

ECON 305 Fall 2007 First Midterm Exam Key

I. (30%) Short Descriptions

1. Arrow's General Impossibility Theorem is a proof that no method of determining social choice from individual preferences could be consistent, fair, and decisive for any set of preferences, and so no social choice rule can reliably determine social preferences. It implies that governments cannot act in the social interest even if they wanted to, because the social interest is impossible to determine.
2. The Coase Theorem is that with clearly defined, enforceable property rights and low transactions costs, any externality could be internalized. Since externalities or spillovers (e.g., public goods) are a fundamental market failure, this means that the market could be efficiently self-regulating if the state could simply clarify property rights and lower the costs of negotiation.
3. Communism is an idealized future economic system in which property is owned in common, scarcity is eliminated, and people all act in the social interest, not their self-interest. As a political system, it usually refers to a totalitarian society run by a Marxist-Leninist communist party that replaces private markets with a centrally managed, state-owned socialist economic system.
4. A Distributional Coalition is an organization of people seeking to affect political decisions for a benefit that goes to their members rather than all of society, and which often conflicts with the overall social interest. In Olson's theory of collective action, DCs are much more effective than encompassing coalitions which are subject to the free rider problem because the EC's benefits accrue to society at large, not just the members of the coalition.
5. Keynes' General Theory is that a free market economy is inherently unstable because investors follow herd behavior and the multiplier effect exacerbates any instability. Keynes argued that the classical theory that supply creates its own demand was only a special case. Prices, wages, and interest rates do not quickly adjust to keep the economy at full employment, except in the very long-run, and so it is possible to enter into a low-level equilibrium. Capitalism needed to be saved from itself, he argued, and the way to stabilize the economy and keep it near full employment is for the government to use an interventionist countercyclical fiscal policy.
6. Madisonian Liberalism is the view that voting still matters even if no social choice rule can reliably determine society's preferences, since voting acts as a check on government power and prevents the least preferred policies from continuing.
7. Market Failure occurs when free markets fail to be efficient because perfect market conditions (see #10 below) are not met. This is one source of inefficiency, but markets may also be inefficient because government intervention creates a market distortion and can thus create public (or government) failure.
8. Mercantilism is a variant of capitalism in which a market economy is used for the benefit of the state, not to improve living standards of the people. Government may promote monopolies because they are easier to control and more of their profits can be remitted to the treasury, even though they are often not in the overall social interest. Government may promote one-sided trade policies, since trade surpluses under the old fixed exchange (gold standard) rules led to inflows of gold and silver specie instead of goods. Hume, Smith, and Ricardo were among those who opposed mercantilist policies.
9. Pareto Optimality: the economic condition in which no further mutually-beneficial trades are possible, and so no one can be made better off without someone being made worse off. It implies that all possible gains from trade have occurred and the economy, at a static moment in time, is perfectly efficient in its use of scarce resources.
10. The three Perfect Market Conditions are: perfect competition, with many buyers and sellers so no individual may control the price alone; perfect information, so we all know relevant information about the goods we are buying and selling; and complete markets, so there is a market for everything, with no externalities or public goods as a result. Violations of the first condition include monopolies; violations of the second include adverse selection, moral hazard, or fraud; violations of the third include pollution, national defense, and (as several students mentioned) the market for babysitters.
11. The Stationary Bandit refers to one of Olson's models, in which a self-interested government (e.g., a dictatorship) may nonetheless tend to act in the public interest, in the same way that shepherds take care of their sheep. Roving bandits tend to take everything from their victims; once they become stationary, however, bandits (i.e., the government) maximize the revenue they can receive over time, and may find it in their self-interest to enforce order and peace (since this reduces competition from other bandits) and promote economic development (since this gives more to steal).
12. The Utopian Socialists were a number of economists, businessmen, and philosophers in the 19th Century who believed it was possible to make capitalism more humane. Mill, for example, argued that capitalism in his day still contained vestiges of feudalism and that you could combine private production with a more equal distribution, while Fourier experimented with communal production and Owen argued that firm owners could profit by providing their workers a better quality of life. Marx called them utopians because he believed that exploitation was at the heart of capitalism, that capitalism could not be reformed, and it could only be changed through revolution.

II. (45%) Short Answers

1. What is the Prisoner's Dilemma model, and what does it predict? How does it compare to Smith's Invisible Hand? When might the Prisoner's Dilemma work in society's interest, and when might it work against society's interest? Give examples.

