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**The Adoption of Hayekian Economic Infrastructure  
as a Foundation for Sustained Prosperity**

Remarks by

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The media abounds with assertions concerning the emergence of a new economy. The pundits contend that we need a new paradigm to understand how this new economy works. Not surprisingly, some old economic models have come under attack for not being able to reconcile the low inflation, high growth, and quite low unemployment rates we have witnessed over the past decade.

Let me suggest that there is no new economy. I admit there is something new, but it isn't the economy. Certainly, computers and information technology have sped up the flow of acquiring or disseminating knowledge: knowledge about prices; knowledge about production techniques. But, it doesn't necessarily follow that we need a new paradigm *because* of this technological progress. And, the reason that the old models are not performing well is not due to bandwidth or megahertz, but, instead, it might be that they never were very useful. Using statistical correlations, such as the relationship between inflation and unemployment to determine policy, can be dangerous. In Hayek's words, but in a different context, it is the difference between knowing *that* and knowing *how*.

In my remarks today, I want to talk about some ideas concerning economic performance and progress that are old and yet still highly relevant to the world we are living in today. These ideas will not help anyone predict real GDP growth for next year or instruct the FOMC on what to do with the federal funds rate at its next meeting. But, they should help our thinking about a more important question: How do we design monetary and fiscal institutions so that we maximize social welfare over time? The theme of my remarks today is that the key to sustainable prosperity is the strength of the underlying economic infrastructure.

### **Elements of Growth**

One thing that has not changed over the last millennium or two is that each and every day new businesses are born, and each and every day other businesses fail. Along with this turnover, we see churning in the labor market as new jobs are born and older, less productive jobs cease to exist. The same can be said of other productive resources, such as physical and entrepreneurial capital. Individuals and firms must respond to the various shocks hitting the economy. They must rethink not only the way they do

business, but also the way labor and capital are put together to produce final consumption. Technological progress necessitates obsolescence. But, this observation is just as valid today as it was in 1900, or 1800, or even much earlier.

Some shocks are large. Movable-type printing was every bit as revolutionary as the computer. Gutenberg's invention in the 1430s allowed information to be mass-produced. In fact, the printing press is an apt analogy to today's technology revolution: they are both about information. Thirty years after the introduction of movable-type printing, there were print shops in every corner of the European continent. It is believed that more books were produced in the 50 years following Gutenberg's invention than in the 1,000 years before it.

The Industrial Revolution was obviously another large shock. The steam engine, for example, increased horsepower by several orders of magnitude. With the added power, not only could some products be made more quickly, but new products could also be produced that would have been much more costly with manual labor alone.

Today we may very well be in the midst of another large shock: The information technology revolution. Indeed, computers and the Internet allow us to obtain information instantaneously from almost anywhere in the world, twenty-four hours a day, while sitting at our desks, and at very little cost.

So, what do I mean when I say there is no new economy? I mean that the fundamental determinants of healthy economies are the same as they ever were. So long as the right environment exists, markets will flourish and in that environment individuals and markets will adapt to shocks. And as they adapt, the face of the economy changes. But the conditions that determine the right environment haven't changed, and the mechanisms by which the economy operates are the same as they always were. Only the outward appearance has changed: the names of the businesses, the products manufactured, the skills used, or the efficiency with which trade is conducted. Keep in mind that in such an environment, the changes that occur are the result of the actors being allowed to respond optimally to the shocks that confront them, making everyone better off as a result.

How does such an environment arise? I contend that it is the product of government laying the appropriate infrastructure. In the United States, as well as in more

and more countries throughout the world, an infrastructure exists that allows a large proportion of resources to be spent on research and development. The infrastructure ensures that we will be able to reap the rewards from a successful outcome, and, of course, that we will have to pay the price for an unsuccessful one. Certainly, more people “online” means ideas can spread faster and new techniques and processes can spill over into other sectors of the economy. Nevertheless, there really isn’t anything *new* here. The printing press, the telegraph, and the telephone each had the same effect. In fact, so much attention has been devoted to the so-called new economy that we have overlooked the importance of the infrastructure that has allowed a freer flow of information, products, capital, and labor—all of which have enabled us to fully exploit those new technologies.

