

The Limits to Growth in the
Soviet-Type Economies:
A Conventional View Versus
a Rent-Seeking Approach

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I: Introduction

The Soviet Union incorporated a diverse nation of 15 union republics. It stretched across Eurasia covering approximately 22 million square kilometers. After the Bolshevik revolution of 1917 and the experimental New Economic Policy period of 1921-1928, the Soviet Union experienced more than 60 years of an economic system uniquely different from the western market economy. The political collapse of the Soviet Union in August of 1991 marked the end of an era characterized by an administrative hierarchical command economy, state ownership of means of production and distribution, and collectivized agriculture. This paper will examine the nature of the Soviet economy; in particular, the conventional view, as put forth in Western textbooks versus the more recent view of the Soviet Union as a mercantilist, rent seeking economy and the links between the two.

Part 1 will give a brief outline of the economic history as well as the political transformation of the USSR during the 60 years of its centrally planned economy. Part 2 will study the industrialization debate of the 1920's, which set the stage for the transformation to central planning and will also examine the two competing sides of this debate. The industrial debate will reveal how Stalin's power grew from this period. Part 3 of the paper will examine the characteristics of a traditional Soviet-Type Economy as it existed in the Soviet Union. Furthermore, Part 4 will outline the traditional views from the Western textbooks of the Soviet economy from 1928 until its eventual political collapse in 1991. Part 5 will present an alternative view to the traditional Western textbook by offering the argument of a mercantilist, rent-seeking economy as the reason behind the struggles and the eventual demise of the Soviet Union.

II. Background of the STE in the USSR

Drawing on Alec Nove's book on *An Economic History of the U.S.S.R.*, I will now give a brief history of the economic evolution that the Soviet Union experienced from 1917 to the time Stalin began his powerful rule in 1928. Prior to the establishment of socialism in the USSR, the Tsarist regime had already tried state-led industrialization and Imperial Russia had achieved notable economic growth. The state tried to force economic growth and modernization within a market economy. Subsequently, the New Economic Policy era, 1921-1928, was a time where the USSR exhibited a traditional market economy, but with some state intervention. Prior to the revolution of 1917 the Tsarist era lead rapid economic growth in both industry and agriculture. Russia had developed an extensive railway system that connected it to foreign markets. Russia was an important player in international trade, although not as major a player as might have been expected, given its size and level of development. Its large raw material resources attracted foreign investment, but despite its economic growth, Russia was still considered a poor country compared to its neighbours. The threat of political instability was a persistent feature of the pre-Soviet period (1861- 1917), owing in part to the continuing pressure for economic growth [Gregory & Stuart 2001]. Economists have argued that during this time despite Imperial Russia's growth, the empire was too slow to adjust technologically and lagged behind the more advanced countries surrounding it. Numerically, Russian growth compared favourably with that of most Western nations, but was still inadequate given the rich natural resources [Nove 1969]. Tensions grew as economic reform began.

The 1917 revolution marked the beginning of the economic changes that eventually gave rise to the Soviet-type economy. There were two revolutions in 1917 that ended the Tsarist rule and in return created the Union of Soviet Socialist Republics (hereafter USSR). The first revolution in March, 1917 overthrew the imperial monarchy and installed a democratic government. A few months later in November, the Bolshevik Party led by Lenin overthrew the democratic government established from the previous revolution and introduced the communist party as the head of a “new socialist order” [Gregory & Stuart 2001]. The intention was to establish socialism in the USSR.

After the Bolsheviks came to power, industry was nationalized. This was the first event that created tensions between the Bolsheviks and the capitalists remaining from the Tsarist era. However, the tension was soon transferred to the growing problem between the White Russian Force that was occupied the Urals, Siberia North Caucasus and other regions and the Bolshevik party [Gregory & Stuart 2001]. The struggle created a civil war between these two parties resulting in an economically unstable situation for the USSR. The increase of war expenditures and the lack of tax collection depleted the Bolsheviks’ funds. This period was dominated by the war, the depletion of supplies, the stagnation of the transportation system, and the destruction of vital agricultural land. The Bolsheviks believed they had no other choice except to resort to increasing their money supply via printing more money. The increase of money supply caused hyperinflation which almost destroyed the current market system. The continuous destruction of the value of money in turn placed more emphasis on a barter system. In November of 1917 there were 20 billion rubles; by July 1921 there were 2.5 trillion rubles in circulation [Gregory & Stuart 2001]. This period eventually led the USSR into the administrative

economy known as the War Communism. Lenin noted that “War Communism was thrust upon us by war and ruin; it was not, nor could it be, a policy that corresponded to the economic tasks of the proletariat. It was a temporary measure” [Gregory & Stuart 2001 p.43].

Following the War Communism period of 1917 to 1921, Lenin instituted the New Economic Policy (NEP) in order to recover from the chaos and devastation of communism shortages and there were threats to cause uprising against the Bolsheviks. The NEP lasted from 1921 until Stalin’s takeover in 1928. As in the War Communism period, the peasants remained in control of the agricultural sector. They were now allowed to freely sell surplus agricultural output and purchase supplies. At the same time, three-quarters of the “commanding heights” of the economy, such as fuel, metallurgy, war industries, foreign trade, transportation, and banking remained nationalized. Politically during this era, the ideological agenda was to place emphasis on the alliance between the peasants and the Soviet regime, and thus the market was re-established for agriculture. This created economic differences within the peasants. It fostered a class of relatively well-to-do peasants, the Kulaks, who opposed the creation of socialism in the USSR.

The main policy during the NEP was designed to improve growth of the war-torn country. In March of 1922 there was a proportional agriculture tax that was implemented to replace the War Communism’s system of requisition. This tax burden eventually shifted to fall on the wealthier peasants, therefore accumulating more tax revenue for the USSR. The implementation of this tax was the first step on establishing a market economy. The NEP also encouraged enterprises, whether they were privately or state

owned, to freely contract with other parties on the sale and purchasing of capital and raw materials. While the USSR was recovering from the famine and the destruction of the 1918- 21 Civil War, the economy did slowly turn around. In 1921, droughts struck the eastern and southeastern parts of the country affecting agricultural output and reducing the planting and sowing of crops. There were limits to the transportation available to transport food, and this in turn caused food shortages in many parts of the country. The hunger strikes caused other health issues to arise. Disease and starvation became major concerns for citizens. The economic instability experienced in the early 1920's enticed the government to implement a new monetary system in order to create a stable currency. Rationing and barters would soon be eliminated and hence enterprises would be able to use monetary accounting measures to account for their financial state. All raw materials would have to be purchased, workers would be given wages, and accounting would be done in monetary figures. During the War Communism period, the Bolsheviks had believed that they could eventually eliminate the use of money. But this never happened, and as indicated above, a goal of NEP was to stabilize the value of the currently in order to give people confidence in the ruble. However, with the New Economic Policy money was used as a means of stabilizing the currency.

In 1923, a new crisis emerged in the USSR: the scissors crisis. This was the result of agricultural prices increasing relative to industrial prices. The agricultural sector recovered more quickly than the industrial sector after the war and drought over 1917-21. By 1923, the sown area of the USSR had reached almost 90% of prewar levels [Nove 1969]. The destruction to capital as well as the depreciation from years of neglect took a

toll on production capacity. The industrial levels were much further below the 1913 levels than the agriculture prices were of 1923 [Nove, 1969].

Table 2.1: Industry figures of the Scissor Crisis

Industrial prices as a ratio of agricultural prices (1913 relationship=100)

	Wholesale	Retail
October 1922	131	161
December 1922	141	167
February 1923	169	180
May 1923	215	223
July 1923	202	211
September 1923	294	280
October 1923	310	297

(Source: Gladkov, *Sovetskoe narodnoe khozyaistvo(1921-5)*(Moscow, 1960),p.413; Nove, A. *An Economic History of the U.S.S.R* (London: Allen Lane The Penguin Press,1969) at 95)

As shown in the *table 2*, the scissors crisis had reached its peak in October of 1923. By 1924, the agricultural prices had reached 92 (1913 = 100) and the industrial index had fallen to 131 [Nove 1969]. By 1924, the Soviet Union had established a stable currency and the period of economic instability was largely over. The most prosperous period of the NEP was over 1924 to 1925, and output peaked in 1926 following a notable economic recovery.

Table 2.2: Recovery Rates (in rubles of constant value)

	<i>1922-23 (in millions of roubles)</i>	<i>1926-27</i>
State	512	1817
Cooperative	368	6826
Private	<u>2680</u>	<u>5063</u>
Total	<u>3560</u>	<u>13718</u>

Source: Nove, A. *An Economic History of the U.S.S.R* (London: Allen Lane The Penguin Press, 1969), 105

The NEP was eventually discarded when the peak output of 1926 proved to be unsustainable. The reasons for the abolition of the New Economic Policy lay behind Lenin economic intentions for the Soviet Union and the power held by the kulaks. The NEP was implemented only as a temporary measure that would gain economic stability before a socialist economy could be effectively implemented. It was considered a step backwards by the Communists, and hence after the country regained economic stability, the party would move forward according to their initial political intent for the country.

The kulaks' actions were another reason behind the abolition of NEP. They were becoming very prosperous and were starting to be seen as a threat that was dictating state policies. This was where the scissors crisis began. Since agriculture had recovered more quickly than industry, upward pressures were placed on the industrial prices to increase them relative to that of agriculture [Gregory & Stuart 2001]. The relative prices of the two sectors took the shape of an open pair of scissors when describing the deteriorating terms of trade of agriculture, hence the term "scissors crisis" [Nove 1969].

Another reason was the limit of growth that the NEP possessed. The leaders believed that the country had grown to the capacity the NEP would allow without

significant capital reconstruction and accumulation. Thus the NEP was abolished in 1928 and replaced with a centrally planned economy. The Bolsheviks believed that an industrial base had to be established throughout the country in order to achieve their goals of economic strength and stability. The NEP was only an experimental policy and considered an imperative stepping stone linking the Bolshevik revolutions to the transformation to socialism. Then in 1928, Joseph Stalin pursued policies of nationalization, collectivization of agriculture, and national economic planning that led to what has been termed as an “administrative command” or “Soviet-type” economy (hereafter STE).

Next, I will focus on the industrial debate of the 1920's. This debate is an important period in Soviet industry for a number of reasons. The debate argued strategic issues to ensure economic growth and development for the USSR. Its outcomes determined the future course of the Soviet economy, and Stalin used the debate to seize power and eliminate his opponents.

