

Socialist Alternatives

- A. Theories of the Socialist Economy
- B. Revolution and Central Planning in the Soviet Economy
- C. Labor Management and the Yugoslavian Alternative
- D. China under Chairman Mao

What is Socialism?

- "From each according to his abilities, to each according to his work" – *Soviet Constitution* (1936).
- Marx was a harsh critic of capitalism, but somewhat vague on socialism. In *Critique of the Gotha Program* (1874) and elsewhere, he included:
 - Dictatorship of the Proletariat after the inevitable revolution
 - Capitalism should have already eliminated scarcity
 - Replacing private ownership with state ownership
 - Rational planning replacing anarchy of market
 - Eliminating wasteful competition
 - Re-education to eliminate last vestiges of capitalism
 - Eventual withering of the state
- Socialism paves the way for eventual emergence of Communism:
 - Withering of the state, elimination of cash economy, self-organization.
 - "From each according to his abilities, to each according to his needs."
– Louis Blanc, *The Organization of Work* (1840), rephrasing Comte Saint-Simon.
 - "All social rules and all relations between individuals are eroded by a cash economy, avarice drags Pluto himself out of the bowels of the earth." – Marx

But can an economy actually be run by the state alone?

- Pareto's conditions for efficiency (1896): relative marginal values = relative prices = relative marginal costs.
- The Socialist Calculation Debate (*see link*):
- Barone's price planning model (1908): theoretically possible, but not really feasible.
 - Lange's trial and error model (1938): the possibility of *market* socialism, with the state owning resources and setting prices to "clear" markets.
 - Criticisms from von Mises (1920) and Hayek (1937-48): need for markets to determine marginal values, impracticality of socializing incentive, impossibility of centralizing information, market prices convey information.
 - Other versions of "market" socialism by Taylor, Dickenson, Lerner, Yunker, and Nove.

Institutions of the Classical Centrally Planned/Managed Economy

- State owns firms (SOEs), arranged under production ministries. State chooses managers to fulfill plans.
- State statistics agency collects data on inputs and outputs.
- State planning agency sets targets for inputs, outputs, technology; taut planning, ratchet effect.
- State pricing agency sets prices based on state goals, not market values. Mark-up pricing and the incentive to use more expensive inputs.
- State owns banks, collects savings, and allocates capital, labor, land, et cetera. Monobank can ensure that plans are followed.
- State relies on SOE profits for revenue, and pays for both investment and public goods out of state budget, banks.
- Foreign trade is controlled through state ministry to augment production plan.

Quantity Planning?

- Leontief's input-output analysis:
 - Linear relationship between quantities of outputs, material inputs, and resources
 - Input coefficients a_{ij} = how much of input i is needed to produce one unit of output j .
 - Production \geq intermediate uses + final demand
- For example, for $n=3$:

Input-Output:	$X_1 \geq [a_{11} X_1 + a_{12} X_2 + a_{13} X_3] + Y_1$
	$X_2 \geq [a_{21} X_1 + a_{22} X_2 + a_{23} X_3] + Y_2$
	$X_3 \geq [a_{31} X_1 + a_{32} X_2 + a_{33} X_3] + Y_3$
Production	$K \geq [a_{k1} X_1 + a_{k2} X_2 + a_{k3} X_3]$
Possibilities:	$L \geq [a_{l1} X_1 + a_{l2} X_2 + a_{l3} X_3]$
- As equations (not inequalities), these can be solved using matrix algebra, though number of calculations rises exponentially with the number of equations.
- Material Balance Planning (MBP) uses input-output analysis to solve for necessary inputs and outputs, given accurate input coefficients, resource constraints, and feasible final demands.

Problems of MBP

- Final demand combinations determined by preferences of planners, not consumers.
- MBP has extremely high information needs. This makes it very slow to adapt to technological change, new circumstances.
- Tendency to aggregate and separate due to calculation problem, data collection problem. Result is autarky, vague targets.
- Prices only serve accounting role, and MBP does not allow for substitution between inputs (or outputs) due to scarcity.
- Input shortages or unmet targets propagate into more simultaneous shortages and surpluses.
- Efficient allocation and distribution not even considered as a goal of the system. No effort to meet Pareto conditions. Little attention paid to managerial, worker incentives.

