

Causes and Origins of the Collapse of the Former Soviet Union

An Honors Research Thesis

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Abstract

Scholars today continue to debate over specifically how the Former Soviet Union collapsed in late 1991. Unfortunately they must depend on poor Soviet data that is largely unreliable and faulty. Much of it is ambiguous and therefore cannot be trusted with great significance. This is a theoretical analysis and empirical study. I postulate that the weak socialist fundamentals that supported the Soviet Union led it its imminent collapse. The Soviet Union economic model promoted excess centralization, vast amounts of inefficiencies and faulty priorities. External factors and economic shocks also prevented the Soviet Union from allocating their resources to their best uses. The Cold War, the largest external shock to the Soviet economy, resulted in large defense spending, which caused this internal economic collapse. I attempt to determine to what extent the Cold War impacted the economy in the long run and conclude that socialist theories fail to respond to such shocks. The Soviet Union deviated from these socialist principles, and I show this by examining Soviet behavior, including the theory of cognitive dissonance and how they ignored long-term problems (blat), which only exasperated the challenges Gorbachev faced. I draw appropriate conclusions of Gorbachev's economic reforms, in that they were inconsistent with economic models of Leninist-Marxist theories.

Introduction

This work is divided up into various sections, each of which acts as a “variable” within a much broader equation, answering the question: which factors led to the collapse of the Soviet Union? Part one consists of macroeconomic variables, including output per worker (and subsequent income per worker), the various Gross National Income (GNI) levels, and special characteristics of centralized planning. Part one also contains detailed analysis of early Soviet mistakes, such as War Communism and the brief era of the New Economic Policy, or NEP. Later sections debate the costs and benefits Soviet society faced as a result of centralized planning, including trade imbalances and capital growth levels. Each variable is weighted to see if it improved, hindered, or had little to no effect on social welfare. Analysis of these costs and benefits is provided.

Part two analyzes economic and political shocks to the Soviet Union. Primary

fundamentals of the Soviet system were not coordinated to respond to shocks to its economy (e.g. natural and man-made disasters, wars, political hostility, etc.) since prices were fixed, dampening short term economic growth. The most important variables analyzed herein are (1) military expenditures during the Cold War, (2) Gorbachev's attempt to revive the economy by implementing policies that disrupted socialist fundamentals, most notably perestroika and *glasnost*'.

Part three deals primarily with microeconomic variables. I attempt to show how the macroeconomic variables in part one changed social behavior *in the long run*. It was common in the Soviet era to work around the inefficient system to get even basic goods and services. One of the most troubling behaviors was *cognitive dissonance*, or the ignorant misunderstanding and even acceptance of serious problems. Another behavior that hindered the Soviet economy from recovering was the notion of *blat*, or an informal network of acquaintances to accomplish certain tasks. Both of these behavioral patterns, in their own unique ways, are correlated with the same problems related to centralized planning, which even dampened Russia's success as an emerging country in the 1990s.

Finally, part four reaches the conclusion that socialist model implemented in the Soviet Union was bound to fail because of its (1) obsession to maintain political power at all costs, (2) faulty priorities, which led to inefficiencies, (3) high emphasis on military and defense spending, and (4) inability to handle external shocks. For the purposes of this thesis, I have divided Soviet economic history into four broad periods, as shown in Table 1:

Table 1 - Soviet Union Economic History, 1917 - 1991

Period	Title	Years	Policies and Major Events
1	Primitive Socialism	1917 - 28	Civil War, War Communism, NEP
2	Stalinism	1928 - 53	Start of 5 year plans, Depression, WWII
3	De-Stalinization	1953 - 85	De-centralization, Stagnation, Cold War
4	Perestroika	1985 - 91	Economic and political reform, revolution

Source: Author

Politics and economics go hand in hand, particularly when the centralized government is controlling the economy (the inputs and outputs). Many political and economic policies are closely intertwined, and it is important to see and understand this correlation. Let us begin in period one, or the early attempt to establish socialism.

1. Macroeconomic Planning in the Soviet Union

1.1 The Early Policies of Period One

From the very outset the Soviet Union failed at providing simple consumer commodities. The Bolshevik party faced many challenges after the successful October revolution in 1917. Lenin, noticing that much of the world was preoccupied with World War I, saw a “window of opportunity” to fully implement his propaganda movement to transform Russia “from capitalism to socialism, not only politically but also socially and economically” (Bandelin). Leninism, as it would be known, was “Marxism in the epoch of imperialism and of the proletarian revolution” (What is Leninism?).¹

1.1.1 War Communism

During the Russian Civil War (1918-21), War Communism, the economic policy at that time, was a complete disaster. It attempted to completely eliminate private production and trade. This caused extreme bitterness towards the new regime. The hard-line Communists were determined to eliminate any capitalist sector, because as long as capitalists stayed in Russia, profits were possible, giving capitalists a share of power that could potentially be a strong enough influence to even challenge the young regime (Kennan). Nonetheless, the civil war made the country worse off economically and experienced more casualties than that of World War I (4 million to 20 million) (Bandelin). This was largely due to dictatorship imposed by the Communists. This coercion, as Lenin believed, was only necessary during the transitional phase from capitalism to socialism, and finally to Communism, the final result.

¹ i.e. it is simply the *Russian* application of Marxist theory, found in the Communist Manifesto (1848) that Lenin implemented in the October Revolution of 1917.

Further, coercion was required because these political, economical and social changes clashed with the citizenry, where it was crucial “to protect socialist gains until Communism was realized” (Bandelin). This was largely due to Bolshevik ideology: all truth is interconnected, throughout all sciences, and physical coercion is justified because it brings about social change. Kennan once stated that “[the Communist regime] alone knew what was good for society and that they would accomplish that good once their power was secure and unchallengeable” (Kennan). In other words, they would not tolerate any activity that had any chance of gaining momentum to rival the Communist Party (Kennan). Thus coercion usually achieved its goals, but it came at a high cost to society. The huge economic growth in the 1930s was Stalinism at its best, partly because force was taken beyond what was required. Stalin wanted to quickly alleviate Russia from its backwardness and become a highly-industrial society within a short amount of time, which poses the question: what is an appropriate growth rate for a given economy? Is too much short-term growth bad for long-term growth?

Lenin persuaded many throughout the world that capitalism was inheritably bad, and what he called “super profits” in advanced economies were responsible for exploitative activities taking place in less developed economies (Sowell, *Economic Facts and Fallacies*). This was Lenin’s political argument for income differences, which, according to Sowell, was not based “on empirical evidence and logic” (Sowell, *Economic Facts and Fallacies*). He, like other early leaders, was so adamant in power-grabbing and retaining that power that they spent little time figuring out their *long-term* economic plans. In this primitive stage of socialism, leaders lacked the following basic tasks in planning a socialist economy, which rules and conditions Marx had established decades before:

- (a) Establish the social needs of the people and strive to achieve them.
- (b) Know how to effectively allocate resources to their most efficient use, in both the short and long term.
- (c) Strive for high economic growth relative to the growth of output and consumption.

(d) Balance the various sectors in the economy in an appropriate ratio to each other (i.e. do not shift all available capital and labor to one sector while leaving few elements remaining in the other sectors).

(e) Maintain the best conditions for economic, political, and technological stability (Berri).

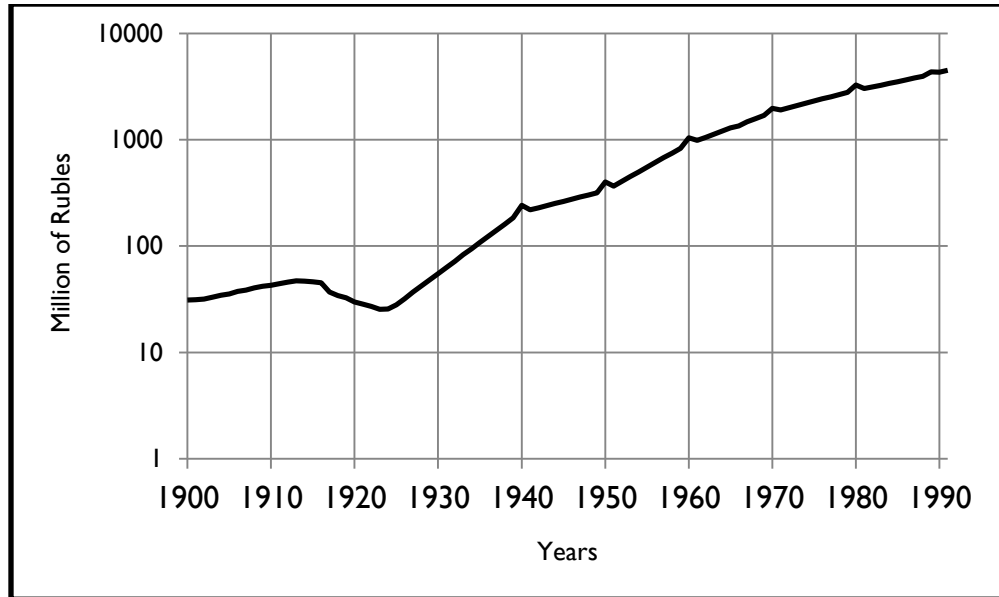
These conditions could not be established for several reasons, largely due to external factors that the young socialist economy simply could not handle:

Russia, at the end of the 19th – beginning of the 20th century, was in the process of embarking on the path of Modern Economic Growth. Russia's per capita GDP growth rates became considerably higher, although they remained very unstable. Second, the world was also changing, and expanding international competition compelled many advanced states to enhance conventional and human capital formation and enlarge productivity growth. Third, in order not to go on falling behind the West, Russia ought to have made a lot – in carrying out much ‘deeper’, comprehensive market-oriented reforms, in creating vital, sound institutions and activating civil society. However, up to the First World War its developmental model remained very unbalanced. There was great and rising divide between modern ‘westernized’ and traditional sectors and substantial income inequality (1 percent of the population possessed 16 to 20 percent of national income). The managerial, entrepreneurial and general cultural level of the Russian population was on average abysmally low. The war activated destructive forces in Russian society, which was not prepared for such an ordeal (Meliantsev).