III: Industrialization Debate: Unbalanced vs. Balanced Growth

The industrialization debate is a debate that separated the Party into two opposing sides, each side claiming their strategy for industrial economic growth would be most favourable for the Soviet Union. The leaders debated the issue of capital accumulation, and discussed their best strategy to gain the optimal amount of investment in the most effective amount of time. By the time the NEP had reached its peak in 1926, it was clear that there was a need for more capital investment in order to progress

economically and efficiently. There were fears of inflationary pressures that caused discrepancies in the USSR strategic plan to regain capital investment. The inflationary pressures caused a dilemma for the leaders; if inflation were allowed, the terms of trade would shift against the peasants [Nove 1969]. This would jeopardize the intent of the NEP policy to cater to the critical relationship between peasants and leaders. If inflationary pressures were not permitted, the achievement of long-run economic expansion would be hindered, causing the Soviet Union not to be as economically powerful as intended. To achieve long-term economic expansion was a basic of the Communist Party, which wanted the USSR to become economically and militarily stronger vis-à-vis the West. At the most basic level, every economic system tried to efficiently use their resources to accomplish their economic and monetary goals. Economists describe this as problem of economic efficiency or the rational allocation of resources [Campbell 1966].

After the death of Lenin in January 1924, the industrial dispute split the leaders of the communist party into left and right sides. The left side included Leon Trotsky, Grigory Zinoviev and Lev Kamenev and the right side included Nikolai Bukharin, Mikhail Tomsky, and Joseph Stalin [Gregory & Stuart 2001]. The focus during the industrialization debate was the economic system and the strategies used to achieve the industrialization of the Soviet Union. It was essentially a debate between balanced growth and imbalanced growth that related to both agriculture and industry.

Two problems emerged when the industrial debate focused on implementing their strategies. The two problems were: first, the problem of coordinating the activities of the different participants in the social process of production and second, the problem of

optimizing or of making rational choices among the different alternatives [Campbell 1966]. In order to coordinate activities, all individuals within the economy including producers and consumers must act consistency. If a good is provided, it must have a sufficient supply to be provided to all people who need that good for production. For example, oil: oil must be provided to all producers that require it to heat their factories or operate their machines. However, to have excess supply of oil would be inefficiently allocating resources and therefore a waste of money. The balance of supply and demand is not adequate for internal consistency; it must also include satisfying the demand in the most efficient way. This balance between supply and demand can be achieved either via markets or via targets and quotas which are also two different paths to industrialization of the economy and thereby the economic decisions are made by the industry ministers. The debate centered on these two distinctly different ways of achieving industrialization. The outcome was the STE in which property mainly belongs to the state, which also manages the economy via a central plan.

The Rightiest Position: Balanced Growth- Bukharin.

The group of the Right side including Nikolai Bukharin, Mikhail Tomsky, and Joseph Stalin proposed the strategy of balanced growth [Millar 1981]. This side mainly ran the governmental office during the NEP period. At the beginning of the debate, they followed the rationale of the original NEP plan, which was a policy attempting to strengthen the weak relationship between the government and peasants. Throughout the period of War Communism and the NEP, the party reached a stalemate where they could retain the support of the workers and keep the urban economy going only by

requisitioning the grain from peasants [Campbell 1966]. The party was not powerful enough to control this policy indefinitely; the peasants had many powerful tactics that would limit their compliance to strategies unfavourable to them. The Bolsheviks were aware at this point that they were not powerful enough to win against an attack from the peasants. In 1921, Lenin realized this impasse and reacted with the strategic retreat that was the NEP. The main focus was the restoration of the agricultural sector, mainly by encouraging production and motivating peasants to cultivate agriculture products. As noted above, the NEP was successful at regaining power by establishing a strong relationship with the peasants and by the re-growth of the agricultural sector. The NEP shifted the party's focus to a more prosperous path for the USSR and hence shifted away from economic collapse.

The Rightists hoped that the NEP policy could be extended indefinitely into the future. They argued that after regaining prewar levels of output, the NEP policy would still be compatible with future growth. They recognized that in order to keep the economy growing it was imperative to make new investments instead of just reusing existing capitals. The Rightists argued that the interdependence of the two sectors, namely agriculture and industry, required a balance of growth. The industry sector would require the funding from the agricultural industry. The agricultural supplies as well as the agricultural exports would finance the initial investment of capital and machinery for the industrial sector.

The main focus of the Rightists was their emphasis on agriculture. Expansion of the agricultural sector would ensure the requirements for industrialization. The improvement to the agricultural sector required a steady flow of food and raw materials

to industry to ensure the expansion of industrial output. The theoretical rationale was derived from traditional market based standards. The industrial sector once formed would require a market for output. This market would only be able to function if consumers were willing and able to purchase their products. The peasants must remain prosperous enough to be able to afford to consume the goods of this market for the strategy to work. Therefore, for the peasants to remain prosperous enough to purchase goods, they must have an agricultural sector that provides them with an income.

The Leftist Position: Unbalanced Growth- Preobrazhenskii:

The left side of the debate included Trotsky, Zinv'ev, and Kameney with theoretical analysis from the economist Evgenii Probrashenskii [Millar 1981]. This group was the opposition within the Bolshevik party that often disagreed with the various ideas and policies of the Right. The Leftists did not believe that the Rightist policies were as promising for economic prosperity as the Leftist plan was for industrialization. One of their main criticisms of the Rightist argument was the claim that the NEP plan could not be extended indefinitely. The NEP plan was a temporary measure to regain economic stability within the USSR. The Leftist argued that the NEP plan was not constructed to continue economic growth in the way of industrialization after restoration of the economy. The NEP construction was based on a temporary plan to channel the USSR from economic instability to an economic system that was fit for expansion and prosperity.

The Leftists had two sides to their strategy for industrialization: firstly, investment requirements and secondly, financing of these investments. They believed the Rightist

had flaws in their calculation of the amount of investment that was required for industrialization to be successful. The Leftist claimed the amount of investment for industrialization would greatly exceed the amount of investment that was required for the restoration efforts within the NEP.

As Campbell [1966] pointed out there were a number of reasons for which the Leftist believed that the Rightist had flaws with their rationale behind their argument for the debate. These reasons were:

1. During the NEP years, restoration was possible with little investment because investment consisted of patching up capital stock that had already existed and was of considerable size. For industrialization this would not be true because new capital and innovation was imperative.
2. Throughout the late twenties, the Soviet Union was exhausting their fixed assets faster than their new investments could replace them. This is a situation that indefinitely could not be sustained; the country eventually had to stop their capital-consumption binge in order to build capital and new investments.
3. In order for industrialization to succeed, extensive investment would be required on a diverse front. This would include investment in transportation to move the increased volumes of output, investment into cities to cater to the growing populations' health care and housing, and investments into educational demands. This would enable the economy to surpass the bump in the road and follow the path to rapid successful economic growth.
4. The industrialization period required that the planners would use the latest developments in technology. If they followed the NEP and continued to patch up and extend the current way of operating, the country would remain backward, inefficient and unproductive. Industrialization required the most modern technology in order to remain competitive. This would require capital-intensive investments, therefore requiring the investment of large amounts of rubles to raise industrial output by one ruble's worth.
5. Preobrazhenskii explained that industries that produced steel, machinery and other commodities were more capital- intensive compared to the industries that produce consumer goods. For example, "to build the blast

furnaces to produce the steel to make the machines to make other machines which would ultimately make consumer goods is a long, drawn-out process" (Campbell , 1969). Therefore, he argued that the labour force and other resources would be occupied before actually producing goods that could be consumed.

This supported some of the errors found within the Rightist movement. Preobrazhenskii's reasoning began where Marxian expanded reproduction had ended, claiming that focusing on investment goods and supporting rapid industrialization was necessary [Gregory & Stuart 2001]. The first goal of the Leftist proposed policy was the emphasis on investment requirements as mentioned above. The second focus of the proposed policy was their strategy for financing these investments. The Leftists criticized the Rightists for assuming that agriculture would be able to finance the heavy financial requirements of the industrialization period. They claimed even a thriving agriculture sector would not be able to fully finance the industrial financial requirements. Instead the Leftist stated that the industrialization of the Soviet Union would require tremendous savings from mostly the peasants. However the peasants would not make this sacrifice unless the governments stopped following a policy that encouraged peasant agriculture. Instead the government should implement a policy that would decide what amounts were to be saved. In essence, the state would equate real savings with real investment or the output of the capital goods sector [Gregory & Stuart 2001]. Therefore the state would begin to transfer savings from the private agriculture sector into the state budget and barding system, where they would come under state control. This would eliminate the private sector and the peasants as a viable threat and create a viable socialist sector as the source of investment financing.

Overall both sides had flaws and criticisms within their prospective policies. The major concern at that time was breaking the alliance between the peasants and the government that was formed from the NEP times. In order for the Soviet Union to survive, it was necessary to keep this alliance strong. If the alliance was broken the peasants would revolted. Then the USSR would have returned to civil war. The threat of a civil war was the major strength the Rightist argument had over the Left, and in turn this was the issue that Stalin used in cooperation with the Right group to overthrow the Left. The Rightists believed that by exporting grain in exchange for machinery and other capital goods they would be able to finance their investments.

Stalin did not contribute much to the theoretical aspect of the industrial debate. However, he implemented himself as a key player. Stalin used the debate as the means to overtake his enemies and establish himself as a powerful figure within the party. At the crucial point of the debate, when both sides were defending their policies for the Soviet regime, Stalin took charge. He attempted to effectively end the debate by establishing collectivization for the peasants and making radical changes to the institutional setting. The strategy behind implementing agriculture collectivization was to easily force sacrifices on the peasants that would ultimately come with industrialization. The responsibility of the division of agricultural output for consumption and distribution to urban areas would now be delegated to the regime representative instead of the individual peasants. By 1928, Stalin had effectively adopted parts of each argument and had ambitiously established the First Five-Year Plan as the Soviet Union's industrialization program.

IV: A Soviet- Type Economy

The Soviet Union exhibited an economy that was the first of its kind. The economic system within the USSR during the period of Stalin's power has now been labeled as a Soviet-Type Economy. Overtime this type of economic system had presented itself in countries such as the East European COMECON nations, North Korea, Cuba and China. The STE originally was based on the underpinnings of Lenin's views of Marxism's past theories of ideas of socialism and his discussions on balances in the national economy as delved as his observation of resources allocation in World War I in Germany. Germany during World War I was a capitalist economy that during the war had to prioritize their resource. Lenin's observation of the operation of the German economic system gave rise to his ideas of socialism. In the 1920's during the industrialization debate, the citizens were at a junction of which path the USSR should take. The 1920's began the transformation towards a planned socialist economy. With the emergence of Stalin's direction, the USSR transformed into a planned socialist economy by the 1930's. The decade following the beginning of Stalin's leadership is known for the major structural transformations the USSR endured.