An Alternative Approach: “Market Socialism”

What about *price planning*?

- Mathematical equations to solve Pareto conditions are inherently nonlinear, and also require much more knowledge of cost and utility functions. Barone, for example, implicitly assumed known first derivatives.
- Lange’s Trial and Error Model:
 - State owns capital and natural resources, hires managers to run state firms, directs them to set $P=MC$ and minimize AC.
 - Markets allocate labor and intermediate products, and distribute final goods.
 - State CPB sets capital and resource prices by trial and error to ensure stability, efficient use.
 - Enterprise profits are social dividend.

But what are the managerial incentives? Will the CPB have better information? What about competition and profits?

The Classical Socialist Economy Janos Kornai

The Classical Socialist Economy is a coherent system, with its own internal logic. For example, market socialism is not internally consistent, nor is “democratic socialism.”

Five steps:

- 1) Political power
- 2) Ownership
- 3) Coordination
- 4) Incentives
- 5) Characteristic Phenomena

These are similar to the “characteristics” of any economic system, but the argument is more subtle that listing categories of differences.

Kornai’s Five Steps

Step 1) The Classical Socialist Economy begins with an unchallenged monopoly of power by a Marxist-Leninist Communist Party.

- Party is an elite vanguard with an unquestioned, coherent, and self-legitimizing ideology, and a paternalist approach to representation.
- Marxism-Leninism is key because it advocates the elimination of private ownership and markets.
- Party offers a promise to help a poor economy develop faster while meeting basic needs and full employment.
- Party controls economy and society through interpenetration of the state apparatus and an intolerance for independent organizations.

The Second Step

The Power Block then requires the Party to try to eliminate capitalism, which requires:

Step 2) State ownership of the means of production becomes predominant.

- Conversion of capitalist firms (especially in "commanding heights") into SOEs.
- Collectivization of farmers, small producers, petite bourgeoisie.

The Third Step

Each step creates a need for the following steps.

Power + Ownership then requires:

3) Bureaucratic coordination and management

- Central planning (i.e., MBP).
- Very large enterprises, ministerial autarkies, poorly defined objectives.
- Von Neumann's redundancy: too many mothers-in-law.
- Vertical linkages affect information flows.
- SOE provides housing, education, food, other services to workers. Manager also implements and enforces state policy.

These Three Steps in turn cause:

- 4) Peculiar Incentives for firms, workers, consumers.
- Soft budget constraint and plan bargaining.
 - Weak price response, ratchet effect, seller's markets, investment hunger, labor hoarding, import hunger and export aversion.
 - Poorly-defined, often irrational targets.
 - Misallocation of labor, low morale, shortage psychology, risk aversion.

5) Observable and characteristic phenomena of the Classical Socialist Economy.

- Shortage Economy: goods, capital, and labor.
- Tonnenideologie, capital-intensive large-scale projects, poor quality, calendar pulsation.
- Relative equality of nominal incomes, not access to desirable goods.
- Environmental ecocide (tragedy of the commons).
- Separation of science and product innovation, erosion of human capital, obsolete physical capital.

The Fel'dman Model: Forced Savings and Unbalanced Growth

Shortages may not only be an inevitable outcome of planning, they may actually be intentional.

- Goal is growth through high rates of capital investment in producer goods (i.e., capital goods, heavy industry), and this requires state monopoly over banks and trading.
- Low state prices for consumer goods lead to chronic shortages, cheaper wages, and forced savings, which are reinvested through monobank into heavy industry.
- High state prices for producer goods and low wages lead to higher profits, which are reinvested through state budget into heavy industry.
- Abram Bergson on *tonnenideologie*: "Under capitalism, bread is the final good and steel is the intermediate input; under socialism, steel is the final good and bread is the intermediate input."
- Long-term effect on worker motivation, black markets.

