July 2015
MID-TERM EXAM

CARLETON UNIVERSITY
Department of Economics

ECON 3870V

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Directions:

Please do each question below, noting the weights, which add to 100%. Use graphs where you find them useful, but be sure to explain them. In general, be sure to explain yourself well enough that the grader understands you and knows that you know what you are doing. Finally, please write on every other line. Bonne Chance.

Questions:

1. Suppose we have an economic system in which there is widespread allocation of goods by means of quotas or rationing. This was true of the Soviet-type economy in its conventional interpretation, which you should assume for this question.

(10%) a. Are official prices rational or irrational in such a system? Briefly explain in what ways they are rational or irrational and why.

(10%) b. Given your answer to **(a)**, what informational problems does quota allocation raise for efforts to allocate goods or to manage the economy efficiently? Briefly explain these problems.

(10%) c. What is "planning from the achieved level" and how does it relate to your answer to **(b)**? Give at least one problem that results from "planning from the achieved level."

2. Some economists have re-interpreted the Soviet-type economy as an example of Mercantilism, and thus as State Capitalism. This also implies a thread of continuity between the old Soviet Union and its successor states, notably Russia.

(10%) a. What are the basic properties of a State Capitalist economy? What distinguishes it from a Socialist economy and how would we tell the two apart in practice? What kind of trade between the state and key firms does State Capitalism involve? What does the state get in this exchange and what do key firms get?

(15%) b. Soviet-type economies were characterized by widespread shortages at official prices and by widespread bribes and other side payments that had to be made in order to obtain goods and services in short supply. Show how a firm would set its output if it maximized its bribe. What role do official prices play in this maximization? Are actual outputs and prices (prices including the bribe) rational? Explain briefly.

(10%) c. Suppose there is a persistent shortage of a good at its official price. Can the government eliminate this shortage by raising the official price? What will happen to quantity supplied when the official price goes up? Explain briefly.

3. In addition to property rights, we can identify basic political rights that are not easily changed by the current government of a given society.

(10%) a. What three kinds of rights can we identify? Is one of these more fundamental than the others, in the sense that the others are apt to depend on it in practice? Explain.

(10%) b. What two basic kinds of institutions do liberal democracies require? What is the difference from illiberal democracy? Is a state-capitalist economy likely be a liberal or an illiberal democracy if it is democratic, at least in name? Why?

(15%) c. What two basic views of the relative expansion of the public sector in market economies since World War II can we distinguish? Describe and compare them briefly. What feature of national income

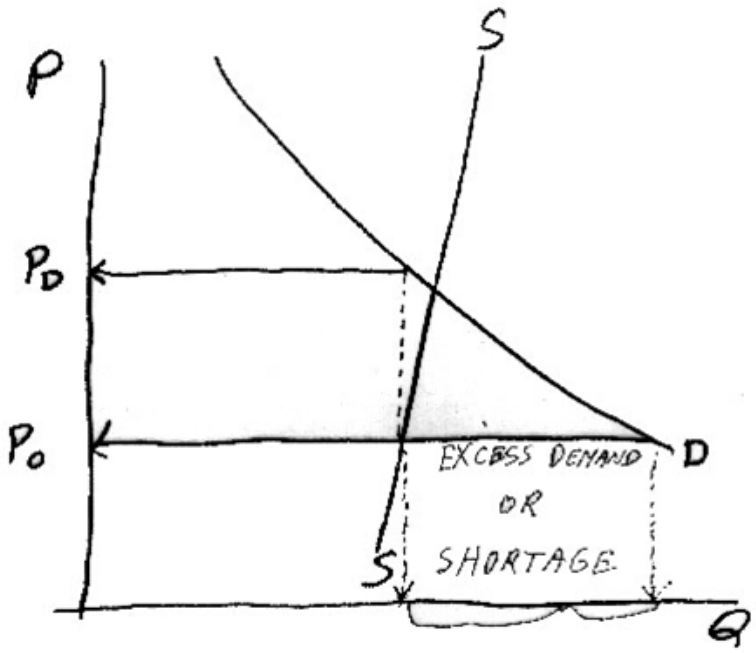
accounting makes it possible to have two different views? How may the nature of the political system determine which view is more accurate?

ECON 3870
July 2015 Midterm Answer Key

Note: The answers below are more thorough than student answers are expected to be.