Several key features characterize a traditional Soviet-Type Economy (STE). In *Market and State in Economic Systems*, Carson [1997] lists eleven characteristics that STE possessed. These include:

1. There is public ownership of most of the means of production and distribution.
2. Most of the economy was governed by state planning via state planned investments, production and resource allocation. Targets and quotas were supplied by central productions.

3. No competition for customers or market share exists between firms because firms were controlled by the state and market share is dictated.
4. Prices did not follow traditional supply and demand equilibrium because the government controls them. As a result, fundamental disequilibrium between supply and demand prevailed on the market. Demand usually exceeded supply.
5. Prices were not rational indicators of scarcity or demand because they were administratively set.
6. The government controlled the money supply via a state banking system that used tools to enforce the state plan. In the Soviet case this was “control by the ruble”.
7. There was the emergence of a widespread second or unofficial economy. This usually led to bribing and rent-seeking practices (which will be discussed later).
8. Political dictatorship under the control of the Communist Party existed. No political party competition was allowed.
9. Enterprises were required to produce “output targets from the achieved levels” that were set by the government. Each year this output target would be raised by a percentage of growth added to the previous amount.
10. A “soft” enterprise budget constraint was often present. The government compensated for the losses of an enterprise by charging higher taxes to the more successful enterprises.
11. Soviet-Type Economies exhibited large extensive growth, rather than intensive growth as in market economics. There was full employment, but not full utilization of resources, including labour. Thus there was full employment but also under employment.

In 1928, the Soviet Union’s new leader, Joseph Stalin, replaced the market economy with the command or “Soviet-Type” economy. With the implementation of the planned economy, Stalin constructed a system that directed resource allocation, owned all industrial enterprises and controlled collective agriculture, thereby replacing the market system with a system of targets and quotas. Stalin’s initial concern was to develop industry at the expense of agriculture and the rural economy. In 1928, command planning began with the implementation of the First Five Year Plan. Gosplan, a

committee organized to monitor current targets and construct long-range plans, was the central coordinator of this plan. Gosplan constructed control figures directing the economy's production [Gregory & Stuart 2001]. Following the construction of these control figures, operational plans of enterprises were constructed to correspond with their figures. Resources and raw materials were then allocated through the system and investment was governed by the five-year plan, the length of which was set to cover the period needed for investment projects to reach maturity.

The STE was built on a hierarchical system with the planning committees and political leaders at the highest levels and enterprises at the lowest levels which pass their responsibilities upwards. In this system, resources and intermediate goods were rationed via input quotas for each individual firm. This was called *supply planning by materials balances* because materials available for production, import and inventory were balanced against future production, exports and consumption [Carson 1997].

The First Five Year Plan covered the period 1928 to 1933, and as Stalin demanded, it reflected the industrial technological aspect of an industrialized, high-paced economy. This plan was criticized for its elaborate demands and therefore, in order to comply, many considerable revisions were necessary. The first plan was an unobtainable vision of growth. The second plan was more realistic.

Table 4.1: Soviet Percentage Plan Fulfillment in the 1930s

Objective	First Five Year Plan (1928- 32)	Second Five Year Plan (1933-37)
National Income		
Official estimate	92	96
Western estimate	70	67
Industrial Output		
Official estimate	101	103
Western estimate	60-70	76-93
Producer Goods		
Official estimate	128	121
Western estimate	72	97
Consumer Goods		
Official estimate	81	85
Western estimate	46	68
Agriculture Production		
Official estimate	58	63-67
Western estimate	50-52	66-78
Labour Productivity		
Official estimate	65	--
Western estimate	36-42	86
Retail Trade		
Western estimate	39	54

Source: N. Jasny, *Essays on the Soviet Economy* (New York: Praeger, 1962), 266; E. Zaleski, *Stalinist Planning for Economic Growth, 1933-1952* (Chapel Hill: University of North Carolina Press, 1980), 503; A. Nove, *An Economic History of the USSR* (London: Penguin, 1969), 353.

Table 1 demonstrates the differences within sectors and shows the degree of fulfillment of the first and second Five Year Plans. Command planning gave rise to administrative considerations based on prices, money, and finance. As the system expanded, price setting was mainly focused on state needs as opposed to reflecting market scarcities. Official prices often remain rigid, although demand prices or transactions prices rose rapidly, owing to the growth demands placed on the economy.

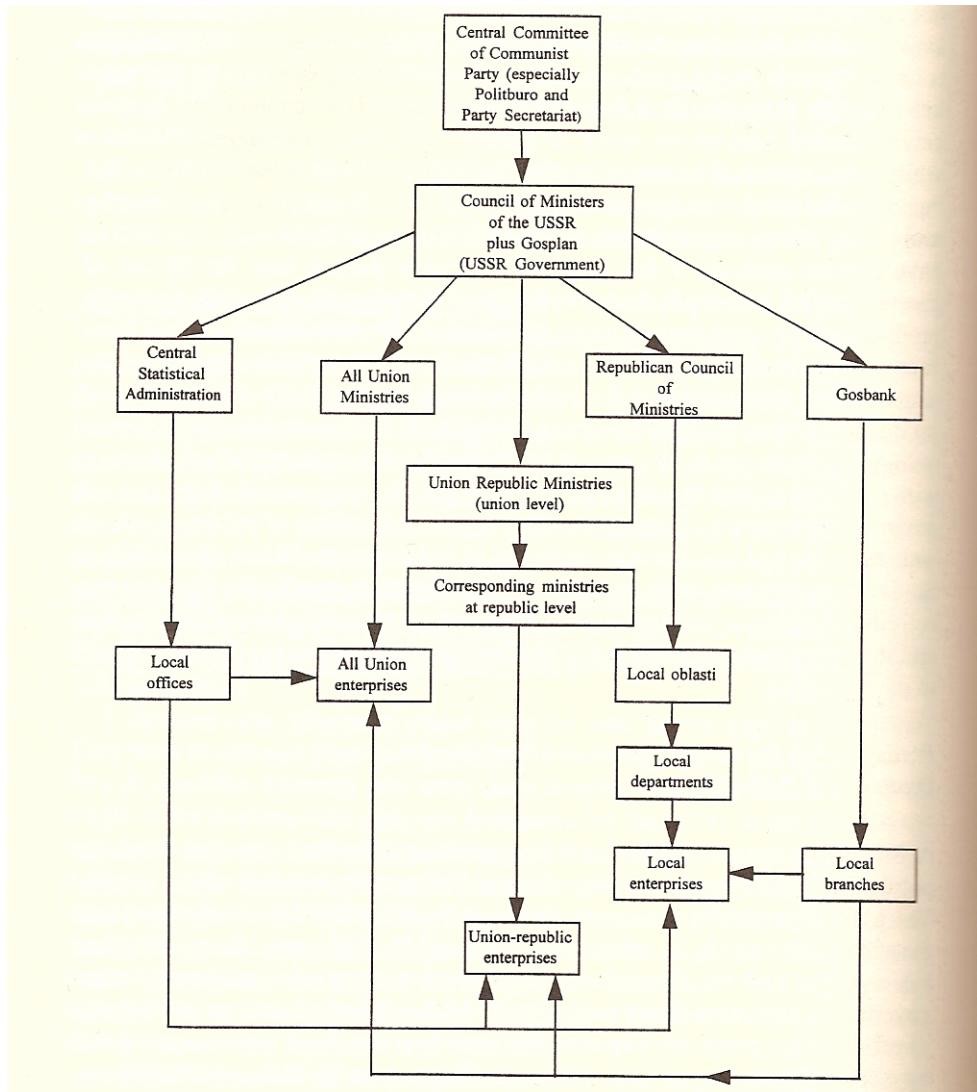
The Soviet Union after Stalin became leader changed from a market type economy to a socialist based economy or STE. The state planned production quotas and controlled the markets; collectivization of agriculture was imposed by the state despite the previous sector's relative freedom from state ownership. Many decisions were passed

up the administrative hierarchy to Stalin, often because of fear of Stalin's harsh punishment when decisions were made that he disagreed with. Stalin had obtained a reputation as a brutal and unforgiving dictator. His paranoia and determination was the reason of many tragically brutal deeds that violently changed USSR's political policies.

The Structure of the Soviet Union

After Stalin gained power he began delegating, made all top-level appointments, had his way on every important issue, and used brutal force whenever necessary. In private, Stalin would meet with his associates where he could dictate the direction of the agenda and control participation. After the 1930's, Stalin eliminated the Rightist group to avoid any extremist that were opposed to Stalin's direction for the Soviet Union. The Soviet Union had an organizational structure as shown below. There was a vertical structure with the Politburo of the Communist Party at the top aided by economic functional and control agencies.

Figure 4.1: A General View of the Chain of Command in the Former Soviet Union



Source: Eugene Zalski, *Planning Reforms in the Soviet Union, 1962-66* (Chapel Hill: University of North Carolina Press, 1967), chap.2 (especially cart 2, pg. 18; Carson, R. *Comparative Economic Systems Volume I: Market and State in Economic Systems* 2nd ed. (Armonk and London: M.E.Sharpe,1997), p.38

Stalin's idea of collectivization was evident from the beginning of his power. In June of 1929, the total number of peasants that were members of collective groups had reached barely a million, and of those, 60 per cent were in the TOZ type of producer's cooperatives [Gregory & Stuart 2001]. Stalin secretly ordered locals to try mass collectivization by whatever means were necessary. Gradually the peasants were forced into collective farms. This created a long and bitter struggle. Since the peasants who

owned their own land did not want to become collectivized; they would slaughter their own livestock in spite of Stalin's direction. The state officials sent to supervise the collective farms were not well educated. It has been noted that there was a crisis in 1932 as a result of bad planning, low pay, coercion, bad weather and the organization of work. The collectivized farms did not thrive significantly. The following figures show the evolution of collectivization under Stalin.

Table 4.2: Percentages of Households and Crops Collectivized

	1930	1931	1932	1933	1934	1935	1936
Percentage of peasant households collectivized	23.6	52.7	61.5	64.4	71.4	83.2	89.6
Percentage of crop area collectivized.	33.6	67.8	77.6	83.1	87.4	94.1	--

(*State farm area and households included.)

Sources: Sotsialisticheskoe stroitel'stvo SSSR (1936) p.278; Nove, A. *An Economic History of the U.S.S.R* (London: Allen Lane The Penguin Press, 1969), 174

As mentioned earlier, Stalin proposed a five-year plan when he first gained power. Between 1928 and 1929 in the Soviet Union, the industry sector was successful. This caused an upward revision of the plan's desired output level, and the projection that the first five-year plan would be completed ahead of schedule. Stalin became even more eager and in 1931 announced the plan would be fulfilled in "three years in all the basic, decisive branches of industry" [Gregory & Stuart 2001]. The following figure shows the alteration of the first five year plan during 1929 to 1930.