Suppose, for example, that the growth rate of the country is not known: centralized planners would then be allocating resources to the wrong industries. This would not be in line with a balanced ratio of the multiple sectors in the economy and would violate rules (b) and (d). Further, if economic leaders pass proposals that deviate from socialist norms (as Gorbachev had done in the 1980s) then rule (e) would be violated. This is not some abstract idea. In reality this did happen, and research has shown the Communist Party of the Soviet Union (CPSU) was largely inefficient for these very reasons (Sowell, *Basic Economics: A Common Sense Guide to the Economy*). The early revolutionists put much of the blame on the Civil War itself. It was a serious hindrance to their

advancement of Communism. Figure 1 shows the decline in Gross National Income (GNI)² between 1916 and 1924:

Figure 1 - GNI Growth in the Soviet Union, 1900 - 1991



Source: Simchera, Vasily. *Razvitie ekonomiki Rossii za 100 let*. Moskva: Rossiskaya Akademiya Nauk, 2006.

Lenin openly admitted the gross errors his party had made during this time. He stated “We reckoned – [or] we presumed without reckoning adequately – on being able to organize the state production and the state distribution of products on communist lines in a small-peasant country directly by an order of the proletariat. Experience has proved that we were wrong” (Riha). In other words, the Soviet Union was still primitive for such radical economic policies, on both macro and microeconomic levels. Lenin and other revolutionists knew that if the economy continued to deteriorate the country would collapse and the 1917 revolution would come to naught. They formulated a plan they envisioned would transform the Soviet economy that would ultimately lead them to communism.

² GNI measures national economic activity. It is “the total market value of all final goods and services produced by the residents of a country in a given period of time” (Black, Hashimzade and Myles). It can also be referred to as GDP or GNP. It is synonymous to national income.

The failure of War Communism is an important variable in our equation because it was the first of many policies that contributed to the shortages that would define the Soviet era. It shows that the centralized government never put consumer demands before their own. Agricultural surpluses, a form of profits, were not allowed whatsoever. Surpluses, had they been legal, would have benefited society. But the young regime would not tolerate “super profits.”

1.1.2 The New Economic Policy (NEP)

As a result of this policy failure, Lenin announced in the 10th Congress of the All-Russian Communist Party (ARCP) in March 1921 a form of state capitalism known as the New Economic Policy, or NEP. Now effectively a despotic form of government, the Soviet Union adopted this form of capitalism, a “U-turn” policy, as it was just another road to socialism. This was not, however, a return to capitalism, rather it was “revitalization... through entrepreneurial initiative[s]” (Bandelin). Marx had predicted that a world-wide revolution would begin in industrial, stable economies before spreading to other areas. Lenin knew that the only way to achieve this world-wide revolution and to get the economy booming again was to soften up on politics, and create an entrepreneurial atmosphere *in the short run*:

“The problem is that a responsible Communist, even the best, who is known for honesty and dedication, having suffered penal servitude and who did not fear death, does not know how to trade, because he is not a businessman. He has not learned to trade, does not want to learn and does not understand that he must start learning from the beginning ... [He] does not know business, and does not even know that he does not know it.” V.I. Lenin (Bandelin).

By implementing the NEP, Lenin hoped to be able to eliminate the inefficiencies of the bourgeoisie, which the revolution should have achieved. Instead, he replaced those inefficiencies with his own!³ Vital to socialism was the “guidance of bourgeois experts

³ This is because many of his ideas were theoretical in nature and not based on empirics. In addition, Soviet propaganda was built on these very ideas, deceiving many and changing Russian mentality.

in technology and management experience,” as this resulted in “greater labor productivity” (Bandelin). But this was not the long term goal. A sophisticated social-democratic system would later “equalize the distribution of profits through the seizure of ownership⁴ of the economic infrastructure and natural resources from the bourgeoisie and reforming key institutions and industries to serve the needs of the proletariat and poor peasantry” (Bandelin). Lenin understood that the only way to abolish bourgeois oppression of the working class would be to educate workers, increasing their capabilities (skills), which ultimately allowed for greater efficiency to transpire in the production process.⁵ Lenin was convinced that only a *Soviet* government would rid the people’s negative view of government, since the Russian government and bourgeoisie for years had oppressed and robbed the Russian people (Bandelin). Hence the road to socialism was implemented in this manner.

Another serious problem confronting the early revolutionists in the Soviet Union was the sheer economic *backwardness*, a word often used by 19th century Russian novelists (e.g. Dostoevsky, Turgenev, and Tolstoy, to name a few) when describing Russian society in their works. P. Tkachev wrote that “...the [state’s] power is only apparent and imagined; it has no roots in the economic life of the people, and it does not embody the interests of any class” (Freeze). The fundamental reason for the revolution was to avoid the dissolution of the commune, which represented most of the population at that time.

After the establishment of communism, revolutionists knew that to achieve strong economic growth, they would need to invest in heavy industrialization: the Soviet Union had been lacking in and were in critically low levels of machinery and

⁴ It is important to remember why Lenin sought a revolution in Russia at all. In his 1901 pamphlet “What is to be Done?” Lenin describes terrible injustices heaped upon the working class brought on by the bourgeoisie. In an attempt to rally a new “democratic party of reform,” Lenin hoped to combine a party of reform and a party of revolution (V. I. Lenin). He was opposed to any separation of politics and economics. In his view the tsarist regime was to be overthrown to make way for socialist economics to take root. This in turn would create opportunities for the working class, a true form of democracy. The bourgeois could not possibly exploit the working class as they had under the tsarist capitalist system.

⁵ i.e., to alleviate Russia’s backwardness, it needed enormous number of engineers and technicians and various schools to train them. Nearly all railway workers during the 1930s had at least some technical education, which enhanced the interconnecting the vast regions of the Soviet Union.

foodstuffs during WWI and the subsequent Civil War. In addition, cooperation with the peasantry in the Russian countryside was culturally significant. If enough uprisings were to occur, chaos would ensue, thus threatening the very outcomes of the revolution itself. Essentially, the NEP allowed for free exchange of commodities to occur, thereby increasing the number of peasants,⁶ creating a strong middle class (the peasantry was by far the largest social class in Russia at the time). While many advanced economies were suffering through the Great Depression of the 1930s, the Soviet Union was rapidly evolving into a powerful economic powerhouse, supported by strong military and defense spending (more on this in section 2.1).

The effects of the NEP are important in the building of our equation: they were the foundations of the beginnings of Soviet economic policy. On the one hand, it was good for the Soviet Union to get back on its feet, but on the other hand, it was bad for the expansion of Leninist-Marxist theory. Unfortunately, Lenin's premature death and the political defeats of his most prominent heir, Bukharin, by Stalin, prevented the New Economic Policy (NEP) from exhibiting any long term results. It would be interesting to see how history would have changed had the NEP stayed and Bukharin been Lenin's successor, because it was implemented only briefly before Stalin abruptly removed it altogether. Unfortunately we will never know what history *could* have been, had the NEP remained policy. We only know the history of what replaced it, which were more centrally-designed five-year plans.

1.1.3 Democratic Centralism

As the Soviet Union progressed, *democratic centralism*, which stood at the heart of Leninist-Marxist theory, began to bear significant economic fruit. It essentially allowed independent, local enterprises to grow under management planning of the state and combined centralized planning of state production, in accordance with the general population. Democratic centralism had increased the significance of local soviets and

⁶ Peasants were the largest social class in Russia which Lenin had divided up into "small class[es] of rich exploiters (*kulaki*) self-sufficient 'middle peasants' (*seredniaki*), and the revolutionary and exploited 'poor peasants' (*bedniaki*) (Freeze). This was done because social status was defined by one's labor, of which peasants were "exploiters" and therefore had no rights and could be used at the disposal of the regime.

enterprises, considered workers when writing up the five-year plans, posed solutions to questions regarding production efficiency and simplified state administration (Schoeck and Wiggins). Analysis should have been more scientific and economically based, not strictly theoretical. This method would have placed blame on the Communists for any shortcomings. But in this “top-down” approach, it must be assumed that centralized planners did indeed have full information on the entire state of the economy. This was due to the idea that “a socialist economy is based on a series of interconnected and coordinated plans – macroeconomic, sectoral, regional, and enterprise plans” (Berri). This heavily-coordinated planning was to achieve the greatest and most efficient methods of production, which in turn would have achieved greater satisfaction (in terms of needs) in society. The most damning burden placed on the Soviet economy was the enormous monetary cost in achieving this full information. In the long run, this could not possibly work.

Democratic centralism thus indicates that economic leaders in Moscow were determining state output by merely guiding local governments’ economic growth rate. There was to be direct communication between the various levels of economic councils where efficiency was a primary goal. One determining factor was the Communist Party itself, which had monopolistic capabilities: it controlled the resources, allocated goods and services, and provided a blanket of security to all citizens alike (i.e. one assumed that his needs would be provided). The Communist Party reinforced this constantly, causing managers of firms to scramble in order to achieve planned output.

