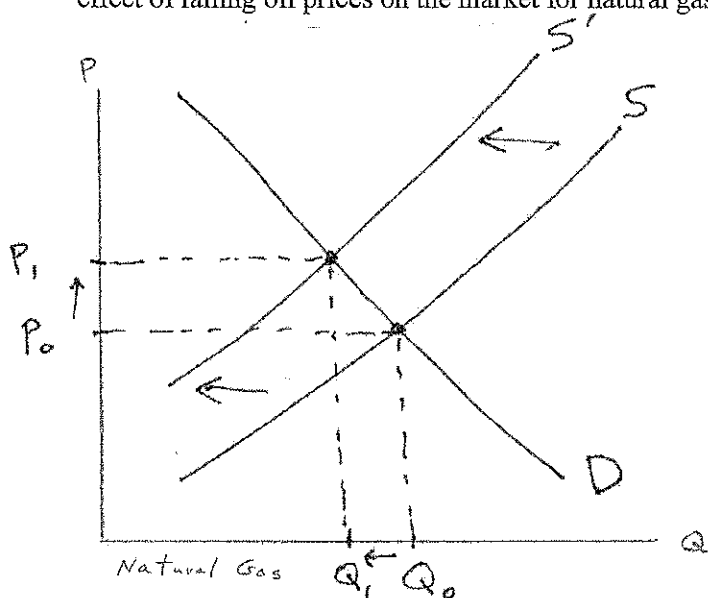


# KEY

1. (5 pts.) Saudi Arabia and Russia, two major players in the world market for crude oil, decide to ramp up production, sending oil prices downward. In other parts of the world, like North Dakota and Texas in the U.S., many but not all oil wells have an associated product, natural gas, that bubbles to the surface alongside the oil being extracted. Explain and illustrate in a diagram the effect of falling oil prices on the market for natural gas.



From WSJ 10/12/16:

A long period of low oil prices has saved motorists money at the pump, but languishing crude prices could drive up heating bills.

That is because the natural-gas supply is closely connected to oil drilling. Low crude prices have led U.S. oil producers to idle more than a thousand rigs over the past two years, resulting in a big decline in so-called associated gas, a byproduct of oil drilling. This gas typically represents about 40% of total supply, but its production isn't particularly responsive to gas prices.

*For some oil wells in the United States, gas is a by-product of oil production.*

2. (4 pts.) We have discussed two different lines along which economic systems can be classified. We also watched a short video clip explaining how agriculture in China works. How would you categorize the Chinese system of agriculture according to each of the classification approaches? Briefly explain both the two taxonomies and how Chinese agriculture fits into each.

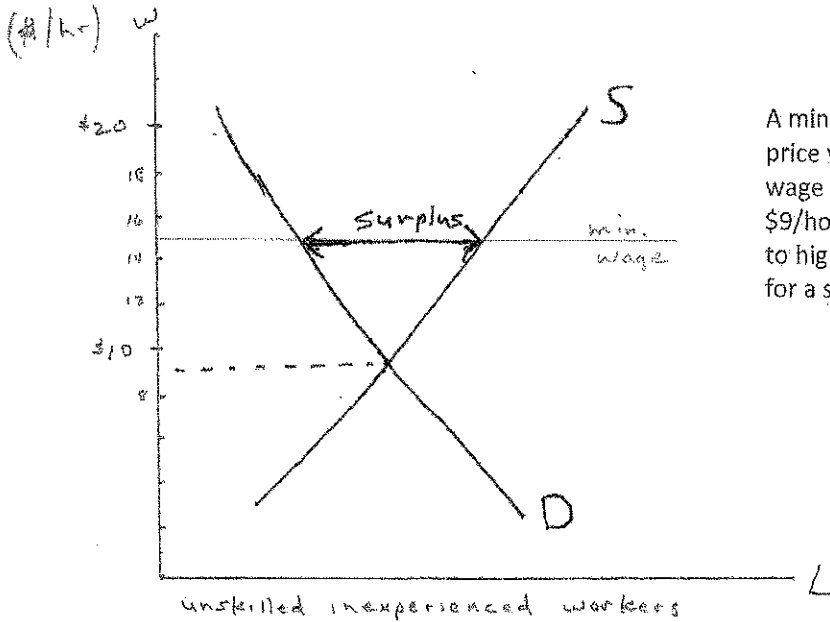
Economic systems can be classified according to the decision-making process (how they answer the questions What, How, and For Whom) and according to the ownership of resources.