Table 4.3: Alteration of the Five Year Plan

	1927-1928	1932-9 (‘optimal’)	1932 (amended)	1932 (actual)
Coal (million tons)	35.0	75.0	95-105	(64.0)
Oil (million tons)	11.7	21.7	40-55	(21.4)
Iron ore (million tons)	6.7	20.2	24-32	(12.1)
Pig iron (million tons)	3.2	10.0	12-16	(6.2)

*Source: S. Bessonov, Problemy ekonomiki, No. 10-11 (1929), [.27 and plan-fulfilment report.; Source: Nove, A. *An Economic History of the U.S.S.R* (London: Allen Lane The Penguin Press, 1969), 188

Economic Growth in the Soviet Union

Economic growth was the ultimate test for the Soviet Union; this included an increased standard of living. Stalin in 1931 made the famous prophecy that “We are fifty or a hundred years behind the advanced countries. We must make good this distance in ten years. Either we do so, or we shall go under” [Gregory & Stuart 2001, p.188]. By definition, economic growth is commonly measured by the rates of change in aggregate output, usually denoted by Gross National Product (GNP) or Gross Domestic Product (GDP). In the Soviet Union, the equivalent concept that measures the rate of change in output is the Net Material Product (NMP). The NMP is not measured in the same way as GDP; generally, the NMP is calculated on a value added basis. This method created a flaw in the accounting. This allowed for double counting in the NMP calculation process hence underestimated the values because services were omitted from the calculation. For example, steel used by an automobile factory would be counted once in GDP calculations but could be counted twice in the NMP value giving it a higher amount [Gregory & Stuart 2001]. In the realms of services, medical doctors’ private patients were not included in the NMP, however medical practices related to material production in an industrial enterprise were counted therefore an improper comparison [Gregory & Stuart

2001]. In reality, the financial records had errors and missing values that were either altered by false information or forged to reach desired quotas. In the following chart, as Gregory and Stuart [2001] demonstrated, the values are not representative estimates. Nonetheless analyzing a series of estimates will allow us to understand the ranges of the Soviet growth as well as the general trend, despite the biases of the individual numbers.

Table 4.4: Economic Growth in the USSR (annual rates of economic growth)

USSR	American Estimates	Official Soviet Estimates
1885-1913	3.3 ^e	--
1928-40	5.4 ^a	14.6 ^d
1950-60	6.0 ^c	10.1
1960-70	5.1 ^c	7.0
1970-80	3.7 ^c	5.3
1980-84	2.0 ^c	3.2
1984-88	--	3.5
1928-84	4.3 ^b	8.8
1928-84 (effective years)	4.8 ^b	9.7
1950-84	4.4 ^c	7.6

^a1950 prices

^bCombined index: 1950 prices 1928-50; 1970 prices thereafter

^c 1970 weights

^d 1926-27 prices

^e 1913 prices

Source: Gregory, P. & Stuart, R. *Russian and Soviet Economic Performance and Structure* 7th ed. (Boston: Addison Wesley, 2001) at 206

The table above shows a difference between recorded Soviet growth and American estimates. Since the official Soviet indices used “early” year prices and excluded services, this produced a much higher growth level than the American estimates. Regardless of what growth figures were analyzed, the Soviet rates slowed considerably as time progressed. The Soviet Union, despite inaccurate records,

demonstrates steady positive growth in the early years, but a steady decline thereafter. What was the reason for this slowdown in growth?

V: Conventional View of the Soviet Union's Limits to Growth

Intensive vs. Extensive Growth

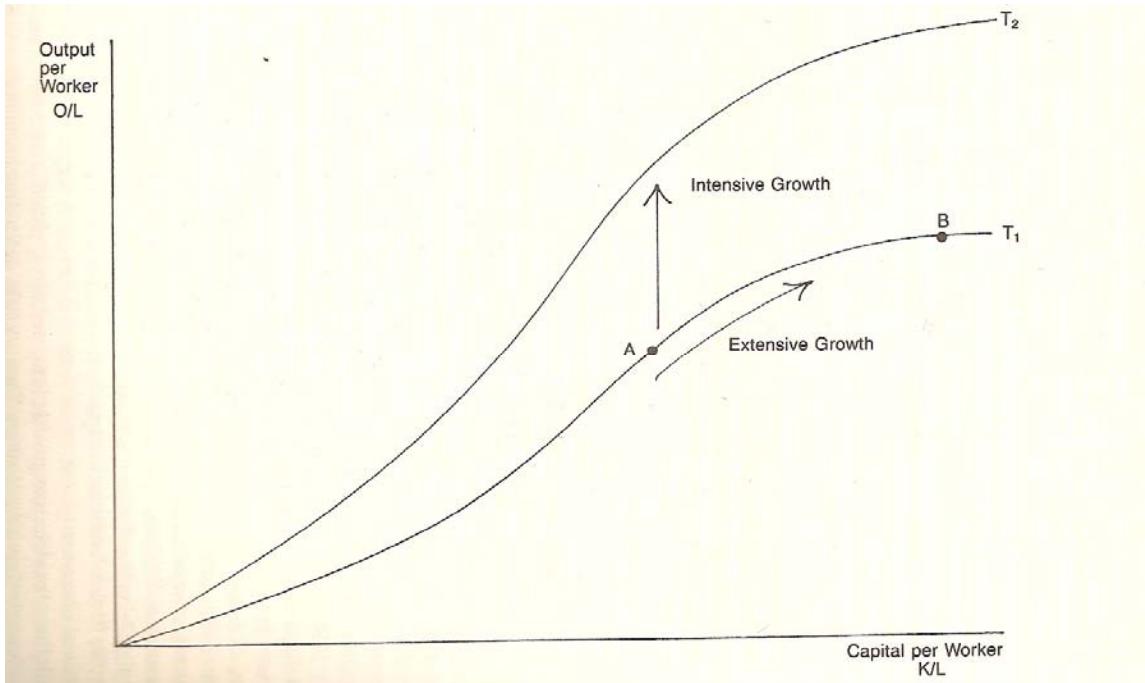
In economic theory there is a trade off between two interlinking forces, intensive and extensive growth; namely, the expansion of inputs via land labour and capital with the better use of those inputs as a result of technological changes and quality improvement measures economic growth [Gregory & Stuart 2001]. Extensive growth is the growth that occurs from inputs, and intensive growth is the growth resulting from the improved use of the available inputs. For underdeveloped countries the main goal is to utilize the idle resources into the production process. As economic growth continues, the task is to use the inputs more effectively and to make qualitative improvements surpassing the binding constraint on the input growths [Gregory & Stuart 2001]. The long-run initiative is to efficiently improve inputs, since capital, land, and labour are scarce and will not expand indefinitely.

A major economic problem experienced by the Soviet Union was over-centralization: all supervision was based on a vertical hierarchical system. The STE relied on planning from achieved levels, excess demand to ensure price and structural rigidity, and evaluations of enterprises based on current outputs. These were reasons why the STE was so poorly managed and henceforth why management was kept relatively simple. The centralized economy, (the STE), had a comparative advantage in generating

extensive growth over intensive growth. This was because they operated optimally under three different conditions: 1) levels of development were low and the governments forcefully stressed the growth of basic heavy industry, 2) the labour force was underutilized and there was a shortage of industrial capital, and 3) the improved technology from abroad was adopted and copied quickly [Carson 1997].

The initial advantage of extensive over intensive growth is beneficial to a developing country. It gives the developing country the ability to generate large forced savings and invest them into industries that had low capital to output ratios. Extensive growth also allows the country to transfer under and unemployed workers from the agriculture sector to the factories and industrial sector. During the industrial changes the USSR wastefully used natural resources to produce raw materials and energy. The expansion was done quickly and at the time it produced increases in output. The figure below shows the extensive versus intensive growth of a country like the USSR.

Figure 5.1: Extensive versus Intensive Growth



Source: Carson, R. *Comparative Economic Systems Volume I: Market and State in Economic Systems* 2nd ed. (Armonk and London: M.E.Sharpe, 1997), p. 62

As the Soviet Union expanded extensively within their early years of development their economy followed along line T_1 . At this point the USSR's was expanding its capital stock more rapidly than its industrial labour force. As the country continued along the extensive growth path, the yield on investment eventually began to fall. This is shown on the graph around point A. This exhibited the point where the economy was experiencing diminishing returns to capital. At this point, the yield of investment reached closer to zero as the curve continued to flatten out. The STE reinforced this decline by having strategies of heavy energy and resource intensive growth that were affected by rising fuel or basic material costs [Carson 1997]. Eventually, as in any STE, extensive growth will be exhausted; this occurred around point B. At this point the Soviet Union could not use capital per worker ratios to generate economic growth within the country. An additional mean such as intensive growth was

required. To avoid stagnation, the only option would be to focus efforts on introducing new technologies or improving the organization's production of the labour force. This alteration would then bring the Soviet Union to move to T_2 at point A, where their economy could have continued to grow. However, in reality the STE did not cater to a system where innovation and intensive growth would flourish. The diminishing returns to capital quickly set in after the increased output occurred from the extensive growth. The problem of the Soviet Union's growth began when the economic progression was being transferred from extensive into intensive growth. The economy had limitations because of the type of system the command economy created.

Planning from Achieved Levels

In Western economy the concept for enterprise production is based on equating the supply and demand. Unlike the traditional Western economies, the strategy of STE states the output target to give the minimum amounts each firm is required to produce. Each year the targets would increase relative to the previous year's performance plus an anticipated increase in input quantities and production capacity [Carson 1997]. This was a crucial aspect for the Soviet Union to operate. As Igor Birman once wrote, "The well-known words, 'from the achieved level', demoted that plan indicators are derived by adding to the relevant figures [of expected current performance] a certain percentage of growth. That is the foundation of all the technique, all the methodology of Soviet planning. The rest is secondary" [Carson 1997 p.44].

Soviet planners projected the output targets indicating the minimum required by each firm to achieve. The ministry would "reward" success in exceeding the plan target by increasing target quotas for future years; this was known as the ratchet effect [Gregory

and Stuart 2001]. When the enterprise surpassed the output target, the next year's target would be "ratcheted up" and viewed as a grim consequence. However, if a firm did not reach their targets, its managers in turn would risk their chance for a promotion and their worker's opportunities for bonuses. As a result, there was reluctance to surpass the target levels; for fear that in the following year they would not achieve the new minimum required. A slippery slope effect was essentially created. As a precautionary step the industrial firms would produce the bare minimum at the beginning of the planning period and then gradually increase output as the period progressed and the deadline was approaching. Hence, when the period was coming to a close, the firms would be working at full capacity to ensure they did not meet their targets too early and risk alteration to future targets. This was called "storming" [Carson 1997]. The managers would attempt by any means possible to ensure they reached their output targets, but would not want to exceed the quotas. The presence of the soft budget constraint reinforced this behaviour since there was not an incentive link between enterprise earnings and the career prospects of its employees.