To understand better how an infrastructure can foster the increase in output, and concomitantly wealth, in the economy, it is instructive to glance back at another “new economy”—the Industrial Revolution. What made the capital accumulation, innovation, and industrial enterprise of that economic transformation possible over a century and a half ago? The appropriate institutions and enforcement mechanisms had to be in place. In contrast, the technical preconditions for such a revolution almost certainly existed in China between the seventh and twelfth centuries AD. While most know that Gutenberg invented his printing press in the 1430s, a similar press was invented by Pi Sheng some 400 years earlier in China. However, for various reasons, his invention did not spread to the West.

Institutions—those that were in place and the way they were structured— have also been mentioned as the proximate cause of the Industrial Revolution. Because of its institutions, Great Britain was able to combine innovation and resources to create greater wealth and set the revolution in motion. While the leaders of countries across the globe at that time may not have been particularly different in their attitudes toward their citizenry, the European fiefdoms were small and open, allowing individuals to move across jurisdictions easily if the conditions in one were not conducive to their skills, or if the particular area was governed in an arbitrary manner. Individuals with the foresight to realize that gains in the standard of living could be made by enforcing property rights,

establishing individual autonomy to make contracts, and so on, were able to capture such gains to the benefit of the citizenry.

Still, trading *between* jurisdictions was problematic, because the laws or rules between them were often idiosyncratic. The merchants took it upon themselves to impose and enforce their own rules, known as medieval *lex mercatoria* (Custom of Merchants). These rules basically established property rights and enforcement mechanisms for breaches of those rights, enabling a freer flow of both goods and ideas, leading to higher levels of prosperity. One should not be under the illusion that that was a peculiar time or a singular event. It is easy to point to many such cases where institutions can be singled out as encouraging or discouraging growth. For instance, we can point to the “Asian Tigers” over the past couple of decades compared to China or North Korea. In economics it is usually not possible to “see how things would have turned out” had we imposed a different assumption on the model. Occasionally, however, we are provided natural experiments. Countries divided by some arbitrary border, as East and West Germany were, or North and South Korea are, give us keen insight into the important role institutions play in determining economic growth. It seems doubtful that explanations other than the underlying infrastructure can adequately explain the disparate patterns of growth between such politically divided regions.

### **It’s the Institutions, not the Macropolicies**

If we ask a simple question like, “Why are some economies rich and others poor?” or “Why do economies grow at different rates?” we get a simple answer: Rich economies have greater resources per capita—more capital, both human and nonhuman, and better technology connecting the two. But this answer only begs another question: “Why do some economies have high levels of capital and technology, while others do not?”

I believe it is a nation’s choice of institutions—the totality of which we call the economic infrastructure—that determines wealth and development. What separates economic “haves” from “have-nots” is whether the role of an economy’s institutions—particularly its public institutions—is to facilitate production, or to confiscate it.

We can describe an economy's infrastructure as the climate created by institutions that serve as conduits of commerce. Some of these institutions are private; others are public. In either case, an institution's role can be that of conversion—helping to transform resources into output—or diversion—transferring resources to nonproducers. Most private institutions are sustained by the value they add—either they produce, or they fail. But the same cannot be said of public institutions that are sustained by the power of the state.

Implicit governmental guarantees, without adequate market oversight, create the potential for a nation's asset values to be determined by things other than the investment's underlying contribution to the world economy.

### **The Role of the State Institutions**

At the most basic level, there can be only two rationalizations for the state's participation in an economy. The first is as a social equalizer, redistributing the fruits of a nation's production under the presumption that a particular social need takes precedence over private desires. The second justification for government participation is the assertion that markets fail to produce an efficient outcome.

Where equity issues are concerned, the role of the state is unambiguous. Society chooses to accept a lower average level of wealth in exchange for some presumably higher social objective.

It is the state's role as a promoter of market efficiency that raises the most complex questions. Even if the objective is to overcome a particular market failure, once the state has involved itself in the economy, its influence will have wide-ranging and unanticipated consequences. And state institutions, which are not bound to obey market forces, exert influence long after their usefulness has passed.

