

## Educational Notes

### Knowledge, Discovery, Incentives and Institutions: Teaching Public Policy Analysis with Austrian and Public Choice Insights

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When our students are faced outside of class with yet another proposal for government intervention in the economy, how do they assess that intervention? What they learn from us about the virtues of markets may make them suspicious of a proposed intervention, but can they think through its particular pros and cons and predict its likely unintended consequences?

The following describes a simple but I hope robust and easy-to-remember approach for such analysis. It is a distillation of the main questions I observe my favorite economists from the Austrian and Public Choice schools raising about a wide variety of policies. Four terms provide an outline of the approach: *knowledge*, *discovery*, *incentives*, and *institutions*. For each I present the basic insights and give students a related question to ask that applies those insights to policy.

The whole comprises three to five lectures that take between three and six class periods to present, depending on the course and student questions. I use a short version in principles of economics and a longer version in comparative economic systems and public policy courses.

#### Knowledge

The first crucial insight for students to know and apply comes from Hayek's (1948 [1945]) "The Use of Knowledge in  
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Society”: Ever-changing relative prices are essential for communicating throughout society the local “knowledge of the particular circumstances of time and place” (p. 80) on which well-coordinated and efficient production depends. Students must understand that, “We must look at the price system as... a mechanism for communicating information if we want to understand its real function” (1948 [1945], p. 86). While I emphasize this point regularly, two particular exercises make it especially well.

First, to make sure that students appreciate the immense dispersion of local knowledge on which production depends, I have them read aloud most of Leonard Read’s “I, Pencil” and note the remarkable variety of knowledge involved. Read emphasizes that there is “no mastermind” directing the process. I exclaim that the process “is out of control!” then ask students what provides the coordination. With some coaching they begin to see that prices do.

Second, I emphasize the necessity of market prices for informing decision-makers with a fifteen-minute thought experiment based on Mises’s (1920, p. 108) railroad example. I ask students to imagine themselves the commissar of railroads in the old Soviet Union, with no markets and no prices, facing a choice of railroad routes between two cities on opposite sides of a mountain range. They may build through the mountains, a shorter route requiring relatively little steel rail, but a great deal of engineering; or they may build around the end of the mountain range, using much more steel rail, but much less engineering. I assume away all costs other than those of engineering and steel, and any greater benefits from one route or the other, but call their attention at length to the many alternative uses of both engineering and steel. I ask them to suppose they are conscientious commissars, aiming only at what is best for the Soviet Union – if steel is more urgently needed for other uses than engineering, they should build across the mountains; if engineering is more urgently needed than steel, they should build around.

“Which way would you go,” I ask, “and why?” When the exercise works well, there is a long silence, for which I congratulate them as the correct answer. What they would need to *know* to make the correct decision, I ask, and how might they find it out? We sample some of the myriad bits of detailed, dispersed, often inarticulate knowledge about the needs for and supplies of engineering and steel. They see that there is no conceivable way for the commissar of railroads to find out all he would need to know to make the best decision.

Then it is quick work to conclude the exercise by asking them to change the thought experiment slightly so that they are the CFO of a for-profit railroad company in the capitalist West. When someone answers that she would choose the cheapest route, I point out that this is the typical capitalist answer, aiming solely at profit with no concern for the overall well-being of the country. But the magic of the market is that in determining what’s cheapest the capitalist thereby unwittingly takes into consideration all the detailed knowledge of all the users and suppliers of engineering and steel, because all that knowledge is represented in the prices of engineering and steel. The cheapest route is the route that saves the most urgently needed resources for other uses. By responding to prices we take into account overwhelming amounts of knowledge that cannot be represented and communicated in any other way.

Once students understand this foundational insight that market prices are essential communicators of dispersed knowledge, I offer them the related first question to ask of public policy:

*What is this policy's effect on the communication of dispersed knowledge through changing relative prices?*

They understand that a policy causes problems if it distorts prices away from market levels. I coach them to consider this with respect to price controls, taxes, regulations, and indeed all economic policies

we discuss. What is the effect on the meaningfulness of prices? With that policy in place, how well will prices convey what people know about the underlying availability of and needs for the goods in question?

### **Discovery**

As the shorthand “knowledge” is to remind students of the way market prices communicate dispersed knowledge, the shorthand “discovery” is meant to remind them of the essential role of profit and loss in directing creative activities. Here again there are two essential insights. First, profit earned in free and voluntary exchange represents the creation of new value in society while loss represents the destruction of value. Second, profit and loss are society’s indispensable means of *discovering* the goods, services, and production methods that best satisfy people’s wants.

It is essential to debunk any anti-profit notions the students may have, so I begin by asking them, “How much profit is too much?” Then I carefully define profit and loss (following Mises [1952])<sup>1</sup> as the difference between yield and cost – the value to consumers of the output of a production process<sup>2</sup> minus the value of all the inputs in their next best uses. I pick a student, let us call her Ashley, and suppose she runs a business that uses, say, \$100,000 worth of resources in a year. This electricity, equipment, space, human effort, materials, etc., all have other uses, currently valued at \$100,000. Now suppose with those inputs Ashley produces goods

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<sup>1</sup> Part A. Section 7, first paragraph: “The difference between the value of the end attained and that of the means applied for its attainment is profit if it is positive and loss if it is negative.”