The Prisoner's Dilemma is a model of how well-informed and self-interested individuals may face incentives to not cooperate, to defect or confess, by either taking advantage of others or to trying to avoid letting them take advantage of you. As a result, everyone in the game becomes worse off. Adam Smith argued that men acting in their self-interest promote the social interest as if guided by an invisible hand, and do so more effectively than if they had intended to act for the benefit of society. Both the Invisible Hand and the Prisoner's Dilemma assume that individuals rationally act in their own self-interest, but they make different assumptions and reach different conclusions. It may be possible that both models simultaneously apply; for example, competition makes firms worse off by driving their profits to zero (a Prisoner's Dilemma), while society benefits by having more goods at cheaper prices (the Invisible Hand).

2. What is the Malthusian view of population growth, and what is the ultimate outcome? Why did the classical growth model of Ricardo and Malthus lead to economics being known as the dismal science? How does the Neoclassical view of economic growth (and population growth) differ from the classical view?

Malthus argued that population growth would always tend to outstrip production, since reproduction is geometric in nature and production is subject to diminishing returns. Ricardo and Malthus believed in an "iron law" that wages would always tend towards the minimum subsistence level, because population growth would only be constrained by starvation. Because rising population put pressures on scarce land, rising food prices would force wages up, rents up, and profits down, leading to slowing rates of investment. This would lead to economic stagnation since investment was the source of growth. Thus economics became known as the dismal science. The neoclassical model is much less pessimistic, and relies on the concept of rational individual choices. Economic growth is primarily driven by improvements in human capital through technological progress, improved economic efficiency, and the accumulation of knowledge and experience. Population growth is not likely to be an inevitable check on economic progress, because people make choices to have fewer children when doing so is in their interests. Unlike the other models, the neoclassical view posits that we choose our own destiny, and history does not choose for us.

3. What is the driving force in Capitalism, according to Schumpeter? How does this force economic change? Why is this view considered evolutionary? Why did Schumpeter believe that capitalist economies would eventually stagnate?

The driving force in capitalism, according to Schumpeter, is the innovation of the entrepreneur. These innovations -- new products, technologies, organizations, structures -- create opportunities for others, and the resulting waves of innovation lead to a process of creative destruction, in which other sectors of the economy become suddenly obsolete. Change occurs through a dynamic and uncertain process of the new destroying the old, as a result of continuous disequilibrium. Schumpeter's creative destruction is very much an evolutionary theory, since evolution is a process of accumulated change through selection of the most successful mutations. That which puts an entrepreneur at a competitive advantage is adopted, and that which puts him or her at a disadvantage is discarded, if only through the bankruptcy of the firm. Because creative destruction is such a messy, unpleasant process, Schumpeter thought that people would push their governments to regulate it and stop it. By preventing firms from being shut down and workers from becoming unemployed, we would prevent the shift of resources to new technologies and thus choke the goose that laid the golden eggs.

4. What are the major ways we compare economies, and which are affected by the variability of market exchange rates? How can we correct for purchasing power parity (PPP), and why might this differ from market exchange rates? What is the Gerschenkron effect, and what does it tell us about the possibility of accurately comparing economic outcomes?

Comparative measures of economic performance may include GDP per capita, its composition and growth rate, the distribution of income (equity), dynamic and static economic efficiency, economic freedom, stability, economic security, and long-term viability. The comparison of GDP or similar measures of money income depends on putting different countries' currencies into a common unit of account. Market exchange rates, however, vary with the investment climate, the ease of trade, and the expected stability of the currency in the future, and thus currencies can be significantly undervalued or overvalued in the relative purchasing power. Economists try to adjust for this by taking a sample of how much countries produce and weighting it by U.S. prices, and then deriving a PPP index to use instead of the market exchange rate. Using these purchasing power parity estimates seems to be a good alternative, except the Gerschenkron effect tells us that we will tend to overestimate another country's output if we do so. Because relative prices differ between countries, and because goods which are relatively scarce tend to have relatively higher prices (and vice-versa), we would be giving our relatively higher weights to what they produce relatively more of, and relatively lower weights to what they produce relatively less of. The implication is that we simply can't make precisely accurate comparisons of living standards between countries using different currencies.