1a. Prices are *irrational*, in the specific sense that they do not give the value of any product to users. In addition, they usually fail to measure the marginal costs of supplying goods, since supply is driven, not by considerations of profit and cost effectiveness, but rather by a system of output targets or quotas. (Note: Students should get at least one of the ways in which prices are irrational.)

To see the irrational nature of prices, consider the following graph:



P_D = the demand price, giving the value of the good to users.
P_0 = the official price of the good, which becomes a price ceiling.

1b. Unless the official price of the product is kept below equilibrium, the market will go to those willing and able to pay the going price. If the government (state) wants to prioritize the distribution of the good---i.e., to achieve a different distribution than that dictated by the market---it must set the price below equilibrium, creating a shortage of the good. Then it can determine which part of the demand is satisfied and which part remains unsatisfied. In this way, it prioritizes between would-be demanders. Those with higher priority are more generously supplied with the good.

In these conditions, the official price, P_0, contains no useful information about demand. If we observe only that price, we don't know what goods are worth to users. We therefore lack a good measure of demand. As a consequence, we don't know which products should be increased in supply and which should be reduced. We cannot compare the return on investment in one product or industry vs. the return on investing somewhere else. The planners of this economy don't have good information to guide investment and resource allocation, which is to say that they don't have a good information base for managing the economy. A legacy of this is likely to be a myriad of inefficient production facilities--the results of poor investment choices--that are threatened with bankruptcy when forced to face greater competition (as in transition economies).

Black market prices, where they exist, contain more information than official prices, but they are not easily observable by top government officials with basic responsibility for resource allocation, especially when this market is illegal.

1c. Because of the informational deficiency noted under (b), a major problem arises in setting output quotas for producers. State authorities lack good information about demand. Yet they need simple, objective criteria that will be perceived as fair to use in setting quotas.

Because demand criteria were unavailable, Soviet-type economies used each firm's historical record for this purpose. Output quotas were set "from the achieved level." Each year, a firm was expected to do a bit better than last year. Typically, a firm's quota would equal last year's output plus a measure of growth, the latter depending on recent investment in enterprise production capacity.

One consequence of this was that firms were reluctant to produce beyond their quota levels, even when able to do so. Instead they produced less than capacity rather than expand production and find next year's quotas raised in consequence. They often wasted resources, in other words, deliberately holding surplus labour and capital to ensure plan fulfilment.

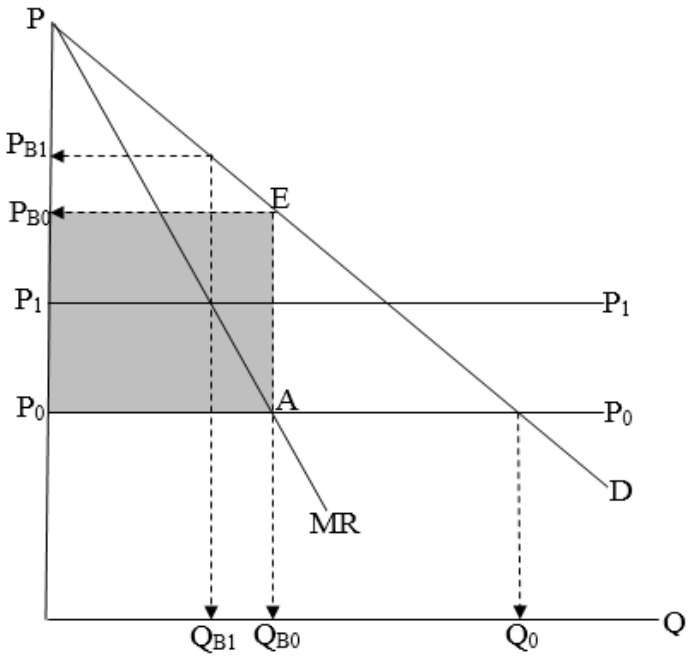
Firms also maintained a rhythm of production that made it hard for the authorities to raise their quotas while they were in the process of fulfilling them. This was called "storming." Firms would start out slowly, then pick up speed, and were finally going flat out by the end of the plan period. In the next period, they would repeat the cycle. (We sometimes see students in a similar rhythm with respect to their course work.)

There were other consequences of planning from the achieved level, including inelastic supply.

2a. Under state capitalism, governments grant market power to firms in exchange for the right to share in the profits of these firms and to use them as agents to help achieve state goals. The firms in question cannot fully exploit their opportunities for monopoly profit when state priorities dictate another course of action. For example, such a firm might be required to use domestic resources in its production rather than imported resources, and thereby to incur higher costs. Loyalty to the government is often a factor in selecting enterprise managers, which can result in a lower quality of management.