The NEP and democratic centralism are good variables in our equation because they portray the disproportionate ratio between excess centralization and economic efficiency. By decreasing micromanagement, firms and individuals are freer and can do as they please, and can even increase their living standards as a result of surpluses. They impacted short-term growth (Figure 1) but did not survive Stalin’s “Iron Fist.”

Lenin attempted to build a utopian society where everyone was equal in status and where everyone pursued the same goals. In this new society, Lenin hoped to

maintain a strong nation, one where the Soviet Union was the chief economy in production and innovation, or a “giant factory” (Ofer). Some of his goals included: low unemployment (0 to 2% on average), paying workers what they’re worth, low corruption, and maximum utility (Browder). The vast Soviet empire had an abundance of scarce, natural resources, such as natural gas, ore, coal, timber, and arable farmland. One major long-term problem the revolution did not address well was their inability to view these resources as “scarce” (Sowell). Few people will view a commodity as “scarce” so long as they have plenty of it. Knowing how to allocate goods and services is how a country *economizes* their natural resources and physical and human capital. The excessive centralization that took place was a substitute for trade that could have strengthened its relations with other economies and boosted standards of living. Knowing this excessive centralization is one vital aspect to understanding the standards of living.

1.2 The Significance of Economic Planning on Living Standards

Throughout periods two, three, and four the Soviet Union strived to achieve centralized plans, which were “designed to satisfy the constantly rising material and cultural requirements of all members of [the] socialist society” (Yevenko). In other words, centralized planning was *supposed* to focus on meeting the demands of society. Hence, the Soviet people regarded these plans as their own and portrayed a zealous ambition to fulfill them at any cost. This “unification” became their great strength and resulted in strong economic growth well into the 1950s. Though it was a struggle in the primitive stages,⁷ the Soviet Union eventually was able to plan specific factors of the economy, progressing towards a more single unified plan (i.e. towards Communism).

Unfortunately this did not significantly alter life in Soviet Russia and did not improve society or the institutions that governed it (i.e. it did not raise the living standards by a significant margin). The Soviet Union drew nearer to other developed

⁷ It was a difficult transition for economic leaders as this was the first planned economy the world had ever tried to establish. It was trial and error method: “theoretical and methodological principles, organizational forms, and planning methods all had to be worked out for the very first time” (Berri).

countries, as far as military and technological advances were concerned, as well as in health and educational indicators, both of which are vital in the labor market, but failed to raise the standard of living to a significant level. Meliantsev explains that “Russian/Soviet HDI related to that of developed countries doubled – from 29–31% to 59–61%... the USSR failed to make progress in catching-up with the developed countries by GDP per capita. The relative gap with the advanced countries remained the same – approximately 29–31%” (Meliantsev). It is interesting to note that human capital in the Soviet Union was very high. Education is a key indicator of the HDI index, which is a comparative measure of life expectancy, literacy, education and standards of living and correlates economic policies on the quality of life. This means that Soviet economic growth was driven by a high investment ratio in both military and educational expenditures. It was neither flexible nor adaptable like the capitalist system in the West.

Perhaps the biggest factor that affected living standards in the Soviet Union was the role prices played in Soviet accounting methods. How economists distinguish between mediocre and superior economies depends on how much “prices play a crucial role in determining how much of each resource gets used where” (Sowell). Prices are driving forces in market economies, allocating resources to their best uses. In a capitalist system, prices reflect scarcity, moving that good or service to the right sector. However, under socialism, prices take power away from the centralized authorities. Prices play a mere accounting role (Riha) and scarcity is not acknowledged because centralized planners are concerned with fulfilling the current five-year plan, which runs the entire economy. This is how resources are allocated – by centralized planners via the centralized plan they are fulfilling. Further, prices under socialism are fixed, or are sticky for a long period of time. Fixed prices can never determine scarcity if it does not correlate with demand for that good or service. The goal was not “to have *commodities*, [goods which are privately produced for the sake of exchange], only *products*... [which] are not exchanged for one another: they are neither bought nor sold” (Riha). This was supported by Marx, who believed that labor should be aimed at providing society’s

needs, not individual needs. In the long run, this greatly affected the change in living standards, because greater profits could have been realized.

Living standards are largely determined by the increase of material prosperity, although there are other determinants. Some determinants include the increase in the work force, in which industries growth is occurring (manufacturing, farming, etc.), how wages increase as a result of the work force increase, and pay differentials. What is important here is the overall percentage increase in material prosperity, which according to the Human Development Index, or HDI, is measured largely by income and consumption. The correlation between the two is obvious: if disposable income is high, consumption must be high as well. Further, it is useful to understand the health and educational levels and their rates of change over time: the healthier workers are, and the greater the level of education workers have completed, the more likely efficiency should increase. This is due to their strong correlation to an economy's production function, which is stated in equation (1):

$$Y = F(K, L) \quad (1)$$

where -

Y - total output

K - total capital stock

L - aggregate supply of labor

Health and education can affect L in both positively and negatively. For example, a decrease in the overall health level might cause more workers to take sick leaves, decreasing productivity. Moreover, higher educational levels may cause productivity to increase, erasing any losses from the previous decrease in the overall health level. In the Soviet Union, unemployment was at or near zero percent, which meant that there was a

high amount of available labor in the workforce. Table 2 shows the relationships between labor, capital, and TFP⁸, all of which decreased as the Cold War lingered:

Table 2 - Growth Rates of GNI and its Main Factors, %

Period	GDP	Labor	Physical Capital Stock	Total Factor Productivity	Contribution of TFP to GDP growth
1928-1940	4.6	3.3	5.3	0.7	14-16
1950s	7.3	1.2	9.0	3.8	50-54
1960s	4.6	1.7	8.0	1.0	20-22
1971-1975	3.5	1.7	6.4	0.4	10-12
1976-1980	1.2	1.2	5.6	-1.3	-108
1981-1985	1.5	0.7	5.0	-0.5	-33
1986-1990	0.1	0.3	2.7	-0.9	-900

Source: Meliantsev, Vitali, A. "Russia's Economic Development in the Long Run." *Social Evolution & History* 3.1 (2004): 106-136.

What were the reasons for the dwindling capital stocks and TFP? I assert that it was due to the lack of innovative technology and willingness to allow intuitive markets to control the economy. Centralized planners could not allow human capital (educated workers) or physical capital (e.g. computers, which can equate and predict with better accuracy) to control supply and demand. This would take power away from them and threaten their very existence. It is noteworthy to mention that during the Brezhnev era, "the number of computers per capita in the United States was seventeen times higher and a least a full generation ahead" (Freeze).

But, given the top priority communists place on education, workers should have been a great asset to society. The literacy rate by 1989 was 98%, equal to that of advanced nations. Every individual that was taught in communist schools should have been able to contribute his or her share to society. Their own intuition should have controlled the economy. This would have increased GNI even more. In the Soviet

⁸ Total Factor Productivity, or TFP, is the "value of output to total factor inputs, aggregated at some set of relative prices." (Black, Hashimzade and Myles). It can vary greatly depending on the level of capital, labor, and other inputs. It is a rough measure of efficiency.

Union, GNI did increase, but efficiency did not. Looking at the capital per worker and productivity of labor rates (how many units each worker produces in a specific time frame) might tell us why this was so. Equation (2) shows the relationship between productivity of labor and the level of employment:

$$Y_t = P_t L_t \quad (2)$$

where -

Y - National income

P - productivity of labor

L - number of workers engaged in material production

As long as productivity was high, Y , or national income, would continue to grow. In capitalist societies, excluding external shocks, periods of economic slowdown are usually caused by monetary phenomena. This was not the case in the Soviet Union. Declining productivity was the problem, because planners were reluctant “to modernize existing plants and [place] heavy emphasis on new construction – a policy that was supposed to increase output as much as possible, in the long run led to the declining capital productivity” (Popov). Within the realms of society exists laws: scientific, cultural, political, and economic laws. Economists and political scientists spend their careers trying to figure out the relationships between these laws.

What then distinguishes socialism from capitalism? One notable difference is what is found in capitalism; what Leonid Brezhnev called “spontaneous market forces.” In these capital markets, the biggest monopolies profit at the expense of society, because they insist their interests and demands to be met, exactly what Lenin had claimed. Socialists claim that under capitalism conscious social regulation is impossible. This is because the economic laws behind socialism “exert themselves in it as the unforeseen results of activity on the part of blind forces” (Berri). In other words, socialism fails to account for expected shocks to their short and long-term planning. Therefore, their inadequacy is not surprising when they do respond. Socialists have their own objectives

and desires, which operate independently of any one single individual. Engels wrote that freedom is not just some imaginary independence of economic laws, but an actual understanding and application of those laws for the betterment of society. Central planners should have a sound understanding of these laws, as they reflect stable relationships among economic phenomena and processes in society. They must understand any causality between various industries and link any effects of economic policies to their output. In economics, regardless of which system a country follows, the problem of scarcity is best solved by the allocation of resources, or to which industries and firms material goods are transferred (Sowell, *Basic Economics: A Common Sense Guide to the Economy*).