Decision-making process: Centrally planned or command economies centralize the decision-making process, while market systems decentralize the decision-making process and rely on the interaction of households and firms in markets to make resource allocation decisions.

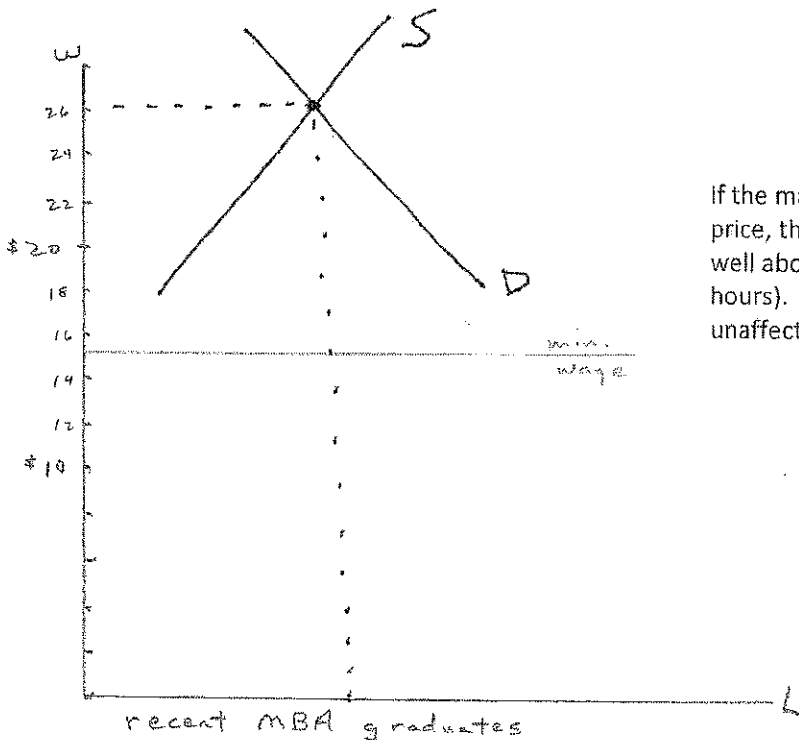
Ownership of resources: Socialism refers to an economic system where the scarce resources of that society are commonly or publicly owned. Capitalism refers to an economic system where scarce resources are privately owned. A critical function of government in such a system is the definition and enforcement of property rights.

Chinese farmers are given production quotas to meet, but are free to grow what they want after they meet their quota. They generally have permanent rights to farm their land, but do not own it in the sense that they cannot sell their rights to someone else.

3. (6 pts.) Citing their concern for the well-being of low-income households, Seattle's city council implements a series of increases in the citywide minimum wage from \$9/hour to \$11/hour (last year) to \$13/hour (this year) to \$15/hour (next year). If they were to have asked you for your assessment of the impact of such a policy on different labor markets, what would you have told them? Explain and illustrate (in two separate diagrams) the impact of imposing a \$15/hour minimum wage on the labor markets for (1) unskilled, inexperienced high school students looking for a summer job, and (2) recent graduates of good MBA programs.



A minimum legal price set above the market-clearing price will create a surplus of the product. If the market wage for unskilled, inexperienced teenage workers is \$9/hour, then a \$15/hour minimum wage will likely lead to high unemployment rates among teenagers looking for a summer job.



If the market-clearing price is above the legal minimum price, there will be no effect. MBA starting salaries are well above \$15/hour (\$60k per year = \$30/hour on 2000 hours). So the labor market for new MBA's should be unaffected by this increase in the minimum wage.