III. (25%) Essay Question.

A. What are the six different characteristics by which we can classify economic systems? Explain each, and give examples. What are the two basic archetypes of economic systems, and what are their characteristics? Given that there are many ways to combine these different characteristics, why might we expect to have most economic systems fit into a relative handful of classifications?

Economic systems may be classified by: 1) ownership, i.e., whether the means of production are owned privately, publicly, or collectively; 2) the coordinating mechanism, i.e., whether markets or bureaucratic management allocate resources and distribute goods; 3) the decision-making structure, and whether it is centralized or decentralized, in the family, the firm, or the state; 4) the incentive structure, whether material, moral, or coercive; 5) the relative equality of income distribution and the extent of redistribution; and 6) the objectives, e.g., national power, GDP per capita, fairness, et cetera.

Though there are many variations, the two basic archetypes are capitalism and socialism. Capitalism is ideally characterized by a predominance of private ownership of the means of production, decentralized private decision-making in the economic sphere, markets and the price system to coordinate the economy, material incentives such as profit and incomes, an income distribution based on ownership of physical and human capital, and the goals of economic freedom and efficiency. Of these, ownership and markets are probably most important. Socialism is usually characterized by state ownership, centralized decision-making, and varying degrees of planning to coordinate the economy. Kornai argues that the key element for such an economy is a Marxist-Leninist party with unchallenged political power, since such a party by definition will have as its goal the elimination of capitalism.

There are many different ways to combine these different characteristics. Even assuming only two options each, there would be $2^6 = 64$ different combinations, while three options each would yield $3^6 = 729$ variants. But economies tend to be systems which have their own internal logic, so that some characteristics go together because they solve the right set of problems. For example, private ownership tends to lead to market coordination and material incentives, while state ownership tends to lead to bureaucratic means of coordination and management. Thus, there tend to be a smaller number of variants.

B. What is the major contradiction of the capitalist system which threatens its very survival, according to Marx? Explain the process described by this theory that Marx argued, in time, will lead to capitalism's downfall. Does this theory have any substantial flaws? How did the anarchists and the revisionists each differ from Marx? Why did Lenin disagree with Marx over where the revolution would begin?

Marx saw capitalism as an engine of progress that was a necessary stage in history, but also as an inherently exploitive system that would inevitably self-destruct. The major contradiction of the capitalist system, according to Marx, is the process of accumulation by the capitalist class and its exploitation of the proletariat. Competition drives the capitalist to accumulate capital; since labor is the sole source of value, however, this accumulation leads to a falling profit rate since the capitalist now has a higher organic composition of capital, and thus relatively less labor to exploit. Since profits are required to maintain accumulation and compete, the capitalist must increase the rate of exploitation and lower wages paid to workers, an action possible only because of the threat implied by the reserve army of the unemployed, but this also causes overproduction and underconsumption. Marx believed that increased exploitation and economic instability will, in time, inevitably lead to class consciousness and a revolution by the proletariat.

There are several flaws in this theory. First, the notion that all value comes from labor has been largely discredited; instead, scarcity value may be created by other inputs, such as entrepreneurship. Second, the hypothesis that capital accumulation will lead to falling profit rates has been repeatedly disproved. Third, the theory is contradictory with regard to the motivations of the capitalist: to accumulate and compete, he must act in his self-interest, while maintaining the reserve army requires that he instead act in his class-interest.

Anarchists – especially those in the collectivist wing – differed from Marx in several ways, but the most important one was the belief that the state would represent the dictatorship of the proletariat after the revolution, since anarchists like Bakunin thought that all government power was inherently corrupt, regardless of whether it was capitalist or socialist. The Revisionists included many of the leaders of the German social democratic movement, like Kautsky and Bernstein, as well as the Ukrainian economist Tugan-Baranovsky. Revisionists argued that Marxist theory was wrong on a number of issues and tended to believe that the revolution was not inevitable, in part due to flaws in the theory and in part due to democratic power-sharing; they still thought socialism was a desirable outcome, though it would require enlightened work and choice.

Marx's theory predicted that the revolution would come first to the most advanced capitalist countries. Lenin modified Marx's theory by arguing that, as a result of monopoly capitalism and uneven development, capitalist nations would compete with each other. The more successful and advanced imperialist powers would shift their exploitation to their colonies, while the less successful would be forced to exploit their own workers, resulting in revolution in the "weak link" countries. Marx also thought that the process was an inexorable historical inevitability, while Lenin thought that a vanguard of professional revolutionaries could make history happen.

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