In the STE prices were not set by equating supply and demand. The prices were rigid and therefore analyzing the price fluctuation was not a means of assessing efficiency or performance. Planners would evaluate efficiency and performance by comparing production amounts. The rule was to add an external standard, like inflation, to the previous year's output amount. This would allow the planners to increase the target rates of the different enterprises. The planners were incapable of gathering and processing all the information and data required to make efficient economical decision

for the industries [Gregory & Harrison 2005]. This was partly because of the paranoia created by Stalin and the Politburo.

The decision-making resources were scarce and often Team Stalin placed emphasis on trivial issues instead of the industrial sector important issues. For example, excessive time was dedicated to individual permits for foreign travel, for locations of monuments, and for prices of metro tickets in Moscow. These were trivial economic features. A costly commission was established that included ministers and chairmen of Gosplan to decide on demanded cuts of timber supplies; the timber accounted for only one percent of total output [Gregory & Harrison 2005]. Some areas simply refused to provide information with claims that it was too costly to run audits to achieve the data required, and consequently would compromise urgent tasks and state security.

The withheld information eventually became a valuable possession and the possessors would monopolize it and attempt to extract rents whenever the opportunity arose. This information problem caused negative results for the Soviet Union. Investments were not properly planned and difficulties in unexpected problems were not properly accounted for and hence were not solved causing many projects to remain unfinished. This was specifically evident in the crisis years of 1931-32 and 1936-37 where more than 15% of gross investment was accounted for as ‘work in progress’ [Gregory & Harrison 2005]. This issue had not been examined closely because the minister’s believed the construction progress was not worth monitoring. Since many projects were not completed, it is important to note the inefficient allocation of investment within the USSR at that time. It is apparent that not all the decision-making was inefficient economically speaking. The USSR did grow, “Stalin’s economic

decisions making did better than would have been predicted by those who regarded socialist planning as infeasible” [Gregory & Harrison 2005 p.749].

A second problem that arose in planning from the achieved level was ministry self-sufficiency. Each ministry had output target levels to reach, as did the firms subordinate to it. Their targets were based on the aggregate output of firms under their jurisdiction. Each ministry encouraged their firms to supply others within their jurisdiction before supplying outside the jurisdiction. This was to ensure that all their own firms would be able to reach their targets. If enterprises achieved their levels quicker than needed, the ministry was instructed to increase their output targets. As a result storming occurred. Hence ministries would not want to raise targets if early in the quarter or period firms did not appear to be able to reach their target levels. This essentially allowed for the supply curve of the products to be very inelastic for products that were considered valuable. In some instances the supply curve could be viewed as backward bending because the price of the good if increased made it possible to reach the valued targets with a smaller amount of output [Carson 1997].

No Incentive to Innovate

The success indicators, also known as the achieved levels, did not create limitations to the economy from a managerial standpoint. One of the major faults with the STE was its limitation to innovation. This problem arose specifically when the economy was transferring from extensive growth to intensive growth. In order for intensive growth to be successful, new technologies and more efficient ways of production were required. This was usually the form of innovation and introduction of

more modern techniques of production. Any modern economy would not be able to sustain itself or expand unless improvements were made over time; this included improvements of quantity as well as quality of the products. As inputs became scarce the economy must adapt to find new ways to produce the product. This was required in order for growth to continue.

The Soviet-type economy, as demonstrated above, relied on routine, structural rigidity and planning from achieved levels. These together made the centralized economy easier to monitor and gives state management a simpler task. However, this also suppresses innovation, and the same was true of the absence of competition for market share and the shortage nature of the economy. While the firm directors or managers were obliged to follow rules, the government greatly limited their independent judgment. In part, this was beneficial to the socialist society. By keeping the society less powerful and giving them less ability to voice their opinions, more control was kept by the government. Also, they were easier to supervise.

The Soviet Union used similar production and distribution methods, year after year, using the same inputs to produce the similar products. One of the problems with the STE was the lack of incentive to create new technology. There was no competition between producers as the STE output was based on target levels and regulated monopolies. The superiors dictated the market share to be possessed by each firm. This was different than traditional market competition where firms must compete on quality, service and price for their market shares. Because official prices were not amounts the buyers were willing to pay, these prices did not reflect product quality. Generally prices were too low, and as a result excess demand was present. Producers did not concern

themselves with winning over customers and therefore, they did not have a desire to innovate.

This alone significantly prevented innovation. Producers would always be able to find customers. In addition, managers would not chance new innovation because they feared they would fail to meet their planned targets. If the innovation proved to be ineffective in improving production, this could potentially lead to the failure to reach target outputs for that year. This would not only cause the manager to lose his bonus for the year and chance for a promotion, but also deprive his workers of their bonuses. Outputs were evaluated by whether output targets were met, and not on the efficiency, production method, or the enthusiasm of the workers producing the products. Studies “have confirmed low rates of technological improvement and diffusion due to the lack of incentives for producers to adopt new technologies and planning ‘from the achieved levels’” [Gregory & Harrison 2005]. Therefore, the encouragement of managers for innovation of new production methods was very rare. Consequences were more sever for innovators than for non-innovators [Berliner 1976]. In cases where changes were made, users had to go through a long chain of commands to persuade the producer’s superiors to enforce the desired changes.

The STE system of planning from the achieved level also created a problem of introducing new products onto the market. When there was not any previous history of a product, no resources were allocated towards it. There were, in fact, inventions of defence and heavy industrial technologies. It has been noted that most socialist dictators were politically insecure. This was true for Stalin. In exchange for their insecurities,

they spent large amounts of investment to focus their attention on military and defense polices rather than consumers goods [Shleifer & Vishny 1994].

Innovation was not completely suppressed, but the STE did not offer an environment conducive to innovation. There was no personal incentive to innovate, but there was a personal incentive not to innovate. The consequence of failure in innovation was too great for many to take the chance. The Soviet economy was dominated by monopolies; this was another reason that commonly does not allow innovation to flourish. In a society with no price, quality or quantity competition, the likelihood to innovate was simply diminished. Carson [1997] gave four basic criteria that must be present in order for innovation to flourish. First, initiatives of the firms must be free to make their own decisions. This meant that decisions to invest should not be centralized like that in the STE; instead they should be decentralized and depoliticized to the firms. Second, managers must have incentives to undergo the necessary risks and frustrations that are shown by innovation. This should be done by altering the compensation method from year-end bonuses and promotions for reaching target levels to compensation for long run profits. Third, the success of a product should not be determined by the produced amount, rather it should be based on the acceptance by the users. Lastly, the “Red Queen” effect should reign. This meant that competition for market share should be present because this forced firms to keep improving their product by reducing prices, improving production efficiency and improving quality. These four criteria were not present within the Soviet Union.

The STE was more of a breeding ground to suppress innovation instead of providing strategies to encourage progress. The inability to innovate and improve their

technology did not affect the Soviet Union immediately. Initially the improvements and growth of the economy were beneficial; however, once the diminishing returns set in, the need for innovation was imperative to efficiently make the economy grow. Eventually, the Soviet Union was not able to sustain the economic growth required, and it began to retreat to slow growth and a more dysfunctional political economy.

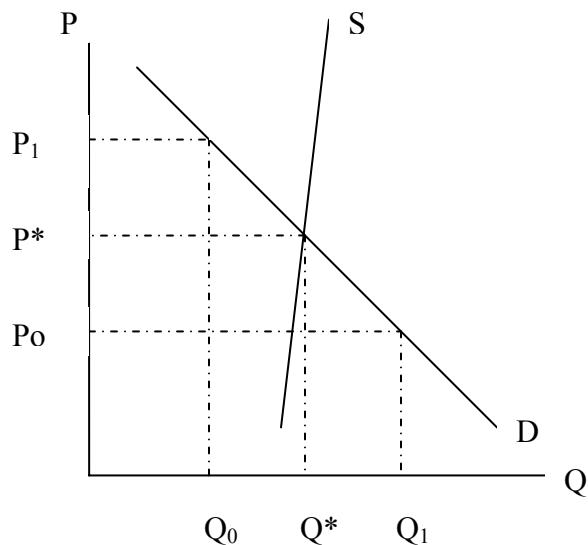
The Soft Budget Constraint

Traditional markets were commonly judged on profits, reducing material costs, and/ or finding more efficient ways of using resources. The STE enterprises could ignore these factors because they were bound by significant boundaries, availability of inputs and the soft budget constraint. Enterprises on a soft budge constraint knew they would never be “shut down”. Managers were more likely to be demoted. The enterprise knew if they did not cover costs they would receive compensation in a form of a transfer subsidy from other enterprises. This subsidy or transfer was from enterprises that had surpassed their output targets. When a firm would surpass their target they would have a high marginal tax on profits that would be transferred to the enterprises that required subsidies. The soft budget constraint divorced any relationships between profits of an enterprise with that of the earnings of managers and workers. Unlike traditional Western markets, the STE changed the budget constraint from “hard” to “soft”. A soft budget constraint would not work in the market based economy because the managers would constantly over-order materials and over- employ labourers to ensure they met their goal. The cost is not a concern to the manager of the STE enterprises, instead the top priority is the fulfillment of ‘the plan’ and the potential bonuses received from it.

Price Setting in the STE

In market economies, the interplay of supply and demand of a product forms the prices of most goods and services. Demand is dependent on marginal utility for the product, and supply depends on the marginal cost of producing the product. When supply and demand are equal, the product is rationed on the basis of willingness and ability to pay for the good. In the Soviet Union, prices were not reflective of demand and supply. Instead, they were determined mainly by administrative decrees [Gregory & Stuart 2001]. The state wanted direct control over the allocation of goods, and therefore, usually set product prices below market equilibrium, causing demand to exceed supply and producing shortages of most products.

Figure 5.2: Price Control and Excess Demand



In the figure above, the market equilibrium price is at P^* . The Soviet government set the price ceiling at P_0 , which was effectively below the equilibrium price, and the demand exceeded the supply. The shortage nature of the economy prevented prices from

allocating goods, thus allowing allocation to be controlled by the government through a system of quotas. This more often hurt the potential user and caused waste unless a quota system was in place. In addition, a second or parallel economy emerged on which prices were higher than that of the official economy. The excess demand of the official economy meant that many buyers were willing to pay higher prices than those set by the government. The second economy flourished to satisfy the excess demand on the official economy. In the second economy, prices were closer to demand or transaction prices (P_1 , in the above figure). The majority of the second economy was illegal, and had a variety of restrictions.