While I doubt that market failures are as common as activist policymakers presume, it is clear that they do occur. The most frequently cited example is "public goods," where providing a good for anyone makes it possible to provide it for everyone with no additional costs. But, precisely because it is difficult to exclude individuals from receiving the benefits of such goods, the private sector would produce too little of that good. A legal system and national defense are such public goods. Another, though not

often mentioned in economics textbooks, is that of a stable currency. These functions become part of the economic infrastructure called “the protection of property rights,” which means, more or less, that individuals can expect to receive the product of their labor. Although people could privately undertake actions to prevent diversion of their output (by burglary, for example), it is widely accepted that a social institution (such as a police force) is a less costly means of protection. Let us be clear, however. In order to pay for the police, courts, or jails, resources must be diverted to the state from private persons in the form of taxes.

Indeed, once the state is introduced into the economic infrastructure, it cannot help but tax the system’s productive capacity. Sometimes, these taxes are direct and sustain the government activity. But direct taxes are probably only a small part of the overall cost to the economy. Also important are the costs borne by private agents who invest resources to minimize their tax burdens, either through tax-avoidance schemes or through attempts to influence the taxing authorities.

This is the paradox of any state enterprise. While the state may be the most effective instrument for minimizing resource diversions (for example, by protecting property rights and enforcing contracts), it simultaneously introduces the potential for the debilitating diversion of resources for the state’s own account. This, I think is where the differences between economies are grossly understated.

A recent article in the *Wall Street Journal*,<sup>1</sup> written by Hillel Halkin, comments on a well-known Egyptian writer’s impressions of the recent corruption scandals in Israel. The chief of police resigned after it was revealed that he spent several nights as a nonpaying guest at a beachfront hotel. The Egyptian writer was shocked at the resignation of the chief of police, saying that Israel must have a “...terribly childish fear of corruption if you make an important official lose his job over an idiotic trifle like that.” Mr. Halkin points out that “...the country that does not hold its elected officials to the highest standards will end up getting the lowest.”

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<sup>1</sup> “The Virtues of a ‘Childish Fear of Corruption,’” *Wall Street Journal*, March 29, 2000, p. A22.

The rule of law must be universal; and these universal rules should be general and abstract. These abstract rules, according to Hayek, must be “applicable to an unknown and indeterminable number of persons and circumstances.”<sup>2</sup>

As is well known, such rules must protect private property and create predictability in interactions with others. The rules should be easily accessible so that all can take advantage of them and all will know the sanctions for malfeasance. Also important is that the rules must allow actors in the economy to spontaneously respond to new technologies and new methods brought on by technological progress. Innovators need access to well-functioning capital markets. Firms need to be able to hire or fire workers as market conditions warrant. Enterprises not willing or able to embrace new technologies—and therefore not able to compete with those that do—should be allowed to fail.

What are the elements, then, that the state must put in place to allow an economy to be able to take full advantage of possible gains from trade? A market economy requires a foundation of enforceable property rights, generally accepted accounting principles, sound financial institutions, and a stable currency.

Quoting Hayek:

“The orderliness of social activity shows itself in the fact that the individuals can carry out a consistent plan of action, that at almost every stage, rests on the expectations of certain contributions from his fellows.”<sup>3</sup>

Where public contracts are not honored and private contracts not enforced, markets are impaired. Where title to property is not certain, normal banking is not possible. Where financial statements are not reliable, investment opportunities are obscured. Where the purchasing power of money is not stable, resources are wasted in costly information gathering or in producing or consuming the wrong things.

Additionally, the rules governing individual interactions are inherently not any different than those we would want governing interactions between individuals and institutions. It is essential that we trust that those we interact with will act in predictable

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<sup>2</sup> *Law, Legislation and Liberty, Volume I: Rules and Order* (Chicago University Press), 1973.

<sup>3</sup> *The Constitution of Liberty*, London: Routledge & Kegan Paul, 1960.

ways, will fulfill promises, and so on. If this were not the case, transactions' costs might exclude possible gains from trade. It seems remarkable, when you think about it, that we often take substantial amounts of money to our bank and hand it over to people we have never met before. Or, that securities traders can send millions of dollars to people they don't know in countries they have never been in. Yet this occurs all the time. I trust that the infrastructure is set in place that allows me not to worry that the person at the bank who takes my money doesn't just pocket it. Or that when I use my credit card to buy a new CD or tennis racquet over the Internet, from a business that is located in some other state or country, I am confident I will get my merchandise, and they are confident they will get paid.

