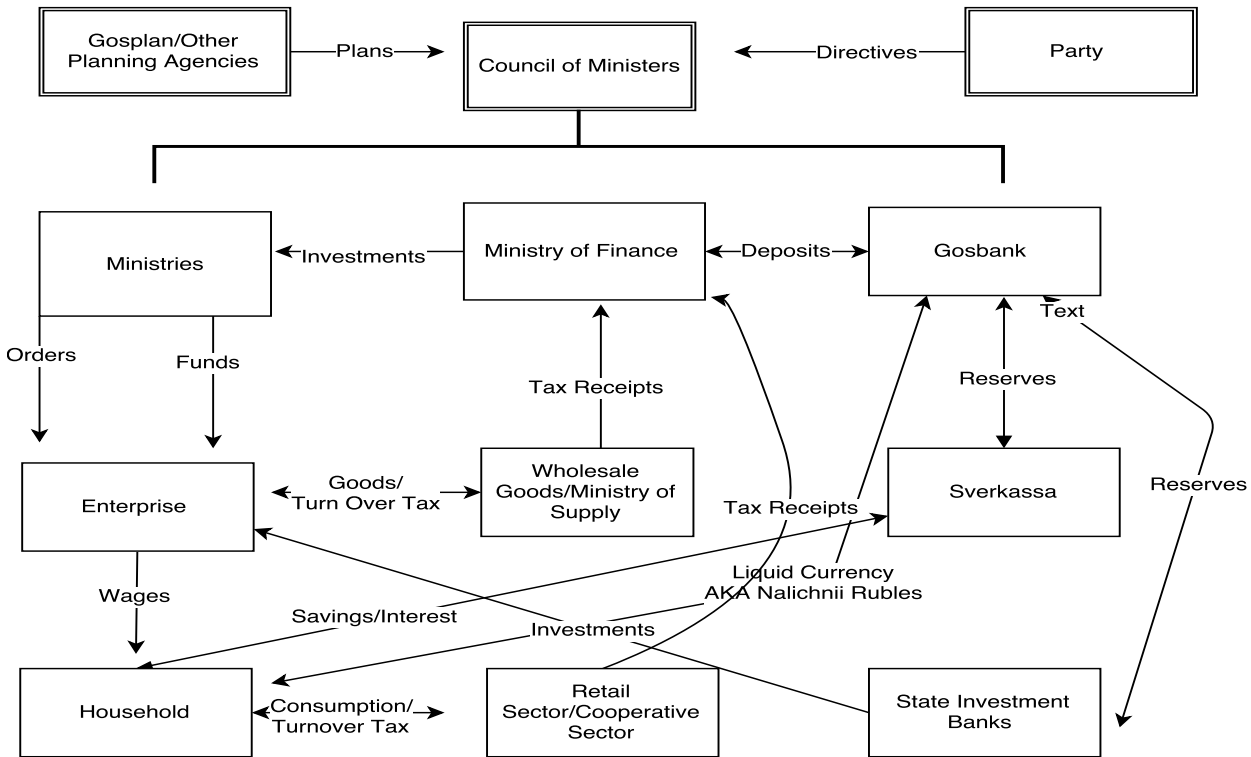
Household		State and State Banking System		State Enterprise	
Savings	Taxes	Taxes	Savings	Earnings	<i>Capital Borrowing</i>
Wages	Consumption	<i>Capital Lending</i>	Bonds	<i>Enterprise Funds</i>	Wages
Bonds				<i>Wholesale Market Goods</i>	<i>Koop Payment</i>
Shares				<i>Koop Contract</i>	
		Coop/Commercial Market			
		<i>Koop Payment</i>	<i>Ent. Contract</i>		
		<i>Goods</i>	Shares		
		Revenue	<i>Wholesale Purchases</i>		
		<i>Wholesale Goods</i>			

Italics: Nenalichnye or enterprise script money.

Bold: Nalichnye or liquid cash.