Revolution and Central Planning in the Soviet Economy

- Early Russian history:
 - Eastern orthodox, European periphery;
 - The Kievan Rus, Duchy of Moscow, Mongol invasion (1237-1452);
 - Ivan the Terrible (1547-84), first Tsar (Czar) of all Russia.
- The Romanov dynasty (1613-1917): 19 Tsars, including:
 - Peter I, the Great (1682-1725): Europeanization of aristocracy, building St. Petersburg, centralizing government, modernizing military, expanding empire, and increasing the subjugation of serfs.
 - Nicholas I (1825-1855): Creation of Secret Police, repressive state.
 - Alexander II (1855-1881): Crimean war, emancipation of serfs (1861) through redemption payments and village ownership; started industrialization (i.e., limited liability companies), massive railroad construction; murdered by revolutionaries.

Nicholas II (1896-1917):

- In the late Imperial Period, Russia was a contradiction of characteristics: dual economy, with wealthy and modern elites and traditional agriculture; collectives (Mir) for peasants after Emancipation; rising military and industrial power; naïve Czar determined to hold on to "God-given" powers.
- Revolution of 1905 after Japanese War (Bloody Sunday).
- New Duma given consultative powers - Czar still an autocrat.
- Stolypin Reforms by decree: peasants given freedom to elect *zemstvo* councils, opportunity for land ownership, anti-terrorist laws, compulsory education, factory worker councils (*soviets*); Premier Stolypin lost support of Tsar, assassinated in 1911.
- First World War: Czar supported Balkan independence, initially resisted general mobilization. Assumed control of military in spite of inexperience, left rule of Russia to Empress and Rasputin.
- March 1917 Revolution started by Food Riots in Petrograd.
- Nicholas abdicated, successor refused crown. Prince Lvov led provisional government.

The Bolshevik Revolution

- ❑ After Tsar's abdication, Alexander Kerensky of the SDP (Menshevik) party became premier.
- ❑ Provisional government was hesitant to stop fighting the war.
- ❑ Germans returned Vladimir Ulyanov (Lenin) by secret train.
- ❑ Before elections could be held, Lenin's Bolshevik Party stormed Winter Palace (November 1917).
- ❑ Civil War (1918-1920): Reds vs. Whites, murder of royal family in 1918.
- ❑ Founding of Union of Soviet Socialist Republics (1922). 12+3 Republics.
- ❑ Soviet sphere included Mongolia (1921), eventually six CEE states under Warsaw Pact.



War Communism (1918-1921):

Civil War not the only problem:

- ❑ Treaty of Brest-Litovsk with Germany.
- ❑ Invasion by Allies in 1918.
- ❑ Invasion of Ukraine by Poland under Pilsudski.

A Jump to Communism?

- ❑ Military-style economy: labor armies with no mobility, forced extraction of agricultural surplus, nationalization of land, livestock.
- ❑ Nationalization of industry: 37,000 enterprises under Vesenhka (BCHX), the Supreme Council of the National Economy.
- ❑ Private trade outlawed, little use of money, rationing.

Results?

- ❑ Drought, famine (1920-21), death of estimated 5 million.

New Economic Policy (1921-28):

- Lenin: "We are not civilized enough for socialism." Russia still primarily an agrarian nation, with small urban population and weak industrial base. "In order to take two steps forward, we shall have to take one step backward."
- Restored some private ownership to farming, Bukharin's slogan of "Get rich!"
- Leased small enterprises to private entrepreneurs. Soviets retained "commanding heights" which employed 80% of industrial labor.
- Legalization of trade, private markets, money.
- Labor laws (1922): 8 hour day, 2 week holiday, benefits, collective bargaining, mobility.
- Foreign peace treaties, commercial recognition, international trade and recognition.

Russian Growth Estimates

According to Maddison's estimates for Russian Empire/Early USSR:

Population:

- 1820-1870: 1.0% growth (annual average).
- 1870-1900: 1.1% growth.
- 1900-1913: 1.8% growth (1.6x U.S. pop., 2.4x Germany).
- 1913-1922: -0.3% growth (net loss of 4 million lives; gross loss of 30 million if population growth had continued at 1.8%).
- 1922-1928: 1.8% growth.

Per-capita income:

- 1820-1870: 0.6% growth (annual average).
- 1870-1900: 0.9% growth.
- 1900-1913: 1.4% growth (30% of US/UK).
- 1913-1928: -0.5% growth (net decline of 8% after recovery, no income estimates for 1922 but they probably weren't pretty).