Under socialism, the profits of these firms would be used to achieve social goals, such as greater equality. The government would not be able to rely on a few insiders, but would need broad public support—in effect, the political system would have to be a liberal democracy, with effective institutions of restraint, as well as of representation.

2b. Consider the graph below--it's the same as the one in website article #13.



In the graph above, let *DD* be the demand for a product, with *MR* denoting its marginal revenue. Let P_0 be the official price of the good, and let Q_0 be the quantity demanded at price P_0.

What price and quantity would the firm set if it is a profit maximizer and has to turn all its official profit over to the state—this is its profit at price P_0—but can keep its unofficial profit? In the above graph, A gives the intersection of MR withP_0. Let Q_{B0} be the output at which $MR = P_0$. Then Q_{B0} is the output that maximizes unofficial profit, and P_{B0} is the profit-maximizing price. Note that Q_{B0} is less than Q_0—thus there is a shortage of the good at the official price—while P_{B0} is greater thanP_0.

In fact, P_0 is the *marginal cost* to the firm of the product, rather than its marginal revenue. If the seller supplies one more unit of output, P_0 is what it must pay in additional costs of production and profit tax turned over to the state budget. Thus output is determined by buyer preferences as well as the irrational official price of the good.

The good's real cost of production is not taken directly into account, and P_0 is not likely to reflect this—the firm may have either an official profit or an official loss at price P_0. As a result, outputs are not "rational" in the sense of being efficient and total prices, including bribes and other side payments, are not likely to be rational either.

If the seller could sell every unit of output at P_{B0}, its "unofficial" profit would be the area of rectangle $P_{B0}EAP_0$. This is the part of its profit that it can keep. Instead of actually selling the product at price P_{B0}, it might sell at price P_0, and collect a bribe or other

payment or favour, equal in value to length *EA* in the graph—in effect charging for the right to buy the good now rather than wait or do without.

2c. From the graph above, raising the official price, eg., from P_0 to P_1, cannot get rid of the shortage at the official price, which equals the horizontal distance from the marginal revenue to the demand curve opposite the official price. Quantity supplied falls, from Q_{B0} to Q_{B1}, so that in a limited sense, the firm has a backward-bending supply curve. It should be noted that the shortage does fall when the official price rises, as long as *MR* slopes downward more steeply than demand.

3a. The table below indicates 3 kinds of political rights that are "basic" in the sense that they are necessary for democracy to exist and also in the sense that they are often hard to establish or change. **NOTE:** This is the same table as in website article #11.

BASIC POLITICAL RIGHTS

I	Right to Vote
II	Right to Participate in Electoral Competition A. Right to Run for Office B. Right to Organize a Political Party, Faction, or Coalition C. Right to Organize an Election Campaign
III	Basic Freedoms (Constitutional Bill of Rights)

The most fundamental political right, which gives voting a social value, is the right to participate in electoral competition. This forces parties to compete for votes by fielding candidates and designing policies, programs, and laws that will be attractive to voters. It also tends to be a necessary, but not a sufficient condition for insuring basic freedoms, because support of such liberties will often gain votes for parties or candidates. Rights-related grievances have a way of becoming campaign issues. The right to electoral competition embraces a range of more narrowly defined rights, including the right to run for office; the right to organize a political party or coalition able to field election candidates, and the right to organize particular election campaigns. Without the right of diverse political parties to organize and to compete in elections, the right to vote has no value, and basic freedoms are apt to be precarious.

3b. We divide democracies into "liberal" democracies and "illiberal" democracies, with the latter in some ways more like autocracies. According to Dani Rodrik, a "liberal" democracy has two types of institutions. These are *institutions of representation*--whose task is to translate popular preferences into government policy--and *institutions of restraint*, whose job is to uphold basic rights and freedoms, including rights of minorities, and prevent government abuse of its power, including its power to regulate elections.

Institutions of representation include political parties, parliaments, and electoral systems, which are needed to elicit popular preferences and turn them into policy action, while institutions of restraint include an independent judiciary, police, and media, notably a free press and a constitution that cannot easily be changed by the government currently in power.

"Illiberal" democracies have institutions of representation, but not effective institutions of restraint. In these countries, whose number has been growing, government is more powerful and can act with fewer restraints than governments of liberal democracies must face. Elections are less likely to be free and fair when democracy is illiberal, and opposition parties face a variety of constraints in electoral competition with the government.