The foremost problem with centralized plans in the Soviet Union was this very misallocation of goods due to misinformation at the top. This is another major reason why they do not respond to external shocks very well. If an industry faced enormous amounts of scarcity, does anyone believe it will respond appropriately to a shock? No! To make matters worse, command economies are input-maximizing (see 'Total Inputs' in Table 3). This strategy led to massive shortages, inadequate allocations, and large amounts of waste. However, it did not stop the Soviet Union from growing until 1960. Table 3 reemphasizes Table 2 and shows similar findings. It includes the categories economists study the most: labor, land and capital, and how they work together to produce GNI:

Table 3 - GNI, Inputs, and Productivity, 1928 - 85 (Annual Rates of Growth)

	1928-40	1950-60	1960-70	1970-75	1975-80	1980-85
GNI	5.8	5.7	5.2	3.7	2.6	2.0
Labor	3.3	1.2	1.7	1.7	1.2	0.7
Employment	3.9	1.6	2.1	1.5	1.2	0.7
Capital	9.0	9.5	8.0	7.9	6.8	6.3
Land	1.6	3.3	0.2	1.0	-0.1	-0.1
Total Inputs	4.0	4.0	3.7	3.7	3.0	2.5
Productivity	1.7	1.6	1.5	0.0	-0.4	-0.5

Source: Allen, Robert C. "The Rise and Decline of the Soviet Economy." The Canadian Journal of Economics 34.4 (2001): 859-881.

Noted economist Thomas Sowell has pointed out that “production enterprises in the [Soviet Union] ‘always ask[ed] for more than they need[ed]’ from the government in the way of raw materials, equipment, and other resources used in production” (Sowell, *Basic Economics: A Common Sense Guide to the Economy*). This is a flawed, alternative method since it is still assumed that “full information” is known when plans are written up. Sowell states that “knowledge is, after all, what makes something a natural resource” (Sowell, *Economic Facts and Fallacies*). Market prices⁹ are much more efficient in allocating goods and services than arbitrary prices set by a central committee. However, in the Soviet Union this would have taken power away from the central planners. As noted earlier, Lenin’s revolution was an attempt to take the “means of production [out of] private hands” (Lenin). Thus by owning the means of production the Soviet regime could set arbitrary prices on the nearly 24 million products circulating in the economy. By so doing they hoped to be able to micromanage all factors of production, something socialist countries aim to do (Lange, Part One). Micromanagement almost always leads to inefficiency because the financial costs are simply too great.

Micromanagement is a very bad strategy and very inefficient, regardless of location or existing premises. Having to deal with multiple macroeconomic problems was challenging, and managers were largely responsible for running well-functioning, efficient firms or plants. Unfortunately many of their own techniques (discussed in part 3) got in the way of efficiency, contributing to losses, even if they were unaccounted for. Managers of firms often altered the production assortment, allowed the quality of products to deteriorate, falsified records, over-ordered supplies and capital equipment,

⁹ In a centralized economy prices do not determine supply or demand, and therefore do not determine equilibrium based on consumer preferences. It is the planners themselves who are determining equilibrium, i.e. they decide the price and quantity of all goods and services.

and resisted technological innovation (Dane). There was no incentive to work hard as there was never the threat of a firm closing down, creating a free rider problem.¹⁰

Centralized planning is a heavily-weighted variable in our equation because it controlled everybody and everything. It was the answer to everything. It changed the landscape politically and most importantly, economically. Centralized planning changed slightly based on the General Secretary at the time and what route the Soviet economy was aiming for.

1.3 Five-Year Centralized Plans and Effects on National Income

All economic growth stemmed from five-year plans. They were the driving force behind all economic activity and were responsible for the progression of socialism. They contributed to wages, GNI, social and economic welfare, national income, capital stock, among many other indicators. The Soviet Union's Balance of Payments (BOP) affected their national income, which included trade. They contributed to everything discussed thus far, and the effects of the policies they represented. The main reason centralized plans failed miserably after about 1960 was that the amount of information required to achieve efficiency is too great, and the incentives to supply the center with reliable information [were] too poor (Black, Hashimzade and Myles). Centralized plans were designed to promote high productivity and material wealth in the Soviet Union. But the Soviet Union's average, real income per capita was extremely low!

The First Five-Year Plan (1928-1932) set economic goals and high ambitions for the good of the country and was even broken down into yearly and quarterly plans. It had a more important task at hand: an "all-round" development, based on the cultural, societal and material needs of every individual:

No small efforts are...required of the Soviet economy to realize the tasks involved in improving the people's material, housing, and living conditions, above all to attain a level and structure of rational

¹⁰ Free riders are people or organizations "who benefit from a public good but neither provide it nor contribute to the cost of collective provisions" (Black, Hashimzade and Myles). Long term effects lead to scarcity.

consumption of goods and services by scientifically validated norms. A drive for a high level of satisfaction of material wants is not, however, the be-all and end-all of the socialist economy but the means, the *sine qua non* for man's harmonious development. Together with growth of material prosperity such notable phenomena as the raising of social targets and priorities are occurring in the Soviet economy. This applies above all...to further improvement of the Soviet people's prosperity, improvement of their working and living conditions, marked progress in the health services, education, and culture, that is, in everything that furthers molding of the new man, all-round development of the individual, and improvement of the socialist way of life (Berri).

In other words, the Soviet Union was economically set up, such that the material well-being of the citizenry would be met. But equally important, socialism promised something better than what capitalism could provide, in overall terms of education, health, standard of living, and level of satisfaction every citizen generally feels. This is because within socialism "individual labor becomes social labor" (Riha). Every Soviet plays a small but vital role in the development of communism. This was certainly the case in the early years of the Soviet Union, as mentioned earlier.

Certainly knowing society's demand schedules is truly the only way to understand people's wants and to establish an equilibrium quantity and price. The demand for many durable goods is calculated using a long term "rational family budget" (Berry). Consider the following example: if centralized planners decide that every household should have a one television unit, then the demand will be equal to the number of households. Hypothetically, if the number of households equals 72, and obsolescence¹¹ occurs in 8 years, the annual demand will be 9 (72:8). Including exports and current inventory, the number of television sets produced in one year is about 10

¹¹ This is defined as a "loss of value of equipment due to changes in techniques or tastes" (Black, Hashimzade and Myles). It generally occurs when consumer preferences change, or when technical progress changes or is altered, or if the technique (production method) is deemed unsafe or risky.

million (Berry). Generally speaking, certain criteria must be known when creating new five year plans:

1. The volume of personal purchasing power.
2. The structure of production of consumer goods, trade, and the stock levels of those goods within the economy.
3. The impact of increased income on certain goods and individual demand schedules.
4. The supply and demand shifters and how they influence price and quantity.
5. The cycle of Normal/Inferior goods and Substitutes/Complements goods.¹²

While many of the above criteria are abstract and very hard to determine quantitatively, knowing the National Income level¹³ is the best way to determine output in certain markets. The simplest model defining national income, which is equivalent to GNI, can be stated in the following way:

$$Y_t = C_t + A_t \quad (3)$$

where -

Y - national income

C - total consumption (personal + current social consumption, and the accumulation of basic non-production assets)

A - productive accumulation (fixed assets + circulating assets, stocks, and reserves)

t - time

¹² Given the topic at hand, understanding the role of these goods is important for two main reasons. (1) Due to the scarcity of goods as a result of inefficiencies created by centrally planned committees (each individual knows his or her own preferences better than any third party can (Sowell)), tradeoffs occur, and society must pay for these tradeoffs, whether legal or not. (2) Since prices did not determine supply and demand for a good in the SOVIET UNION, most products were rationed, leaving "what was left," or the substitute, of the rationed good.

¹³ Assuming everyone spends their money (nothing is saved) planners essentially can determine to which industries the flow of money is headed. Knowing this, they can appropriately ration key components to that industry for investment.

In equation (3), C and A are the only factors of production. Trade is omitted since it played an insignificant role in official Soviet figures; although it had increased to a mere 4% of GDP in 1985 (see the next subsection). To determine efficiency, centralized planners had to determine the change, if any, (denoted “delta,” or Δ) by either factor. In order for there to be an equal balance, *both* factors must change at the same rate. Since the Soviet Union was at or near full employment (0% unemployment) the labor force was the largest determinant of national income. Additionally, the demand for any given product must be determined by the change in population plus the change in consumer preferences. The income and subsequent consumption is related to the proportion between wages and “social consumption funds” (Berry). Social consumption funds show the fastest rate of growth and “constitute that part of consumption in national income which is used to satisfy the needs of members of society which cannot be satisfied out of wages” (Berry). To an extent we can see the priorities the centralized government placed on certain sectors and government programs. Government expenditure does increase national income, and carries a multiplier effect: the more the government invests in a certain sector, the greater the output will increase. This creates an increase in income, another increase in output, more government revenue and thereby a greater dependence on social consumption funds. Table 4 shows the calculation of social consumption funds:

Table 4 - Calculation of Social Consumption Funds
(conventional figures, 1,000 million rubles)

	Actual figures	Planned figures
Care and education of young people	10	15
Training of manpower	5	7
Health and leisure facilities	12	18
Care of elderly and disabled persons	11	15
Provision of social, cultural and household services	4	6
Total - volume of social funds (1 - 5)	42	61
Of which		
a) money payments	22	29

of which pensions, benefits, and grants	20	29
b) material goods and services	20	30
Distribution of social funds by social group:		
expenditure per member of a worker's family (in rubles)	195	260
expenditure per member of a peasant family (in rubles)	150	225

Source: Erry, L. Ya., ed. Planning a Socialist Economy. Trans. Jenny Warren. Vol. 2. Moscow: Progress Publishers, 1977.