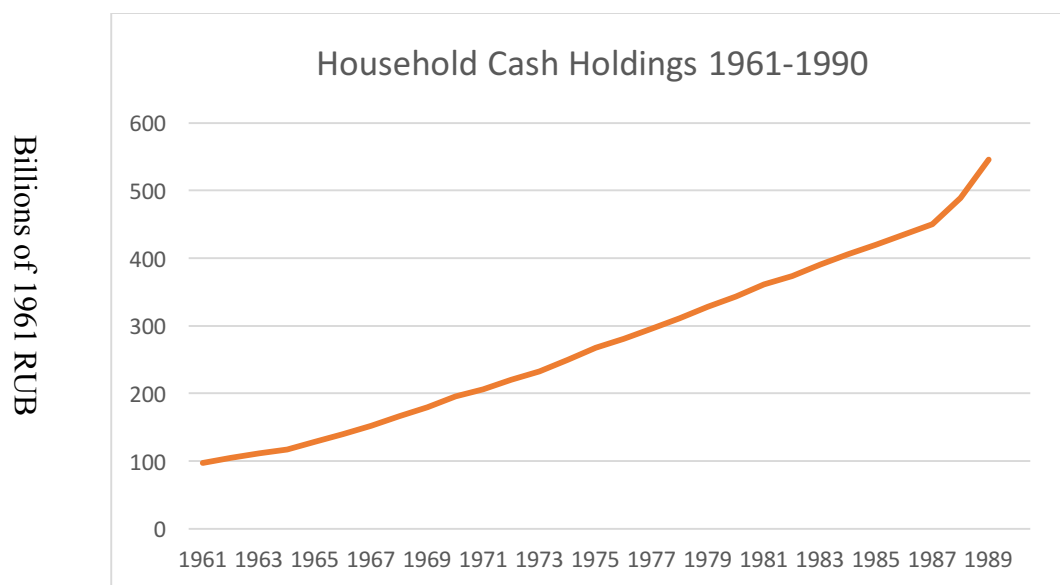
APPENDIX B: Circular Flow and Decision Diagram of Soviet Fiscal Institutions

Figure 8.4



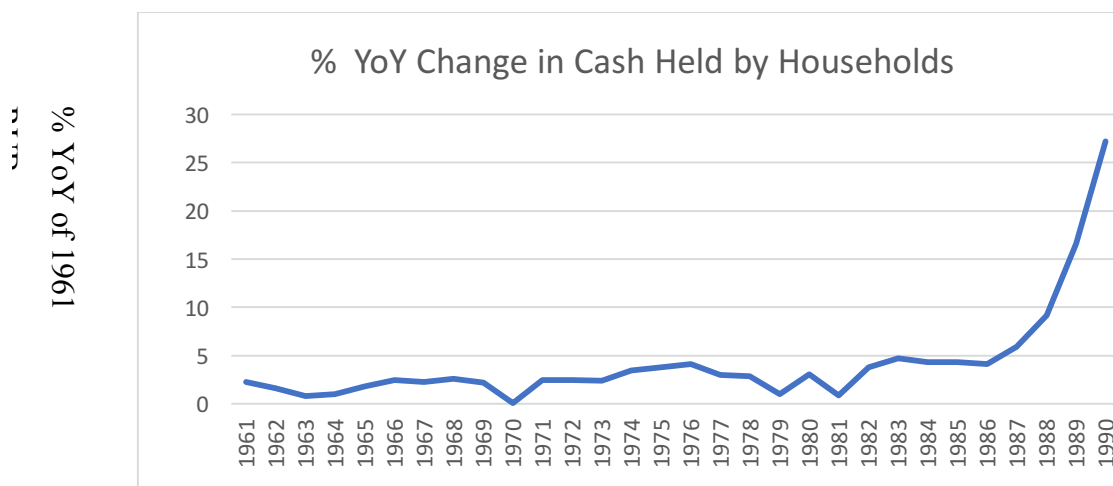
APPENDIX C: Household Cash Holdings and Consumer Spending

Figure 8.5 Cash Holding by Soviet Household 1961-1990 in Billions of 1961 Rubles



Source: Iu. Kashin et. al. *Denezhnyie doxody i razhody naseleniia 1924-1990* (Moscow: Central Bank of the Russian Federation, 2006), Author's Calculations.

Figure 8.6 Cash Holdings by Soviet Households in Percent Change from Previous Year



Source: Iu. Kashin et. al. *Denezhnyie doxody i razhody naseleniia 1924-1990* (Moscow: Central Bank of the Russian Federation, 2006), Author's Calculations.

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