Official prices often remained constant over long periods of time, during which they became more and more removed from the demand prices. A reason for keeping prices rigid was to make it easier to evaluate the performance of producers by their superiors. The quantity supplied depended partly on prices, but mainly on target outputs in the plan.

In traditional socialist countries, firms do not compete for market share and monopolies dominate the market. However, official prices were below market-clearing levels causing shortages of most goods as just indicated. This model, as set out in Andrei Shliefer and Robert Vishny [1997] article on *The Politics of Market Socialism*, showed some implications of the pervasive shortages that result from this. These shortages allowed bribes to be collected and enabled the Soviet elite to exercised control over the suppliers of key products, enriching themselves by collecting bribes in return for access to supply. This gave an explanation as to why prices remained below equilibrium for so long. In addition, the persistence of monopolies prevented competition in bribes, which

therefore did not fall to the competition level. The final result was that the elite of this economy maximized their efficient market system. The Soviet Union became to some extent a rent-seeking society and an example of modern mercantilism, as shown below.

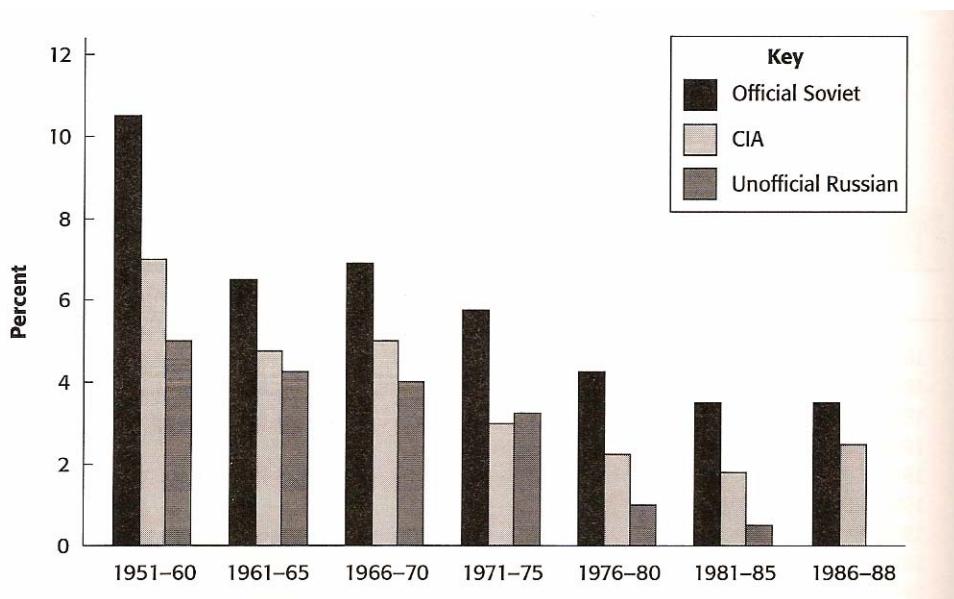
Accumulation and Consumption

Prior to the opening of the Soviet archives, Stalin's economic plan was unknown. The archives now tell us that he was obsessed with accumulation. During "1928 and 1937, Soviet real GNP doubled, but the fierce repression of private consumption enabled a quadrupling of real investment" [Gregory & Harrison 2005]. Stalin once wrote, "Only bureaucrats can think that planning work ends with the creation of the plan. The creation of the plan is only the beginning. The real direction of the plan develops only after the putting together of the plan" [Gregory & Harrison 2005]. All the plans were tentative, and subject to change from a higher chain of command. The direction for change always was carried up the chain of commands for fear of displeasing Stalin. Stalin essentially suffered from the "dictator's curse", his trusted colleagues had an incentive to decide as little as possible because Stalin had brutal consequences for those that did not make decisions of his liking.

Stalin and the Politburo attempted to control the economy by planned investment levels and the distribution of products. In the first two five-year plans, the incentive was to construct massive programs that included hydroelectric dams, machinery complexes, vehicle works, blast furnaces, railways and canals [Gregory & Harrison 2005]. As the Soviet Union encountered the problems mentioned above (for example, transformation from intensive to extensive growth, planning from the achieved levels and the soft budget

constraint) the once prosperous looking economy began to diminish. As demonstrated in the graph below, there was a natural decline in Soviet economic growth. The figure also shows a large difference between the numbers found by the Official Soviet, CIA and the Unofficial Russian economists. However, there is a significant downward trend that is consistent across the series of data.

Figure 5.3: Soviet Economic Growth



Sources: CIA, *Revisiting Soviet Economic Performance under Glasnost: Implication for CIA estimates* (Washington, DC: CIA, 1988); CIA, *handbook of Economic Statistics* (Washington, DC: CIA, various years) Gregory, P. & Stuart, R. *Russian and Soviet Economic Performance and Structure* 7th ed. (Boston: Addison Wesley, 2001), p. 208

The data was distorted by the difference in the basic measurements. The estimates were based on the accuracy of the Soviet Union's physical output series. The Unofficial Russian economist claimed that the managers and administrative personal had incentives to overstate output growth. Therefore there was a bias in the information provided. A second source of inaccuracy was product quality. The argument of whether a useless product should be included in the aggregate output was also an issue of debate in the data presented. The third inaccuracy in the data provided is the accounting of

unknown (hidden) inflation. The CIA has attempted to account for the hidden inflation. But, an inadequate adjustment for inflation would cause the growth rate, in rubles, to be overstated against real rates of economic growth [Gregory & Stuart 2001]. The general understanding from the graph above is intended to demonstrate the initial “good” economic growth followed by the steady decline as the year’s progress.

VI: Rent Seeking, an alternative view to the Soviet Union’s political collapse

The STE was a centrally-planned economy, as indicated earlier. This implied that all resources were efficiently accounted for and allocated in a scheduled plan. The nature of the planned economy should essentially inhibit the incentive for corruption or unproductive activities since all resources were efficiently accounted for. In perfectly planned economies, resource allocation by the central government should prevent the discretionary use of resources for unproductive rent-seeking endeavors. Rent-seeking is the use of resources to obtain and protect rents with help from the state [Carson 2007]. In the STE, despite its planned nature, there was allocation of market-determined resources. For example, agricultural surpluses in planned economies were often sold directly by peasants to the consumer [Hillman & Schnytzer 1986]. This was sometimes done through a legal parallel or secondary economy. However, as noted above, a further parallel economy usually developed which was illegal. This was based on corruption and bribes made possible by the shortage nature of the economy.

In Socialist theory, the Soviet economy should not have harboured any selfish motives, especially rent-seeking. Even when the plan erred on the side of extra

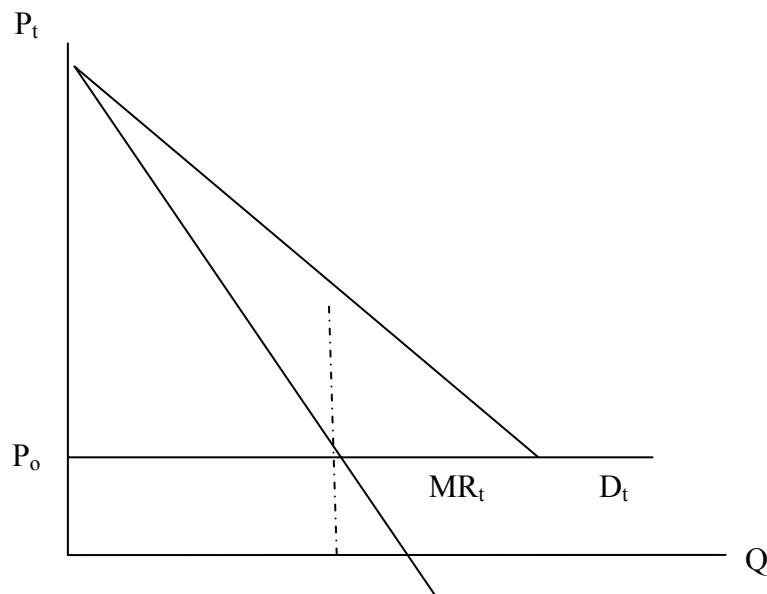
production, the economy should respond to benefit the society as a whole. It should not extract rents that benefit specific individuals. In socialist reality, we have seen that the individuals of the Soviet economy departed from its ideological norm and that personal advantages prevailed. The search for personal utility and profit maximization encouraged rent-seeking and rent-protecting behaviours by individuals, who allocated resources in such a way as to protect and to increase their personal income [Hillman & Schnytzer, 1986].

The economy of the Soviet Union was dominated by monopolies, as noted above. These were legal monopolies dictated by the government restrictions on competition and entry into their industry. These monopolies gave individuals the opportunity to extract rents from consumers, whether in the form of monetary payments or goods and services in kind. The conventional view of the USSR's economy demonstrated fixed prices that were set by the planners. Producers were only allowed to sell products to individuals who possessed an allocation certificate [Anderson & Boettke 1997]. However, the official prices were not equal to the prices of actual transactions. Transactions prices moved liberally despite the rigid official prices. Individuals would extract profits, often through bribing officials in their chain of supply, to obtain necessary inputs. This market for rents played a crucial role. Otherwise, there was a complete absence of clearly defined and enforceable property rights to the rent flows [Anderson & Boettke 1997]. This corrupted the economic system and enriched those who were in positions of power.

As mentioned above, the Soviet planners set prices below market clearing levels. The scarcity of products caused the demand of transaction prices to be higher, and allowed bribes to be changed in exchange for access to the products. The size of a bribe

reflected the difference between the official price and the transaction price plus the quantity exchanged. Because the ruble had limited purchasing power, goods in kind and other currencies such as the U.S. dollar were often used to pay bribes. In such a society, it is natural to assume that the suppliers strove to maximize their bribes. Let's take a look at this issue.

Figure 6.1: Profit Maximization for a Bribe



The graph above shows where the producer or supplier would set ‘quantity’ to maximize their bribe. Specifically they would set Q^* where the marginal revenue equals the official price or P_o . In the simplest case, this is where:

$$MR_T = \partial(P_t Q) / \partial Q = P_o = \partial(P_o Q) / \partial Q$$

The size of the bribe equals $(P_t Q - P_o Q)$, that is the transaction price of the product multiplied by quantity minus the official price of the product multiplied by quantity. At the point Q^* , demand curve is elastic. However, it could happen that the target quantity

or Q_A would be above Q^* . Then the producer will supply Q_A and will also try to convince their superiors to get Q_A adjusted downward to Q^* .

It would be very unlikely that the producers would produce their product at a level that would only fulfill the target quotas. The incentive to receive bribes from products was too great to ignore. The producers had an incentive to alter their production schedule to meet the interest of the rent-seekers. This could give the producers the ability to adjust the amount they chose to record towards their target quotas. Since the Soviet Union catered to a system that would allow alterations in the plan, any firm that did not meet the target would either receive a subsidy or early in the timeframe have their quota adjusted down. This essentially created a system that was not based on a quota system but instead created a system that acted in the interest of bribes and rent-seeking.