1.3.1 Trade Imbalances

When a nation trades with another, both nations will benefit. This is based on the law of comparative advantage, which states that when a country has lower opportunity costs to produce a good or commodity, it should specialize in production of that good. When it trades that good for another, production will improve and consumption will rise because the terms of trade increase national income (Black, Hashimzade and Myles). Trade during the Stalin era served two purposes: to quickly alleviate Russia from its backwardness and to “[widen] the capital stock and [increase] production... in specific branches of industry” (Smith). Unfortunately this dependence on imported technology resulted in an “inability to generate and diffuse *domestic* technological progress” (Smith)(*italics added*). In other words, this reliance on imports hurt the economy *in the long-run*. After Stalin died in 1953, Secretaries Khrushchev and Brezhnev introduced very few effective economic reforms to alleviate this dependence on foreign trade. In fact, the trade imbalance only got worse. This is evident by the increase in imports in various commodities in the 1970s and 1980s, as shown in Table 5:

Table 5 - Soviet Trade Increases, 1972 - 1984

	1972	1975	1980	1982	1984
Total	4,971	12,700	20,813	25,596	27,112
Machinery/ Equip.	1,138	3,635	4,713	6,021	6,060
Fuel/Energy	195	648	931	2,010	3,107
Ores/Metals	537	2,131	3,359	3,711	3,398
Chemicals/Fertilizers	311	737	1,528	1,496	1,718
Wood/Paper Products	188	503	747	693	631
Textiles	397	598	860	749	931
Foodstuffs	1,322	3,173	6,361	7,576	8,052

Industrial consumer goods	439	757	1,194	1,648	1,680
Unspecified	264	518	1,120	1,692	1,535

Source: Allen, Robert C. "The Rise and Decline of the Soviet Economy." *The Canadian Journal of Economics* 34.4 (2001): 859-881.

One major factor in this downward shift was Brezhnev himself, who did not have any "personal political vision or program" (Suny). He did little to "reach and surpass America" or "build communism" (Suny). Rather, he emphasized scientific and technological innovations, or *realistic* expectations (i.e. the status quo). These expectations relied heavily on international innovation, which can explain the increase in trade:

"Soviet imports of machinery and equipment from the West [were] determined more by short-term domestic economic priorities and the desire to overcome domestic shortages than by the pursuit of a consistent policy to overcome technological backwardness... A leadership that did not fully understand the potential of modern technology and was unwilling to decentralize decision-making to those who did... gave excessive emphasis to large-scale civil construction projects that utilized relatively simple processes that they could comprehend (A. Smith).

Trade is an important variable in our equation because it dampened domestic production in the long run and shows that the Soviet Union's long-term macroeconomic policies were unsustainable. It reiterates that Soviet authorities would not budge on their authority to conform to the needs of their own people. By so doing they thought they would be giving credit to the importer of that technology.

1.3.2 Golden Rule Capital Level of Stock

What made the economy so inefficient was the large increase in capital versus the output produced (GNI). I have already shown how domestic production decreased as a result of trade. Centralized planners were still investing in large amounts of capital, despite the decrease in production (i.e. their capital-to-labor ratio was extremely low (Ofer)). Whatever the reasons, Soviet economists were ignoring their *golden rule capital*

stock, which is the level of capital that maximizes consumption per capita. It is also the point where the marginal product of capital (MPK) equals the depreciation rate (∂):

$$c^* = f(k^*) - \partial k^* \quad (4)$$

where -

f - output per unit of labor

∂ - depreciation rate

k - capital-labor ratio

c - maximum consumption

The problem in the Soviet Union was the high levels of capital that were exhaustive to the economy. Had the economic leaders emphasized equation (4) in their models, their capital levels would have returned to equilibrium levels, or at least been reduced to a more appropriate level. Depreciation rates (∂) were relatively low (around 10 - 15%) which meant less money should have been spent on capital and should have been allocated to their next best alternative. In addition, had individual firms been able to manage the finance of repairs themselves, “[an] elimination of [centralized] bank control over the expenditure of [funds]” would have been possible (Horwitz). This seemingly innocent transaction would have taken power away from centralized planners, something centralized planners would not tolerate. This is a case where the excessive bureaucratization over enterprises induced a “perseverance of gross output targets and planning from an achieved level [that] caused wastes and restrained production” (Aslund, Gorbachev's Struggle for Economic Reform).

Stalin was big on heavy industrialization, but his dream to revolutionize Russia has serious drawbacks, especially the allocation of funds. As a result from the XVI Party Congress in 1930, it was decided “to create new centers of industry in the East, thus removing Soviet production from the potential danger of aggression from the West; (2) to industrialize the country so strongly that it would reach the industrial level of the West in about a decade; (3) to lay the emphasis squarely on heavy industry, at the cost necessarily, of other branches of the economy” (Mirski). For example, the Soviet Union government allotted funds disproportionately among industry and communications. It

is reported that “from 1928-1940, the Soviet State spent 185 billion rubles for industry as against 61.8 billion rubles for all communications. In 1939, with a total budget of 153.3 billion, “31.1 or 20.2% went to industry, while only 6.6 or 4.3% were allotted to communications” (Mirski).

This problem could have been resolved easily in the short term, but the system was set up, such that any final plan involving major capital expenditure had to be negotiated with Gosplan [the State Planning Committee] and the Union Republic Council of Ministers. This resulted in time delays and information costs that were unnecessary. A simpler method would be to allow local leadership to make major decisions, since they were more knowledgeable than planners in Moscow who knew little to nothing about the proposal at hand. Financially, this intensified since the Soviet government did not want to borrow from abroad. I believe these disproportionate ratios were just one of many causes Soviet failures were so common.

This is the last important macroeconomic variable in our equation. It is important because it focuses on capital investment and how it contributed to economic losses due to overcapitalization (e.g. military expenditures) and undercapitalization (e.g. consumer products) and how over time this was bound to fail.

2. Negative Externalities

I have shown that the Soviet Union was largely inefficient and inadaptable. This section examines the correlations between the Soviet Union’s economic decline and external shocks, specifically defense spending, which rose dramatically during the Cold War (1945 - 1991) between the Soviet Union and the United States. This has been carefully researched by Easterly and Fischer (1995) and Bremmer and Kesselring (1998) and is supported by the notion that “the percentage change in real GDP is inversely related to the percentage of GDP spent on military expenditures” (Bremmer and Kesselring). In other words, a high military expenditure dampens investment, which weakens economic growth. In addition, “low Soviet elasticity of substitution between capital and labor.... is sufficient to explain the decline of Soviet growth” (Easterly and

Fischer). Other notable research by Ofer (1987) compares Soviet growth rates¹⁴ over several decades and supports the results of Easterly and Fischer.

Another externality, the nuclear accident at Chernobyl in April 1986, has been studied by Lehmann and Wadsworth (2009) who examined the health, wages, education, and productivity of Ukrainian workers immediately after the fallout of the Chernobyl accident. They conclude that radiation levels in various groups (based on geography, population density, and age) contributed to significant economic losses, either psychological or physical, since, within the production function “health [is] considered to be an important determinant of labor market outcomes, such as wages, hours of work and employment” (Lehmann and Wadsworth). I do not expound upon the Chernobyl incident in depth, other than to promote the idea that the production function was seriously affected in those parts of the Soviet Union.

2.1 Military Expenditures on Economic Growth

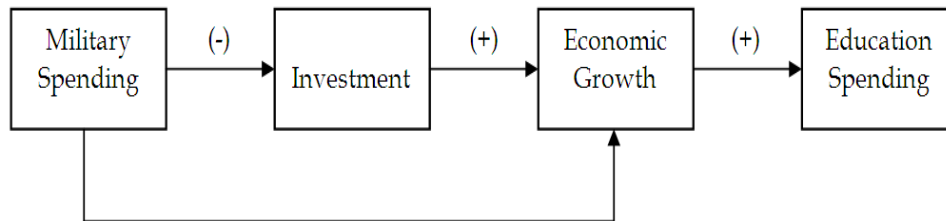
Based on dozens of literature reviews, Mintz and Huang (1991) postulated that no trade off between guns and butter¹⁵ exists in the post-WWII era. Simply put, other economic factors, such as health, education and consumer welfare are not significantly affected by an increase in military expenditure (Mintz and Huang). Mintz and Huang have therefore concluded that “increased levels of military expenditures dampen investment, which reduces growth, thereby reducing the ability of governments to allocate more funds to welfare programs”¹⁶ (Mintz and Huang). This is made possible by a high military budget, which crowds out investment, or at least reduces it, which in turn slows technical expansion of existing capital. The military expenditure “competes” with investment because they are substitutes of each other. Governments may impose a higher tax rate or will borrow heavily (will issue bonds). This is shown in Figure 2:

¹⁴ These growth rates include GNP, labor, capital, land, investment, defense, personal income, household expenditure within the Soviet Union.

¹⁵ The classical “guns versus butter” tradeoff case refers to a country’s investment option between two goods and is shown in its production possibilities frontier, or PPF. If the production or quantity of a good (e.g. guns) goes up, then a certain quantity of the other good (butter) will decrease. This is its opportunity cost.

¹⁶ Some of these programs might include education, housing and healthcare.

Figure 2 – Guns vs. Butter: An Indirect Link



Source: Mintz, Alex and Chi Huang. "Guns versus Butter: The Indirect Link." *American Journal of Political Science* 35.3 (n.d.): 738-757.

While this might stimulate the economy in the short run, long run growth will be seriously affected by the reduction in investment (Mintz and Huang). Therefore military expenditures negatively affect economic growth because they dampen investment. On the other hand, countries that rely on investment will see high economic growth¹⁷ and an increase in education spending, such as human capital. As human capital increases, income per capita will increase, reducing the government's liabilities to provide for social benefits. This is true only if a country is experiencing a high growth rate. The Soviet Union did not fall under the latter category. This is because their military expenditures exceeded any appropriate ratio to consumer expenditures. In comparison to G7 countries, the Soviet Union had an extremely high military expenditure (Bremmer and Kesselring). They took the data from G7 countries as these countries are all advanced countries and dominated the 20th century, in terms of real growth.