<sup>2</sup> Because some consumer surplus usually exists, of course, what consumers pay an enterpriser is generally less than the whole value they place on it, so the whole value created is greater than the enterpriser’s profit, but I don’t always take time to make this distinction.

and services for which consumers willingly pay her \$130,000. Her \$30,000 profit means that Ashley has taken inputs worth only \$100,000 in their next best uses and transformed them into \$130,000 worth of benefits for consumers! She has created \$30,000 worth of value. If, on the other hand, consumers will pay only \$80,000 for Ashley's products, her \$20,000 loss indicates that she has destroyed \$20,000 worth of value.

Then back to the opening question: On this view, how much profit is too much? None. If Ashley had Harry Potter's powers and could create her output with the wave of a magic wand, so that she makes the whole \$130,000 in profit, would that be bad for society? Not at all, because then all the resources she never has to use would remain available for their next best uses. The more profit the better.

The social role of profit and loss I introduce by emphasizing uncertainty. The future is always uncertain. Profits are never assured. Entrepreneurs are inescapably unsure about precisely what to do to make the world a better place tomorrow, what products will fetch what prices, what new opportunities and challenges *other* entrepreneurs will create. To make this point I quote a series of remarkably wrong projections, including Bill Gates's "640 K ought to be enough for anybody," Irving Fisher's "Stocks have reached what seems to be a permanently high plateau," in 1929, and a Yale University management professor's comment on Fred Smith's plan for FedEx that "the concept is interesting and well-formed, but to receive better than a C, the idea must be feasible." The quotations show that even those in the best position to know what to do sometimes get it utterly wrong.

In addition to uncertainty, we face a scarcity of resources with which to experiment on new products and processes. Society needs some means of selecting among the myriad possibilities to reward the development of those best suited to actual consumers, and to discourage the development of the unsuitable. Profit and loss is that means. Significantly, it selects not only among products and

processes, but also among entrepreneurs. I quote Mises: “Profit and loss are the instruments by means of which the consumers pass the direction of production activities into the hands of those who are best fit to serve them” (1952, p. 123).

With these insights students understand how policies that expose enterprises to the discipline of profit and loss promote human progress, while even well-intentioned policies that shield enterprises from such discipline likely retard progress. Hence the second question I recommend for assessing policy:

*What is this policy’s effect on the discovery of new and better ways to accomplish our purposes, through the feedback of profit and loss?*

### **Incentives and Institutions**

“Incentives” is shorthand for public choice economics’ emphasis on the incentives inherent in any policy; “institutions” is to remind students to look for the private-sector institutional alternatives to government intervention that exist for almost every purpose. I present these together.

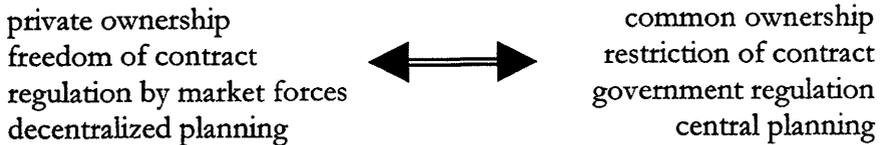
The presentation argues that the *incentives* in private-sector *institutions* are more conducive to human well-being than the *incentives* in corresponding public-sector *institutions*. It illustrates that point with various examples. With each illustration I coach students to look for the incentives inherent in the institutions and to project outcomes accordingly. Meanwhile, I show them that there *are* institutional alternatives to government intervention for almost every social purpose.

I begin by calling students’ attention to the broad spectrum of institutions on which policy might be based. Figure 1 shows my representation.

For almost every purpose, we can find policies anywhere on that range. With schooling, for example, at one extreme, we could forbid any private efforts, letting government provide and pay for all

schooling. At the other extreme, we could entirely separate school and state (as we do church and state), letting private entities own, run, and pay for all schools. We could choose some intermediate approach. Today, most American children in grades K-12 go to government-owned and operated schools, but instead we could have government pay for schooling but leave its provision to the private sector. There are always alternatives, and good policy analysis looks creatively for and contrasts the merits of these alternatives.

Figure 1



After that preliminary, I turn to examples.

I begin by describing the perverse timber programs in many national forests. The logging causes loss of animal habitat, erosion, siltation of streams that in turn impedes the spawning of fish, and other environmental costs. These are generally *not* justified by the market value of the timber harvested, however: The expense of running the program greatly exceeds the market value of the timber produced (Anderson, Smith, and Simmons, 1999)! “Why?” I ask. “How can we account for the persistence of these programs?”