The archives have shown that this parallel economy was not exclusively the providing of the wealthy. All tiers of Soviet society participated in the rent-seeking and rent-protecting of products. This made it very difficult for the planners to receive full disclosure from enterprises. In Hillman and Schnytzer's [1986] article on *Illegal Economic Activities and Purges in a Soviet Type Economy*, it was describe the incentives for individuals at different levels to indulge in rent-seeking and protecting ways. They claim that at the plant and product-distribution levels managers have a lessened incentive to monitor corrupt behaviour because those who monitor are 'residual claimants'. Therefore, there is a heightened incentive for the individuals who practice rent-seeking behaviour to attempt to replace their superiors. Individuals who are residual claimants tend to the benefits from their rent-seeking practice. Henceforth, managers have at their disposal, discretionary time in order to protect against rents and those individuals who are

aspiring for his position. There is no additional benefit to use time or other resources to surpass output targets because, this would increase future official targets that must be met. Therefore the main incentive of these individual's residual claimants, is to use resources for personal gain. These hidden resources and/ or excess products which is produced and used for rents imply inefficiency within the centrally planned economy. As well, it implied a socially aware consensus of inefficiently wasting resources. These rents take form of bribes or transfers which facilitated the ongoing nature of the illegal economy.

Bribes were so prevalent in the Soviet economy, that entrepreneurs engaging in illicit production considered these rents to be an unavoidable cost of production [Hillman & Schnytzer 1986]. One author writes "the only major ongoing expense which can be connected to underground costs is the money spent on bribes without which no single private factory would last for more than a month" [Hillman & Schnytzer 1986 p.90]. The bribes were transferred through the hierarchical system both upwards and downwards. The upwards transfer was to ensure that materials were supplied and the distribution of resources were given. The downward transfer of bribes was to give employees an incentive and also to ensure their silence. Rents were even present in the political system. It was very common in the Soviet Union for government officials to engage in rent-seeking activities. These included bribe-taking, empire building and competition among bureaucrats in order to expand their jurisdictions [Carson 2007; Gregory and Harrison 2005; Hillmand and Schnytzer 1986]. Rent-seeking within the Soviet Union was so embedded into their culture that it generated incentives only to create rents and not to benefit the goodness of the society.

After Stalin came to power, the prices of good were soon frozen. As the industrialization of the country was pursued apace and the extensive growth increased hugely, transaction prices rose above official prices, as noted earlier. Individuals wanted to preserve these rents initially created by extreme growth pressures. This rise in potential price created a value on these products that individuals used as an incentive to produce. There was no evidence whether Stalin or the Politburo wanted rent-seeking, especially within sectors like the military or research and development (R&D). However it has been argued that rent-seeking was in the best interest of the dictator. A dictator's strength and power comes from his supportive elite [Wintrobe 2004]. A support base was imperative because under dictatorship there is always competition from a new dictator to overthrow the existing one. In the Soviet Union there was competition for government positions, control of allocation of scarce resources, and competition for the bribes and transfers [Carson 2007].

Just as Andrei Shleifer and Robert Vishny [1997] in their article on *The Politics of Market Socialism* argue, the socialist environment like the STE was less efficient since the government was pursuing its “political” objectives. They also argued a socialism system should be superior for three reasons. First, the state has greater control over income distribution than under capitalism and therefore can distribute income more equitably. Second, the problem of externalities is solved because the state controls all firms. Third, the state has the ability to avoid monopolies because it sets prices and determines entry. However, there are two disadvantages in the STE: firstly, monopolies were responsible for the rigid prices, and secondly, the economy was only interested in preserving economic rents, and therefore incapable of innovation. There was no

incentive for individuals to innovate because they were already obtaining a higher income from rent-seeking.

With innovation the cost of production is reduced and the product can be produced more cheaply than in the past. As products becomes less scarce and access to them increases, the amount that people are willing to pay relative to before decreases. This could eventually harm the income that the rent-seekers were expecting to receive from their activities. In order to preserve the illegal market as well as the income derived from it, the incentive for rent-seekers to innovate was completely diminished. On a second note, innovation would cause the output targets to increase for the factory, therefore producing more products that would have to be exchanged on the official legal market. If the target was unreachable, not only would they be forfeiting the income from the rent-seeking activities, but also, could be potentially waiving the income from bonuses for reaching their output targets.

The value of the rent-seeking or rent-protecting activity depended on the capitalized value of the rent. In STE the value of rent-seeking and rent-protecting activities surpassed that of the official income flow [Hillman & Schnytzer 1986]. The officials in command and ministers received income from below them, from bribes, and from above them which is their official income. Their political position also dictated the benefits tied with their job. These included apartments, chauffeured cars, servants, country dachas, leisure and travel, and privileged shopping. If these officials lost their position, they would lose all rights to their benefits as well as the incomes that were derived from both their legal and illegal activities. Because rent seeking is an illegal activity where no records were kept, accurate data is hard to collect; however, there is

some data on the values attached to republican ministerial posts in the USSR. An interesting case was cited in the Hillman and Schnytzer [1986] article citing the wages of the sales clerks at the Food Store Five in Moscow:

“The illegal profits extracted from customers’ pockets by the sales clerk are very large indeed compared with their official wages. The average salary for a sales clerk in a Moscow food store is 12 to 130 rubles a month, but the illegal earnings could range from 500-700 rubles for someone working the delicatessen or another department to 1,500 to 2,000 rubles for a butcher. The store managers’ illegal earnings could average 40,000 to 50,000 rubles a month...” [Hillman & Schnytzer 1986 p.92]

However, this was not the manager’s final income. Costs that were incurred included:

“The managers had to pay the loaders, as well as skilled workmen hired off the books to repair all the minor breakages which are inevitable in any large store. In addition, there were 36 sales clerks in the store, each of whom took food home each day without paying for it. The resulting shortages had to be made up by the manager and his assistant. This amounted to the quite sizable sum of 4,000 to 5,000 rubles a month. Food Store Number Five supplies the district elite with food at less than full price, also the store’s management made regular tribute payments, in cash and merchandise, to all the various inspectors, auditors and police employees. Nearly 9,000 rubles were spent each month on these gifts” [Hillman & Schnytzer 1986 p.92].

The rent-seeking amount was calculated by the bribe amount minus the cost incurred by the rents of each unit exchanged. It is easy to see how costs are incurred and how there is an incentive to act within the illegal market.

In Anderson and Boettke’s article, they addressed examples of how rent-seeking and bribes were so prevalent in the STE. Legally, medical services were rationed to individuals according to need; the sickest would be helped first. In reality medical services were rationed to those with the most attractive bribe. There have been cases

where doctors would not even examine a patient without a bribe. Another example dealt with education. It appeared to the general population that students applying to higher education were accepted or rejected based on their ability and knowledge. In reality students were often subjected to offer bribes for their admissions into programs.

The Cost of Rent-Seeking: The Purges

One of the most devastating events in the Soviet Union of the 1930s was the great purges, the mass removal of groups. Purges were common within Marxism-Leninist systems; in the Soviet Union they ranged greatly in severity and scope from Stalin's Great Terror to demotion of anonymous bureaucrats [Hillman & Schnytzer 1986]. Hillman and Schnytzer [1986] examine previously researched explanations for the purges that occur in the USSR. The first explanation believed that each purge was the result of the influence from political, economical, or social situations of the time. The second view focused on personality and psychological ideals of the leader. Joseph Stalin had been known for his paranoia and harsh consequences for failure. A third reason was the underlying ideology of the leaders such as Mao-Tse-Tung, the Chinese Marxist military and political leader of the Communist Party of China. Even though studies have proven insight to behaviour characteristics they have yet to provide a general hypothesis for the purges.

The general theory of rent-seeking and rent-protecting activities provides an effective explanation to why the purges happened and why the purges ranged from the lower levels of the hierarchy to the top echelon members. The purges can be viewed as cost-related to the rent-seeking activities of the Soviet Union. The corruption and the

violence that prevailed within the USSR were intertwined with the potential for a greater income. Secrecy of these rent-seeking activities was imperative because Stalin did not condone the act. Those caught were punished.

When the purges were from a higher official it was exhibited by rent-protecting activities. This was mainly individuals of lower-levels that were trying to replace a higher official. The official was protecting their position and rent hence as a last resort a purge ensued. If a purge came from below, rent-seeking was being reflected. For example, consider an official in a position where he received rents directly associated with his position. The official's job was to control enterprises and subordinates. If these enterprises were engaging in illegal activities they must pay a rent to the official in order for them to be allowed to continue with their illegal activities. The official was essentially acting as a monopoly from the power and knowledge he holds. If an individual below him successfully replaced this official, the official would lose all its rents and the legal benefits that came with his position. Therefore, there was an incentive to eliminate any aspiring official [Hillman and Schnytzer 1986]. Since rent-seeking was viewed at all levels of the economy, whenever someone's position was threatened any means was endured to avoid it from being completely over taken.

The Soviet Union as a Mercantilist Economy

According to the traditional view, the Soviet economy was an economy based on planned targets that were centrally established by the administrators. The resources were allocated on the basis of need and were determined by the planners of the administration. Prices were rigid and the economy was a non-market centrally planned system. The

archives have told us, that in reality the operation of the Soviet Union did not reflect the theoretical view. Planned targets were often an aftermath to production [Anderson & Boettke 1997].

Drawing from Anderson and Boettke's [1997] article on *Soviet Venality: A rent-seeking model of the communist state*, I shall now counter the conventional view and propose the idea that the Soviet Union was actually a modern version of the mercantilist economies of the 16th and 17th century. A mercantilism economy has two aspects: internal monopolies and export surpluses. Monetary wealth of a nation is increased by regulations of the foreign trade sector as well as an elaborate system of regulating domestic trade. Mercantilist economies are market based with privately owned property rights. However in this system there was extensive government intervention. The government intervened extensively by way of regulations of prices and wages, movement of labour and capital, cartelized and monopolized markets, and individual rights subjected to the government's rule. The mercantilism economy was strongly focused on the massive expansion of military forces which was the largest expenditure for the government.

The STE model tends to assume that the central planners are rational, self-interested actors; thereby they act solely on the basis of benefiting the public interest. In reality there are a few discrepancies between what the socialist model should possess and what the Soviet Union's actions exhibited. There are four major assumptions that the Soviet Union's reality is consistent with the mercantilisms ideology: (1) the government is led by a dictator; (2) the dictated state intervenes with the private economy and supports monopolies and cartels; (3) the dictator sells restriction of competitive entry for

monopolies as a way of raising revenue; (4) the dictator appoints a specialized bureaucracy whose function is to monitor monopolist franchises to ensure that there is no competitive nature in their behaviour.