The Great Debate (1924-1928)

Left Deviation: Teleologists

(Trotsky, Preobrazhensky)

- Fear of capitalist encirclement, need for rapid industrialization and militarization.
- Concern over re-emergence of new capitalist class.
- Advocated return of state monopoly over trade, agriculture.
- Rapid shift towards centrally planned socialism.

Right Deviation: Geneticists

(Bukharin)

- Need to consider current conditions.
- Smychka – alliance between workers and farmers.
- "Get rich!" incentive for farmers.
- Continuation of NEP.
- Gradual movement towards planned socialism.

Stalinism



- Josef Dzugashvili, CPSU General Secretary when Lenin died (1924).
- Ruthless rise to power. Bukharin called him a "New Genghis Khan."
- Originally supported Right Deviation, switched to Left. Purged Trotsky, Bukharin, and virtually all "Old Bolsheviks."
- Political purges, show trials in 1930s, Cheka/OGPU/KGB, Gulag Archipelago (see Solzhenitsyn), Reign of Terror. Perhaps 5-20 million people died.
- First Five-Year Plan (FYP) in 1928-33, focus on rapid growth in producer goods, state monopoly over trade, banking. Forced collectivization to get state control over surplus, exterminate Kulaks. Perhaps 7 million died in Ukraine alone during first winter.
- World War II: secret Ribbentrop-Molotov agreement (1939), German invasion (1940), estimated 17 million Soviet deaths.
- Stalin's total control over military, society until his death (1953).

Institutions in the Soviet Union

- Party (CPSU) run by Central Committee, Politburo, General Secretary. Party cells at every level, including enterprises.
- Administration: Council of Ministers, Premier.
- Legislature: Supreme Soviet a rubberstamp, Chairman of Presidium was "President".
- Nomenklatura: 200,000 jobs controlled by CPSU.
- Gosplan: state planning agency used approximately 4000 I-O tables, FYPs passed into law by Supreme Soviet.
- Gosbank: Control by Ruble, cash used by consumers, no independent monetary/fiscal policy.
- State-owned enterprises: managers appointed by ministries; large, capital-intensive, self-sufficient; use of *tolkachy*; labor shortages, layoffs difficult, rationing, housing; MBP targets; cost-plus pricing.
- Foreign trade: CMEA, state-administered, price equalization, soft overvalued Ruble, accumulation of hard currencies (Eurodollars).
- Unions: not independent of CPSU, no strikes or disruption allowed.

Agriculture in the Soviet Union

- Prior to WWI, Russia was the world's largest exporter of grain.
- After Forced Collectivization, agriculture organized into Sovkhoz (large state farms, preferential treatment), Kolkhoz (collectives). Small private plots allowed. In 1985, one study found:
 - Sovkhoz: 53% of land, 37% of output.
 - Kolkhoz: 44% of land, 34% of output.
- Poor coordination, infrastructure, transportation: estimated that half of potato harvest rotted in fields, trains.
- Central planning not adaptable to change, poorly suited for agriculture.
- Lack of motivation, low state prices, poor assessment of worker performance.
- Soviet Union became world's largest importer of grain.

Soviet Expansion

- USSR (1922): originally 12 Republics.
- Mongolia (1921): first satellite.
- Stalin headed Comintern: training of revolutionary cadres.
- Baltic States (1939): Latvia, Lithuania, Estonia in USSR.
- In 1944-45, Soviet Red Army occupied all of Central and Eastern Europe (CEE) except Yugoslavia and Albania.
 - Eastern European governments in Czechoslovakia, Hungary, Poland, Bulgaria, Romania, Yugoslavia and Albania all formed socialist governments. Most became Soviet allies.
 - Joint Allied Occupation in Germany and Austria: East German Soviet Zone became DDR, Berlin Blockade and Airlift, building of Berlin Wall.
 - North Korea also occupied by Soviets. Communists took power in China (1949 Revolution), North Vietnam (after liberation from French), Cuba (1959 Revolution), and in other small countries.
- Churchill's "iron curtain": U.S. Policy of Containment, Cold War, Marshall Plan, and NATO.
- Soviet Union established Warsaw Pact and CMEA (Comecon).