State capitalism usually goes hand-in-hand with either dictatorship or illiberal democracy. Such a political system allows government to rely on a relatively small number of insiders for most of its support and to pay for this support by giving access to monopoly profits, as well as to bribes, subsidies, tax breaks, and other types of economic rent. The remuneration of insiders would disappear or be lower in a competitive environment. Thus State Capitalism involves an exchange of rents, including monopoly profits, for support. The government receives support from insiders, including the managements of state capitalist enterprises, while insiders receive rents in return.

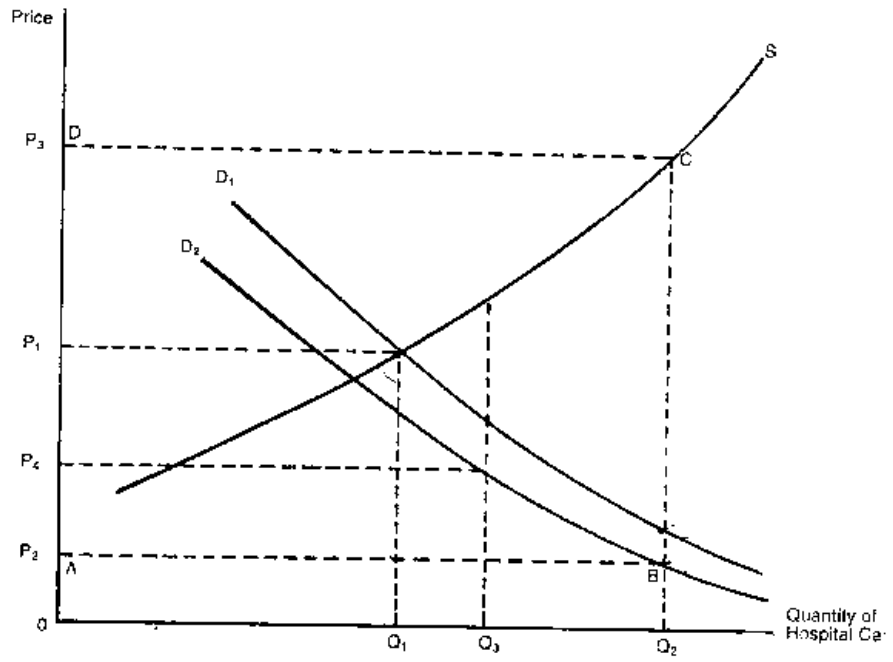
3c. We can identify two underlying views of public sector expansion. These are possible because separate measures of supply prices and quantities—of Q_2 and P_3 below—for goods and services financed by government are usually unavailable. All we observe is total expenditure (P_3Q_2). The two views in question are as follows:

1. To some, government has become leviathan, exercising monopoly power over its citizens. For these observers, the growth of government is mainly a price effect, in which citizens pay higher and higher tax prices for publicly financed goods and services, plus a nationalization effect in which services such as health care come to be paid for, and in some cases to be supplied by, government agencies. Nationalization also leads to higher effective prices because of the moral hazard effect. According to this view, the expanded share of GDP accounted for by goods and services that are now publicly financed results mainly from the fact that the average supply price of these

products has risen faster than the average price of privately-financed goods and services.

2. To others, relative prices of goods and services that are now publicly financed may have risen, but quantity and quality increases have also occurred. To these observers, democratically elected governments have reflected voter preferences and carried out the wishes of their citizens faithfully. According to this view, at least a significant part of the increase in the share of GDP accounted for by publicly-financed goods and services is a relative quantity and/or quality increase.

The leviathan view notes that expansion of social insurance substitutes tax and payroll fee financing for direct financing in the form of prices charged of users, resulting in a reduced incentive to economize on insurance-financed services. The result is to increase both quantity demanded and the supply price (or the price that must be paid to suppliers). This is the "moral hazard" effect and is shown in the graph below. The shift from direct to indirect financing raises quantity demanded from Q_1 to Q_2 while the supply price also rises from P_1 to P_3. NOTE: This graph is also in website article #11.



However, the extent to which a government can exploit its subjects and survive depends on the nature of the political system. Exploitation is lower in a liberal democracy—with both effective institutions of representation and effective institutions of restraint—where government is under more pressure to be sensitive to the wishes of its citizens than in a dictatorship or an illiberal democracy.