Bremmer and Kesselring took annual data from 1960 - 1991 and use them in a "two way" fixed and random effects model that pools cross-sections and time series" (Bremmer and Kesselring). The sign of β_2 is expected to be positive, given the relationship between population and real GDP growth. Knowing what the sign of β_1 is

¹⁷ Investment was crucial in the United State's growth rate in the 20th century. Average annual growth in the U.S. from 1929 - 1982 was 2.90%, of which investment was nearly one-fifth (Mintz and Huang).

will tell us if military expenditure is correlated to the change in real GDP. This model is estimated as:

$$Y_{it} = \alpha_0 + \alpha_i + \gamma_t + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it} \quad (5)$$

Where Y_{it} is the percentage change in real GDP in country i observed from the previous year (time $t-1$) to the current year (time t)
 X_{1it} is the amount of current defense spending in country i expressed as a percentage of country i 's current GDP
 X_{2it} is the percentage change percentage of the population in country i in the previous year (time $t-1$) to the current year (time t)
 α_i is a binary dummy variable and captures country specific effects
 γ_t is another binary variable that captures specific time effects that impacts each country in the same way

Bremmer and Kesselring found that the adjusted R^2 of G7 countries was 0.66, or significant, in that the variables tested indicate a good overall "fit." The variables they used, which are (1) defense spending of overall GDP and (2) the percentage change in population, explain the variation in the percentage change in GDP. Based on their regression and analysis, Bremmer and Kesselring conclude that "the opportunity cost of increased military expenditures is foregone economic growth" (Bremmer and Kesselring). Table 6 includes their results of β_1 and β_2

Table 6 - Regression Results: Fixed Effects Model

	Estimate	Standard Error
Overall Constant	7.625	0.959
Defense/GDP Percent (β_1)	-1.272	0.279
Percentage Δ in Population (β_2)	0.117	0.072

Source: Bremmer, Dale and Randall Kesselring. "The Opportunity Cost of Super Power Status: the Tradeoff Between Defense Spending and Economic Prosperity." (1998)

Even though Soviet data is scarce and hardly reliable, the data included in Table 6 is important for our analysis of Soviet military expenditures. In his autobiography, Gorbachev states that only 2 or 3 people knew of the true scope of the Soviet Union’s military expenditure. When economic leaders decided to release the true figures in the early 1980s, many were surprised to learn that “military expenditure was not 16 per cent of the state budget... but rather 40 per cent” (Gorbachev). Based on this revelation, Gorbachev feared economic and social collapse, and therefore made it a goal to dramatically reform the economic system. He based his ideas largely on western economies. These reforms did allow more firms to set their own prices (within specific parameters set by centralized planners), as wage inflation dramatically increased in 1988 and 1989. M2 also dramatically increased, indicating mass inflation. Table 7 shows data from 1985 – 1991:

Table 7- Soviet Macroeconomic Performance, 1985 - 1991

	1985	1986	1987	1988	1989	1990	1991
GNP growth	0.8	4.1	1.3	2.1	1.5	-4.0	-13.0
Gross investment growth	3.0	8.4	5.6	6.2	4.7	-2.5	-6.0
Budget deficit/GDP (%)	2.4	6.2	8.8	11.0	9.5	8.3	20.0
Retail price index	3.5	4.4	4.5	6.0	8.0	20.0	100.0
M2 growth	NA	8.5	14.7	14.1	14.8	20.2	75.0
Nominal wage increase	2.9	2.9	3.7	8.3	9.4	12.3	70.0

Source: Fischer, Stanley. "Russia and the Soviet Union Then and Now." The Transition in Eastern Europe. Ed. Olivier Jean Blanchard, Kenneth A Froot and Jeffrey D Sachs. Vol. 1. University of Chicago Press, 1994. 221-258.

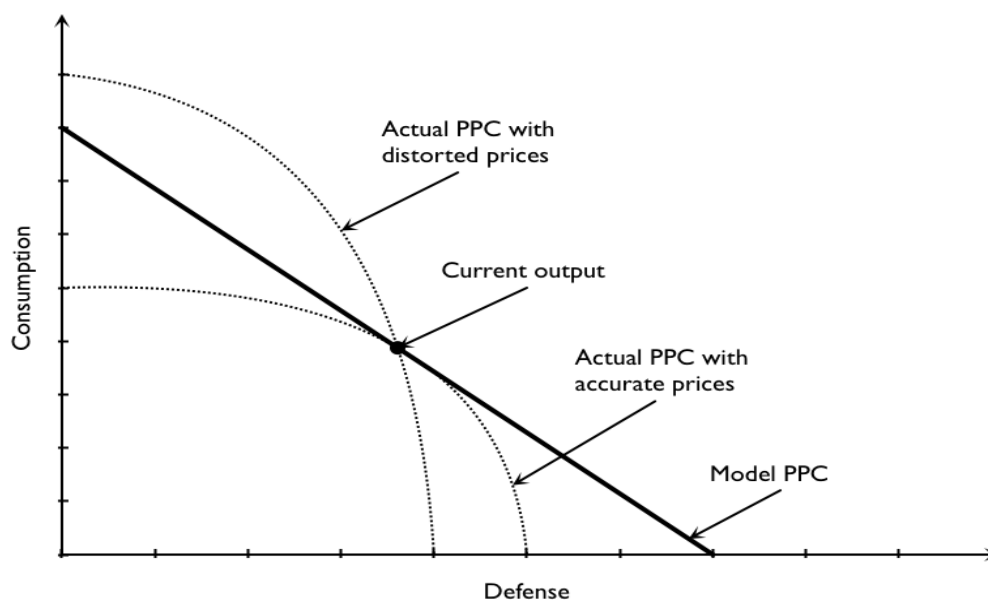
The Cold War was responsible for long-term decline. Socialism held the belief in the basic “badness of capitalism, in the inevitability of its destruction” (Kennan). The Soviet regime was willing to go to war with the greatest superpower on earth, the United States. Unfortunately this strategy came at a cost for Soviet society.

2.1.1 Production Possibility Curves (PPC)

The discussion of declining consumer surplus thus far can be attributed to the tradeoffs between consumption and defense. Figure 3 is relevant to our discussion of tradeoffs between defense (horizontal graph) and nondefense goods, or consumer

consumption (vertical graph). It shows how much military burden was on the Soviet economy, based on prices. The Model PPC is the best tradeoff, based on opportunity costs.¹⁸ Actual PPC with accurate prices assumes no underpriced good exists, and portrays accurate prices. However, Actual PPC with distorted prices shows the tradeoff change is distorted prices (an underpricing of defense goods). If goods are underpriced it appears as though military spending is not a burden, making consumers better off. Figure 3 shows the common tradeoff that occurred between consumption and *assumed undervalued* defense goods:

Figure 3 - Production Possibility Curves of Aggregate Economic Model



Source: Hildebrandt, Gregory G. "Models of the Military Sector in the Soviet Economy." *The Impoverished Superpower: Perestroika and the Soviet Military Burden*. Ed. Charles Wolf and Henry S. Rowen. San Francisco: Institute for Contemporary Studies, 1990. 221-253.

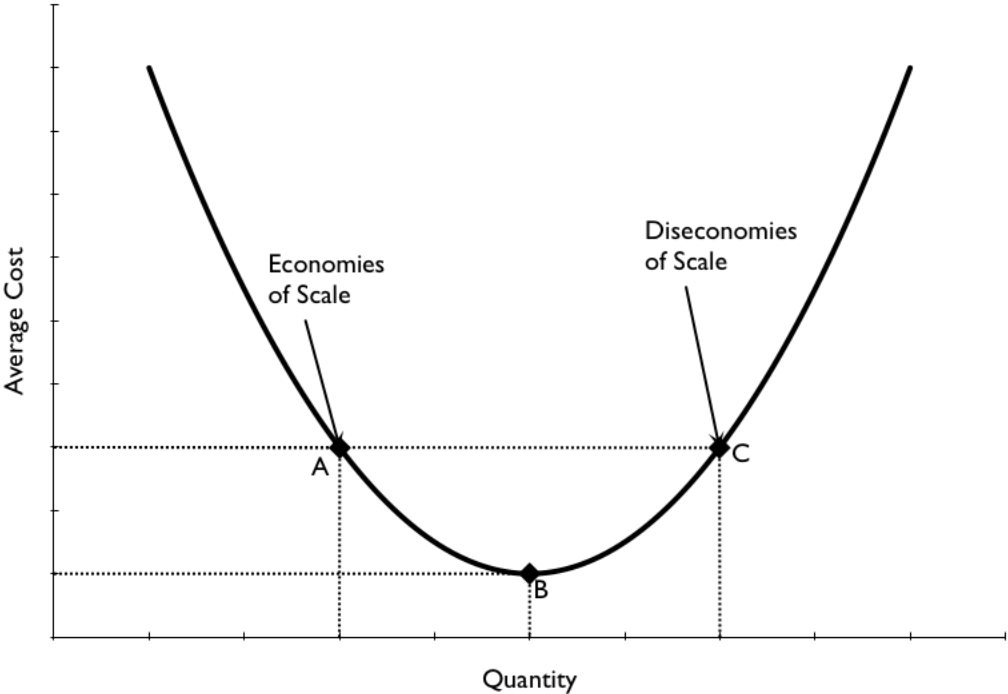
2.1.2 Diseconomies of Scale

Everything I have talked about thus far eventually led to a series of diseconomies of scale, which usually “result from the problems and added cost[s] associated with large bureaucracies” (Wessels) anyway. In the long run this created a high surplus of

¹⁸ Opportunity costs can be defined as the “benefits that could have been obtained by choosing the next best alternative” (Black, Hashimzade and Myles). If the Soviet Union’s next best alternative was investment in R&D, instead of military expenditures, it would weigh the costs to see if it would benefit or lose from choosing this “opportunity.”

manufacturing goods and a deficit of consumer goods, not to mention higher costs of imports and a soaring cost of living (Grigoriev, Ivanova and Nikolaenko). I believe that had the Soviet Union never implemented centralized planning, diseconomies of scale would not have been an issue, or at least would not have been as severe. Figure 4 shows economies of scales graphically. An economy of scale is a situation where average costs *decrease* as quantity increases (point A). A diseconomy of scale results in an *increase* in average costs as quantity increases (Point C). A minimum efficient scale, or constant returns to scaleThe Soviet Union’s average total costs (ATC) of Soviet products were going up as output expanded:

Figure 4 - The Soviet Union’s Diseconomy of Scale Problem



Source: Author

One reason economies of scale were not found in the Soviet Union may be the result of low international global competitiveness, which often forces firms and businesses to economize and reduce and/or eliminate costs. When firms compete internationally, production volume increases, per-unit costs decrease, and profits are

greater than they would be under strictly . Firms would be able to utilize their capital. However, only increased production was a priority in the Soviet Union. Had firms been allowed to profit

3. Some Microeconomic Behaviors in the Soviet Union

No unemployment but nobody works.