After the students discuss the question for a few moments, I interrupt them with coaching in the form of the third question. If you want to understand what drives public policy, I say, ask yourselves:

*In this institutional setting, what are the (interest) groups primarily affected, and what are their incentives?*

After I have helped the students identify the mutually supporting incentives of 1) the logging interests for logging roads built by the U.S. Forest Service, 2) Congress for campaign contributions and votes from the logging interests, and 3) the U.S. Forest Service for millions in funding with which to build the roads, I ask emphatically, “Who owns the national forests?!” The three answers I draw out are “Everybody,” “Nobody,” and “the government” – all amounting to the same thing.

Without drawing any conclusions yet, I then describe the oil and gas production that Audubon Society allowed for decades in its Rainey Wildlife Sanctuary and ask how we can account for an environmental protection organization dealing with an oil company(!). Again, *what are the (interest) groups primarily affected, and what are their incentives?* Students work out that Audubon wanted the substantial royalties it earned (with which they bought and preserved more land), and at the same time required on their own land whatever environmental protections they thought necessary. At that point I ask, emphatically again, “Who owns Rainey Wildlife Sanctuary?!” to make sure they focus on its private ownership.

Then I lead students through the reasoning from free-market environmentalism<sup>3</sup> regarding the systematically different incentives between publicly owned and privately owned institutions: Whereas the salaried administrators of publicly owned resources have weak incentives for good stewardship and strong incentives to support the interests that support them politically, private owners have strong incentives for good stewardship of resources.

I pursue the different incentives faced by public- v. private-sector enterprises with two-minute thought experiments contrasting the quality of performance that students expect from the U.S. Postal Service v. FedEx, from government agencies that serve the poor v.

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<sup>3</sup> See, e.g., Anderson and Leal (1991) and much of the research available from the Property and Environment Research Center (PERC.org).

private non-profits that serve the poor, and from government schools v. private schools. In each case students overwhelmingly expect the private-sector organization to perform better. Why? I ask them to focus on *the connection or disconnection between performance and funding*. In private-sector organizations the close connection between performance and funding provides a relatively strong incentive for the organization to perform well. After all, if it does not, it will lose its funding. By contrast, in public-sector organizations performance and funding are largely disconnected. Accordingly, the incentive for people in those organizations to perform well is much weaker.

Having stressed the institution of private v. common ownership, I turn to the institution of freedom of contract v. governmental restriction of contract. The problematic incentives that arise in government regulation I illustrate with a story about how hairdresser licensing reduces competition among hairdressers, raising prices and reducing choices for consumers (Baetjer, 1988). The example nicely illustrates regulatory capture. I have students brainstorm for a few minutes on alternatives to governmental licensing that might arise in the market. I pointedly do not ask for any conclusions as to whether or not such alternative institutions would work better or worse than government licensing; the point is simply to make students aware of alternatives. When I have time I also use Bruce Yandle's (1999) illuminating "Bootleggers and Baptists" discussion of how eastern coal interests turned the Clean Air Act to their advantage at the expense of clean air. The concept of regulatory capture is especially useful in showing students that even when intervention is entirely well intended, it can do net harm because of special interest groups' incentives to use the intervention for their personal advantage at the expense of the general public.

A telling example of problematic incentives in government regulation concerns the Food and Drug Administration (FDA). Given their *incentives*, which error are FDA officials more likely to commit: allowing a dangerous drug to go onto the market, or keeping

a good drug off the market? Students understand the latter is more likely. I have them brainstorm again, now looking for private-sector alternatives to the FDA for providing information about the safety and effectiveness of pharmaceuticals. I make sure someone raises the possibility of a pharmaceutical equivalent to Underwriter's Laboratory, which certifies the safety and reliability of thousands of potentially dangerous products, at far lower cost in time and money than does the FDA.<sup>4</sup> I close this bit by showing them some shocking statistics on the avoidable deaths that have occurred as a result of the FDA's delay of various medicines. Students usually leave this exercise with a salutary uneasy thoughtfulness.

The last central element of the presentation on incentives and institutions aims to show why so much bad policy exists in democracy, even though the many who lose from such policy far outnumber those who gain from it. The answer is "the special interest effect." I refer back to the logging in the national forests, hairdresser licensing, and other policies we may have discussed to illustrate how the concentration of benefits on special interest groups results in large benefits for individual members of the group, and hence a strong individual incentive to work for the policy politically. In contrast, the diffusion of costs among taxpayers/voters/consumers results in small costs to individuals and hence a weak incentive to oppose or even learn about the policy. "So whose voices do the politicians hear?"

I conclude the presentation by asserting again that the incentives in private-sector institutions are more conducive to human well-being than the incentives in corresponding public-sector institutions, and urge students always to look for alternatives to government intervention in alternative institutions in civil society.

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<sup>4</sup> For this idea, and the statistics mentioned next, see Noel Campbell, 1997.

As this presentation is the last in the series, I review the main points about knowledge and discovery, and then phrase the final question on institutions in terms that tie the whole series together:

*What are the institutional alternatives to this policy that might foster better communication of dispersed knowledge, better discovery, and better incentives?*

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