The mercantilist systems of the 16th and 17th century were dictated by the monarchy to raise revenue through the sale of monopolies. In turn, this hampered the efficiency of the overall economy while maximizing the wealth for the monarchy. The Soviet Union also hindered their ability for an efficient market and their ability to maximize revenue because the general economy acted to maximize the wealth of Stalin and his commands. Both the French and the English had mercantilist economies. The English had export subsidies, while the French had internal monopolies. The Soviet Union's economy was in the middle of this spectrum. The Soviet Union became a rent-seeking society by its maturity, and by the mid 1930s it was starting to function like a mercantilist state. This is not to say there were no other ideological factors that contributed to the STE system. However, the efficiency of the STE was hindered by the rent-seeking activities which were derived from the organization of the centrally planned system. Had Stalin acted more in the way of a mercantilist society, would there have been less rent-seeking and a greater chance of survival? The Soviet Union might have been more successful if rent-seeking was confined to top echelons of the economy and society. However, it was evident that this would not remain confined, and it was only a matter of time before the rent-seeking flowed down the hierarchy.

Rent-seeking and the Failure of Reform

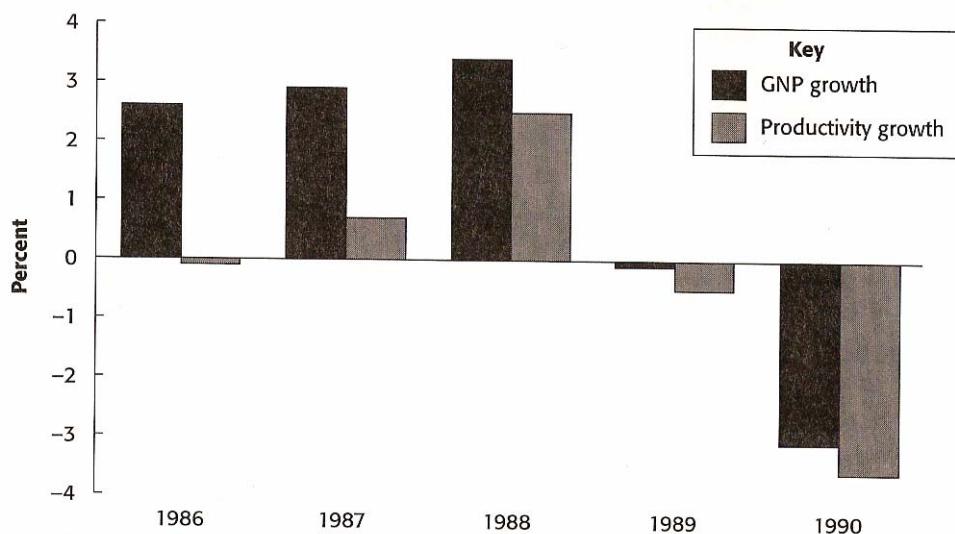
There have been many countries that have been plagued with rent-seeking, bribery, and criminalization like the Soviet Union. Some examples were Africa, Latin America and Mexico, all of which have been unable to grow despite their underlying economic conditions [Gregory and Stuart 2001]. The criminalization and widespread rent-seeking among the levels of society had a detrimental effect on the Soviet Union's growth. An economist, Mancur Olson, believed the widespread criminalization in the USSR was the result of the administrative command economy that fostered informal conspirators whose purpose was to ensure plans were fulfilled and protected enterprises from the state authorities [Gregory and Stuart 2001]. If this theory is right, then criminalization and rent-seeking are indigenous of the Soviet Union and therefore must be removed for it to prosper. These rent-seeking groups were established from the pressures of the government and to avoid the punishments endured if the plans were not met. The groups later became the governments Mafias, industrial "structures", and/ or the outright criminal groups that held power during the early years of transition [Gregory & Stuart 2001].

Another problem hindering reform that emerged out of the rent-seeking and criminalization was the problem of price control. The price control gave rise to two types of profit opportunity: first, there was an opportunity to buy low and sell high, and second, the rents that were extracted from price controlled businesses offering their product to the highest bidder. This highest bidder allowed the seller to collect the difference between the official price and the price the bidder was willing to pay. This created a powerful

interest against the reform of the market in the Soviet system. A reform into a market system would rid managers and officials of collecting these bribes and rents.

During Stalin's time, the Soviet Union was being replaced with an administrative-command economy. The STE reach maturity just after World War II. The death of Stalin in 1953 brought about the emergence of Nikita Khrushchev, who introduced a new political era in the Soviet Union. The Kosygin Reform of 1965 was intended as a two stage reform; unfortunately, it was reject by the society [Gregory & Stuart 2001]. It was the first time critics could see how the administrative economy of the Soviet Union rejected change. By the mid 1970's the Kosygin reform had completely failed. The final Soviet reform was the Perestroika reform which was implemented in three stages. The Perestroika reform was intended to improve the performance of the Soviet Union- it did not do so. By 1989, performance problems caused administrative controls to be reintroduced. The financial discipline was tightened, and price ceilings were introduced for consumer goods. In the early years of this reform output did increased. However there was a drastic turn as the years went on.

Figure 6.2: Perestroika: Aggregate Economic Performance Growth Rates



Source: CIA, *Handbook of Economic Statistics, 1991*(Washington, DC, 1991) Gregory, P. & Stuart, R. *Russian and Soviet Economic Performance and Structure 7th ed.* (Boston: Addison Wesley, 2001), p. 240

The failure for reform in the Soviet Union was inevitable because the rent-seeking society would not allow it. For successful reform to occur, rents would have to be eliminated, and hence eliminating the bribes that gave rise to these rents. Officials would have to secure access to their rents or suffer the loss of the profits from these rents just as in purges. Within the hierarchy of the political, managerial, and security officials, there was an incentive to avoid reform because of the personal interest in preserving these rents. Once reform started within the institution, the economic subsystems surrounding the institutions began to breakdown. This was presented in the Food Store Five scenario in Moscow that was mentioned earlier.

“One of the officers was Lieutenant-Colonel Boris Adamoc, who was assigned the post of manager of Food Store Number Five. Adamoc was an honest officer, educated in military concepts of discipline and obedience, and when he arrived at his new post he could not accept the fact that the normal functions of a state

enterprise could only be carried out with the help of bribes and by cheating the customers. He started out be operating in strict compliance with the law of the land: he took no money from his sales personnel, sold nothing at speculative prices to professional retailers, and categorically refused to pay bribes to top people in the municipal administration of the chain responsible for the shop of to the managers of the wholesale depots, cold storage facilities and meat-packing plants which supplied the store with merchandise. Since the municipal administration officials were not receiving their monthly payments from the new manager, they began to carp at any petty blunder made by an inexperienced employee. At the same time, the managers of the various supply facilities, since they too were going without their regular bribes, stopped providing the store with goods which were in short supply and even made great difficulties about supplying things which were available in abundance. Consequently Food Store Number Five did not fulfill its sales plan and its income fell sharply" [Hillman & Schnytzer 1986 p.96].

This example shows the difficulties that not only food markets would experience but also those of many enterprises within the Soviet Union as reform continue. The ability of reform depends greatly on the willingness of the individuals in society. In retrospect, the citizens had adapted to the harsh living conditions dictated by Stalin's government and hence created a system that was sustainable. They adapted to this way of life and this adaptation of rent-seeking, bribery and corruption was embedded in their society. The corruption and rent-seeking activities were not only embarked upon because of monetary rewards and incentives- often, it was a means for survival. For a system to reform quickly from being as corrupt and unstable as in the Soviet Union is a difficult feat. Rent-seeking adds a dimension to the economy of social loss due to the monopoly powers and government regulations of a planned economy [Anderson & Boettke's 1997].

Overall, the rent-seeking behaviours were a driving obstacle behind the difficulties of reform.

VII: Conclusion

The collapse of the political structure within the Soviet Union in 1991, created fifteen new transition economies; all of which had difficulties emerging on the global market. These states had their infrastructure disrupted and broken up after the Soviet era. They had to choose between developing their own currencies and monetary institution or remain with the highly inflated ruble [Gregory & Stuart 2001].

Traditional views on the collapse of the Soviet Union blame the soft budget constraint, diminishing returns on capital, and lack of innovation. These were the major contributors to the decline in economic growth over the USSR's 60 year reign. However, a new theory that has recently been debated may be a major contributing factor for the Soviet Union's inability to innovate, to reform, and to successfully grow during this time. The idea of rent-seeking contradicts the idea of what Marx and Lenin would have desired for their socialist economy. Specifically, the rational behaviour of the economic agents was intended to act differently than what was exhibited by rent-seekers. For a centrally planned economy, the ability to generate rents gives an incentive for economic agents to act against the best interests of society. It is unrealistic to assume that a planned economy will be able to account for all products and that no computation errors will ensue. In fact, many decisions had to be taken de-centrally, at the level of the firm. This gave decentralized agents decisions-making power over the supplies of resources sand

products. There is still uncertainty and discrepancies in the accounting and production output revealed by the Soviet Union's archives.

The traditional view examines in depth the problems the Soviet Union had experienced from transferring from extensive to intensive growth. The inability for the country to innovate because of the pressures from the success indicators and the soft budget constraint aided to the decisions growth.

The rent-seeking perspective provides an alternative view in understanding the reasoning behind lack of innovation, the purges, and the inability for the Soviet Union to reform. Rent-seeking and protecting activities added a social cost that created inefficiencies in the market place. In the market, the legal monopolies generated a social cost from their inefficiency. The rent-seeking behaviour gave incentives for the workers to preserve their income from rents, and they acted to avoid losing these rents. This perpetuated the existing shortage economy and pre-rented effective reform. As a result innovation and intensive growth were inadequate.

The mercantilist model revealed new insight into the way in the Soviet Union operated, even though it does not account for all the observed behaviours in the Soviet economy. It provides a model from which parallels can be drawn between the STE and a traditional mercantilist economy. A common consequence that from this type of economy as well as the STE was that the economic interests of the consumers that succeeded in outbidding individuals to gain control of political institutions [Anderson & Boettke 1997].

Overall, the proposed idea of rent-seeking provides an alternative view to why the Soviet Union did not grow as rapidly as the leaders had hoped and did not achieve

sustainable growth. The proposed ideas by Stalin and the intention of the central planners and of the enterprises lacked asymmetry of information that hindered the country as a whole. The intent for personal motives to be removed and the ideological view of bettering society was not adopted by all individuals of society. In reality, the rent-seeking behaviours dominated society and in turn added a cost to the society's efficiency.

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