Nobody works but productivity increases.

Productivity increases but the shops are empty.

The shops are empty but fridges are full.

Fridges are full but nobody is satisfied.

Nobody is satisfied but all vote unanimously (A. V. Ledeneva).

I have explained the four major weaknesses in the Soviet Union's socialist model, as outlined in the main introduction: its (1) obsession to maintain political power at all costs, (2) faulty priorities, which led to inefficiencies, (3) high emphasis on military and defense spending, and (4) its inability to handle external shocks. I believe that in order to fully grasp these problems, we must understand their relationship to Soviet culture and behavior. Understanding consumer behavior can help us to draw more accurate conclusions. I conclude that the bureaucracy was an oligarch system, where top-down reforms were destructive, because communists at the top felt threatened during "Gorbachev's Idea" (Zubok), or when Gorbachev implemented radical economic reforms in the 1980s, which resulted in serious consequences. This is due to socialism being "defined more by its ideas than by its institutions" (Bandelin).¹⁹ Gorbachev had severely altered the Soviet Union's political system by taking power away from the centralized government and Communist Party. He wanted national elections and minority parties to be represented. By changing the political structure of the Soviet

¹⁹ i.e. it is much harder to change people and their behavior than it is to change the institutions and systems that confine them. It is my belief that just because an institution has changed does not imply the people who are governed by it, even those who govern the institution, are willing to change. Only people can truly change themselves, despite the strongest influences.

Union Gorbachev was essentially asking for an economic collapse. George Kennan, well-known ambassador to the Soviet Union in the 1940s, had warned against this notion many years before. He stated that “if anything were ever to occur to disrupt the unity and efficacy of the Party as a political instrument, Soviet Russia might be changed overnight from one of the strongest to one of the weakest and most pitiable national societies” (Kennan). This paper has shown how far the Communist Party was willing to go to preserve that power.

This section discusses all Soviet citizens as optimal consumers, or consumers who make every economic transaction the most beneficial, given the specific conditions. These comparisons are also briefly analyzed. First, I will discuss Gorbachev’s radical policy changes during the 1980s that swept the country, impacting everyone’s entire way of life. Second, I will discuss what cognitive dissonance is and what it meant in the Soviet context. I will also explain who *tolkachi* were and how they aggravated the effectiveness of major policies. Finally, I will explain what *blat* is and how its practice became all too common on all levels of society, which indirectly affected policy changes.

3.1 The Gorbachev Idea

By the 1980s, the xenophobia²⁰ initiated by Stalin and the *détente* and stagnation effects during the Brezhnev era had contributed to issues so grand in the Soviet Union that “nobody could have reformed the Soviet system and Soviet empire. They could only be destroyed completely” (Zubok). To make matters worse, numerous external shocks to the economy, including the Cold War, the invasion of Afghanistan, and the nuclear accident at Chernobyl muted the impacts of Gorbachev’s reforms, greatly reduced the Soviet Union’s credibility and ability to maintain its superpower status. Specifically referring to the Chernobyl incident and cover-up, Gorbachev stated that “our work is now transparent to the whole people, to the whole world. There are no interests that could force us to hide the truth” (Zubok). The accident at Chernobyl

²⁰ Xenophobia is basically fear and hatred of strangers or foreigners. I believe that it, coupled with the hatred of capitalism, was enough to trigger the Cold War.

directly led to *glasnost'*, or the loosening grip of the Communist Party's on the media and previously disclosed archives, such as the true scope of Stalin's purges.

Gorbachev was an ambitious leader. He unsuccessfully attempted to save socialism from stagnation. He believed that by "removing Brezhnev's corrupt cronies and inefficient bureaucrats would make the Soviet system run well" all the while maintaining a centralized planned economy (Zubok). Gorbachev wanted to introduce market socialism, similar to what China had done in the late 1970s. But his triple reformation process of democratization, economic transformation, and decolonization of non-Russian republics is what ultimately brought the Soviet Union to its imminent collapse. It was just too much at once for a society to undertake.

Gorbachev promoted what he called "new thinking" (*novoe mushlenie*). He had recognized that there were just too many defections that prevented the Soviet Union from having a dominant voice in the world. He believed the morality of a society does impact the production function (as mentioned on page 14):

The moral aspect is of tremendous importance. If we do not effectively revive socialist values and a socialist atmosphere in our work collectives and in society as a whole, we will fail to carry through the restructuring drive. We can propose the right policies and effective mechanisms, but we won't accomplish anything if society does not improve through consolidation of the moral values of socialism, above all social justice, distribution according to labor input, uniform discipline, laws, rules and requirements for all (Gorbachev, 1987).

Gorbachev wanted to change the Soviet Union behaviorally, but society just was not ready; neither its leaders nor the common folk. His biggest programs, *glasnost'* and perestroika, aimed to achieve a *new* production function, one that had never been tried in Soviet history. This was first and foremost on his agenda. He also wanted to boost the morale and productivity of Soviet workers. The anti-alcohol campaign was such an example. It did work, but decreased government revenue enough to cause a financial scare (Gorbachev, 1987).

Gorbachev was, in part, was also a community organizer. He wanted the whole of society to join together to carry out his agenda. He felt that socialism had not yet been achieved and that its progression had become stagnant. He wanted to clean up society and get back on track, or revert to Leninist roots. Unfortunately many saw his agenda as damning to Soviet fundamentals. He states that “revolution requires the demolition of all that is obsolete, stagnant and hinders fast progress. Without demolition, you cannot clear the site for new construction” (Gorbachev, 1987). *Glasnost'* and perestroika easily demolished much of the socialist structure, but failed to provide this “new construction.” Gorbachev admitted that true socialism was never constructed because the wrong forms and methods “were canonized, idealized and turned into dogma” (Gorbachev, 1987). He blames the early revolutionists for speaking in theoretical terms and for not defining the attributes of socialism. He took it upon himself to define what socialism is, where the pitfalls were, and make the necessary adjustments.

3.1.1 *Glasnost'*

Referring to *glasnost'* Gorbachev stated “Communists want the truth, always and under all circumstances. Governments should not be the privilege of a narrow circle of professionals” (Suny). Lenin had always been open to the idea of no secrecy, and *glasnost'*, according to Gorbachev, would make it easier for people to understand the past and present, and to understand the economic and social changes that were being implemented. He even compared *glasnost'* to air: one needs both in order to survive. He also claimed that democracy is not possible without *glasnost'*.

Glasnost' alone could have brought the Soviet Union down. This bold statement is backed by Gorbachev himself in his autobiography when he stated “the reform of our enormous state indeed demanded decentralization and redistribution of powers between the centre and the regions. But the local elites tried to paint this need the exaggerated colors of ‘national survival.’ It worked!” (Gorbachev). *Glasnost'* was effective at opening up the freedom of the press. But with this new freedom came a drawback: new allegations of Soviet cover-ups and the real truth behind the Great

Purges of 1937-38. This mentality of new truth greatly affected the masses. Consider the following conversation taken from *The New Russians*:

In 1990 Zakharov, a contributor to the Soviet TV show *Vzglyad*, which advocated the economic and political change at the time, was asked about Communism and socialism. He replied "Oh, Communism and all that? ...I don't know what socialism is." But, he advised me (the author of *The New Russians*) "...you must take into account the Russian mentality."

"What do you mean?" I asked.

"This is a country of poor people, with a distorted psychology, who for seventy years have been deceived and pumped full of ideology."

"So what do you do?" I asked.

"You have to explain everything very simply to them - this was this and that was that," he replied. "I want to have a program showing people that the Revolution was not made for them. This is all very painful. When you tell them that they have been deceived, they don't believe you. It turns out many of them prefer to be fooled rather than to know the truth" (H. Smith).

Gorbachev understood the task at hand: he needed to create a strong center, thereby creating strong republics. This would involve new foundations, such as "security, coordination of fundamentals of economic and social policy, coordination of foreign policy, maintaining order at the border, and so forth" (Gorbachev). He did this by using the mass media through newspapers and television media to further his own political objectives. Many at home were taking part in the action for the very first time, watching the Communist Party in action during the All-Union Conferences. No one at the time knew to what degree how the effects of *glasnost'* would shape the economic and social landscape of the Soviet Union.