Economic Reform After Stalin

- Reform under Stalin was nonexistent:
 - Brutal repression of economic science
 - Two major attempts at reform (1933, 1947) led to execution of reformers.
- Khrushchev Decade (1953-64):
 - Denunciation of Stalin's personality cult and purges.
 - Emphasis on agricultural investment, decentralization. Not successful.
 - Resurgence of economics, mathematics, and planning.
- Brezhnev Era (1964-1983):
 - Premier Kosygin's Reforms in 1960s – recentralization, Schekino method to reduce labor hoarding, managerial incentives, etc.
 - Slowing growth, stasis afterwards.
 - Brezhnev Doctrine.
- Andropov (1983-84)
- Chernenko (1984-1985)



Perestroika – Restructuring

- Gorbachev selected as General Secretary, 1985
 - Margaret Thatcher: "Here is a man we can work with."
- China's initial reforms a successful example, but the USSR began in industry.
- New attitude of *Glasnost* led to improved international relations.
- *Uskorenye* (Acceleration) during 12th FYP:
 1. Retooling rather than expansion
 2. New independent quality control agency
 3. Anti-alcohol campaign
 4. Attack on underground economy
 5. "Human Factor" – *Glasnost* (Openness)
- Problems and "cavalier inconsistency": bottleneck in machine-building, conflicts with quality control, falling revenues (vodka, oil), Chernobyl.
- Growth fell to 0%, budget deficits > 8% by 1987, financed by Gosbank credits → repressed inflation.



Osnovanye Polizhenya – Basic Theses

- After failure of *Uskorenye*, Gorbachev realized the need for more radical reforms (*Perestroika*)– but with the objective of saving Socialism, not transforming to Capitalism.
- Law on Private Activity, 1986 → small entrepreneurs
 - Law on State Enterprises, 1987 → contracts
 - Law on Cooperatives, 1988
 - Political Reform → led to elections in Republics, new Union Treaty
 - Renunciation of Brezhnev Doctrine for Eastern Europe
- Economy began to shrink by 1990: high deficits, rising inflation, disarray.
- Gorbachev turned away from reform, Shevardnaze resigned, Shatalin's "500 Days" Program killed by hesitation.
 - Coup in August 1991 failed: republics seceded, CPSU outlawed in Russian Federation, USSR dissolved.

Russian Growth Estimates (Part 2)

Again, according to Maddison's estimates:

Population:

- 1928-1940: 1.2% growth (annual average).
- 1940-1946: -2.0% growth (net loss of 12 million lives; gross loss of 37 million if population growth had continued at 1.2%).
- 1946-1990: 1.2% growth.
- 1990-2003: 0.03% growth.

Per-capita income:

- 1928-1939: 4.6% growth (annual average).
- 1939-1946: -2.2% average (net decline of 15%).
- 1946-1960: 5.3% growth.
- 1960-1970: 3.5% growth (37% of U.S.).
- 1970-1980: 1.4% growth.
- 1980-1990: 0.7% growth.
- 1990-1996: -9.2% average for successor states (net decline of 44%).

Growth Performance

- We would expect that central planning would be good at marshalling resources in a backwards economy, but not good at using them efficiently.
- By 1990, official data estimated Soviet per-capita output equal to almost half of U.S. level. Services, black market.
- Growth rapid in 1930s, postwar recovery, 1950s. Krushchev (1956): "We will bury you."
- Growth failed to meet FYP targets after 1960s, and targets continued to fall. By end of 1980s, economy was stagnant.
- Prices hard to measure: no markets, repressed inflation (shortages), so real growth overstated.
- Extensive growth, not intensive: priority on heavy industry, high savings, high labor force participation, use of easily available resources, ecocide. Educated workforce, but severe problems with motivation, product quality, innovation, chronic shortages. Labor shortages in Russia, surplus elsewhere.
- After collapse of the Soviet Union, economy fell by over half. Some economists estimated that Soviet GDP was significantly overstated due to distorted prices.