3.1.2 Perestroika

A strong believer in socialism, Gorbachev stated that perestroika would "show that socialism is not only capable of coping with the historic task of reaching heights of scientific and technological progress, but that it can handle it with a maximum of social

and moral efficiency, by the methods of democracy, for the people, and, thanks to their own efforts, intellect, skills, talents, conscience and awareness of their responsibility to other people” (Gorbachev, 1987). Historically, the Russian people had become all too accustomed to leaders who had ruled with an iron fist (Suny). That changed when Khrushchev was ousted by the Politburo, the elite ruling power. Brezhnev too was considered a “great, very great mistake.” Worse, the quick successions of General Secretaries Brezhnev (1982), Andropov (1984), and Chernenko (1985) left volatility in Moscow. Nonetheless by this time the Soviet Union had loosened its grip too much on the top and Moscow became an oligarchic system²¹ (Aslund, 2002). By the time Gorbachev came to power, it was impossible to implement any top-down reform because “in order to make a successful social transition from authoritarianism to democracy and from a state economy to a market economy it is essential to have a viable state authority. The state comes first” (Suny). Gorbachev’s personality and over self-confidence did not win the people over. In fact, his message was often vague and confusing. The masses did not know what to make of it.

Progress in Gorbachev’s revolution was very slow, largely because of the inability to adapt to the progress of the information age, which would have expanded its economic growth. Heymann, as quoted in Ofer (1987), labels the Soviet Union a “handicapped” society, or a place that was ill-equipped for a successful economic restructuring which was initiated by Gorbachev:

Soviet society - as is now (1985) beginning to be recognized by the new Gorbachev leadership - is handicapped by a socio-political organization ill suited to the adoption and assimilation of an information-intensive culture: its highly centralized approach to management and decision making; its dearth of reliable data bases and the wall of secrecy with which surrounds them; the poor quality and availability of its telecommunications links; its discouragement of entrepreneurship and risk taking (uncoordinated small-team, competitive ventures do not exist); its tradition of ignoring

²¹ The state enterprise managers did not feel accountable to anyone, which meant they could do as they please, delaying any economic reform offered by Gorbachev.

the needs and wishes of customers and users, and its abhorrence of the wide-open, chaotic marketplace, where a staggering variety of profit-motivated buyers and sellers contend – these and other features hamper and constrain the society’s ability to adjust to and benefit from the information revolution (Ofer).

It had taken decades to achieve this society, and would take even longer to revert to the days of high growth and high output per worker figures in the 1950s. Had Gorbachev known then what scholars know now about this internal collapse of the Soviet Union, he might have opted for an alternative plan. Many scholars still debate whether implementing both perestroika and *glasnost*’ simultaneously was effective (Ofer). Had perestroika been able to pursue its course (without any effects from *glasnost*’) it might have achieved the intended results. Research analysis²² has shown that economic transitions (from centrally planned to market-oriented) are satisfactory when approached gradually, like China had done, starting in 1978, in comparison to the Soviet Union and later Russia’s “shock therapy” approach (Sachs and Woo).

Even if the Soviet people had a clear understanding of what Gorbachev was doing and had agreed that it would benefit them, we cannot assume that they would accept it, because they had a clear case of cognitive dissonance: they had been ignoring the problems they were facing for quite some time.

3.2 Cognitive Dissonance

Soviet Russia had a severe case of cognitive dissonance, which is “the need to resolve contradictory or conflicting beliefs, values, concepts, perceptions, [and] only occurs when we are attached to our attitudes or beliefs” (Tompkins and Lawley). Psychologists say that “no problem can be solved until an individual assumes the responsibility for solving it” (Peck). Economic and political leaders knew of the problems but did not address them, thinking they might go away, despite their

²² Some indicators include: the employment change in various industries, output per worker, income per worker, state-controlled enterprises, economic structure, investment, and international trade. The main economic difference between China and the Soviet Union was the Soviet Union’s “overbuilt” industry: too much heavy industry and too little light industry, state subsidies, and the social welfare system (Sachs and Woo).

“monopolistic capabilities” (Lange, Part Two). Their problem was their “unwillingness to delay gratification,” or to confront problems willingly rather than being forced to by circumstances (Peck). In addition, any threat that endangered the regime resulted in inefficient methods of production, as we saw with certain externalities.

Managers used tactics like *tolkachi* (pushers) and *blat* as well, two terms every Soviet was familiar with. A *tolkach* was a worker whose sole purpose was to manipulate “people, procedures, and paperwork” (Klugman). He would collect supplies that a firm was short on by traveling to various suppliers and bargain with them, often using barter from the very firm he represents. The firm would meet its centrally planned target, only if the thousands of *tolkachi* were successful. This informal and risky tactic could have been avoided altogether had a local firms been able to design their own target plans.

3.3 Blat and the Underground Economy

One of the most damaging behaviors practiced in the Soviet Union was the practice of *blat*, which describes an action by an individual or a firm in hopes of using their own personal influence for personal gain or special treatment. This often occurred in the underground economy, to which *blat* was a huge contributor. In the Soviet Union prices were fixed. State-controlled prices were set well below demand. Malleable property rights and low administrative salaries resulted in bribery and corruption. All of the above indirectly contributed to the 1970s stagnation period, which crippled economy by the 1980s, and the eventually caused the collapse of the Soviet Union in 1991. Both government officials and civilians were to blame.

There were certain prerequisites in order for *blat* to work. On an economical level, it was practiced because of the limited commodities available. On a legal issue, people were not sure that they would be protected by the law, which increased the need for close personal relationships. On a cultural level, Russians were part of a collectivist culture in order to combat the obstacles of the system. On a historical note “take and give” practices and mutual aid have been common in Russia for generations. On a

market approach, reduction of competition, risk avoidance, and control over the market all became common (Ledeneva).

Blat seriously affected the behavior of Soviet society. It changed people economically and seriously affected how they transitioned from a centrally-planned economy to a market, capitalist economy during the 1990s:

Blat aided and impeded the growth of the Soviet economy. The system was more efficient when independent agents circumvented artificial price and production controls, thus buffering average citizens from the inefficient allocation of resources by centralized planners. Growth in the unofficial sector far outstripped growth in the stagnant official economy. Yet obligatory law-breaking had a corrosive effect on society, and undermined the legitimacy of the state. Although authorities periodically attempted crackdowns, their ultimate targets were themselves highly placed party officials. Brezhnev's own family was deeply involved in the black market. Many observers mistook black marketers for proto-capitalists. However, when the fall of the Soviet Union in 1991 took with it the state-planning system, they evolved not into entrepreneurs, but into large-scale criminal racketeers who throttle the economy today no less than state planners once did (Geldem).

Since there was an abundance of scarce products, Soviet society was full of corner-cutting to satisfy its wants. No one cared, just as long as the means justified the end results. In the Soviet Union, *blat* was used to buy both basic consumer products and various foreign goods, both of which were scarce. During the 1970s and 1980s new products like washing machines, televisions, tape recorders, cars, and car parts were impossible to buy without *blat*. These products were evenly sold and distributed in the Soviet Union by means of “specific allocation slips” through organizations and enterprises, which in turn selected the employees who could purchase the items, or a special selection process. This was also the case for more prestigious and hard-to-get products such as chocolate. Products²³ and opportunities such as vacations, leisure

²³ Products from the West (blue jeans, cigarettes, to name a few) fell into this category. It was possible to obtain these products only if you had the right resources and right acquaintances. Long-term consequences resulted in a thriving black market.

activities, health care, and bearing children certainly required money, but in order to reap the most out of the system, Soviets would use *blat*. *Blat* could have been avoided, or reduced, if the consumer side of economics was given a higher priority.

4. Conclusion

The four broad elements of this thesis led to the Soviet Union's collapse. The first is explained by the struggle to maintain political power, which early policies and Stalin's xenophobia emphasize, which resulted in scarcity and dampened innovation and technology. The second element is defined by the Soviet Union's faulty priorities, which led to inefficiencies and large amounts of waste. The most common faulty priority was the heavy-to-light industry ratio, which contributed to shortages. The third element can be explained by the excessive burden of high emphasis on military and defense spending, particularly during the Arms Race with the United States. Finally, the fourth element proves the Soviet Union was incapable of handling external shocks. Gorbachev was really the only Soviet politician who realized that things could not go on as they had, which is why he had an extremely hard time convincing his own people that his reforms would work.

Not surprisingly, Lenin's utopia was simply unattainable. Stalin started a cold war that the Soviet Union had no way of ever winning: détente and stagnation had serious long-term effects. Gorbachev is often labeled the villain in the collapse of the Soviet Union, but I have shown the Soviet Union was already on a slippery slope to destruction that had started from War Communism. The socialist fundamentals and tactics to achieve the output are the negative indicators in our final equation. I maintain that the Soviet Union collapsed internally, as a result of pure Soviet propaganda and behavior, as macroeconomic indicators tend to show.

I really believe that the Soviet Union could have, and *should* have, been the greatest empire in contemporary history. It had lots of potential and its people are tough, having been through many personal and national hardships. But the socialist

fundamentals were weak. Many of the ideas were theoretical and promoted through propaganda methods. Had the Soviet Union started off differently and adjusted its priorities, and kept consumers in mind and an entrepreneurial spirit in focus, might still be in existence today, threatening the very existence of the United States, China, and other developing countries. Its endowment factors²⁴ would have caused its growth to be unstoppable.

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²⁴ Endowment factors include total land, labor, capital and entrepreneurship. Usually the greater the total amount of these factors leads to greater prosperity and GNI for that country. The SOVIET UNION had plenty of land, labor and capital, but could not benefit from an increasing GNI because it lacked the fourth factor, entrepreneurship, that causes efficiency to increase.

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