### **A Reputable Monetary Authority**

We must require from our government institutions the same features we require from our private ones—predictable behavior, trustworthiness, and commitment. People would like to expect that if taxes are taken from them to provide for their retirement, the government will honor its obligation and return the funds with interest when they are old. We should expect that the dollars issued by the government are subject to the same level of trust, and that their value will not be eroded by arbitrary policies.

It is important to emphasize that these rules should apply at all levels and to all institutions, including the monetary authority. Economic exchange involves information and transaction costs that require real resources. These costs, which influence the extent of trade, the degree of specialization of labor, and the economic benefit derived from goods, stem primarily from the difficulty of acquiring information about the quality of the goods—their true worth, as opposed to their money worth. The lower the information and transactions costs, the greater the opportunities for individuals to undertake exchanges that maximize mutual welfare. When we find ways to conserve productive resources that had been devoted to gathering information and conducting exchange, we liberate them and make them available for creating consumable output. In this way, sound money promotes prosperity.

Of course, a nation must be concerned not only about the integrity of its money, but also about the stability and reliability of its financial system. The condition of a

nation's financial intermediaries and financial (asset) markets may influence a monetary authority's policy actions, but need not compromise its objectives. Unsound financial institutions and inefficient financial markets may impede, but do not preclude, the achievement and maintenance of a stable currency. Nevertheless, if ex ante concerns about, or ex post responses to, the condition of financial intermediaries or markets, divert monetary authorities from a disciplined, sound policy stance, then overall financial instability can result. While the adverse effects of shocks to the financial sector can never be eliminated, their disruptive influence can be minimized if monetary authorities continue to provide a stable monetary unit.

Economists are accustomed to talking about the quantity of money; I suggest thinking more deeply about its quality. A society will choose to use as money something that enables people to gather information and conduct transactions with a minimum of resources. Indeed, the worldwide use of the U.S. dollar alongside local currencies illustrates the point that currencies do compete along the quality dimension.

While central banks around the world have begun to understand the long-term efficiencies that stable money can provide, they are also part of a fiscal regime that includes strong incentives to violate the public's trust by generating unanticipated inflation. Through unanticipated expansions of fiat money, central banks can levy an unlegislated tax, reduce the real value of the government's outstanding debts, or attempt to exploit a short-term trade-off between growth and inflation. Governments, especially those that heavily discount the future, will always be tempted to instruct or pressure their central banks to issue excessive amounts of money.

The beneficial effects of such short-sighted government policies are transitory at best. As people alter their behavior in the face of inflation, the cost of conducting exchanges increases. The additional resources expended on gathering information and protecting the real value of wealth would otherwise have been available for growth-enhancing activities.

Governments lacking the willpower to maintain price stability may attempt to ensure the quality of their monetary unit by adopting institutional arrangements that restrict their own monetary discretion. Certain types of rules can enhance a central bank's reputation by signaling that the government intends to maintain the quality of its

currency. Examples include explicit price-level targets or other legal imperatives that place monetary stability above other objectives. Such arrangements may be particularly important because a reputation for monetary integrity is built very slowly.

### **Some Practical Examples**

Several examples of the importance of infrastructure in fostering long-run growth are worth noting. The first concerns the decline in the value of the euro relative to the U.S. dollar and the British pound, which occurred shortly after its initial offering. The euro recently was trading at about 95 cents, far below its January 1999 starting level. Many have put the blame for the euro's weakness on the outflow of long-term capital.<sup>4</sup> Indeed, there are still many uncertainties when it comes to trying to reconcile the structural differences among the countries in the euro-zone. Countries entered the Union with over- or undervalued real exchange rates, different debt-to-GDP ratios, different rules concerning the hiring and firing of workers, and so on. Recent comments from the European Central Bank suggest that allowing Greece into the Union may exacerbate the euro's slide. Greece is the poorest country in the European Union, its per capita production is a third below the EU average, and its debt of 104 percent of GDP is substantially above the EU target of 60 percent. Many are concerned that the problem with the euro stems partly from not having adhered strictly to the standards originally proposed. For example, Italy was allowed to join, although it lacked several proposed EU standards for admission.

What needs to be done to reverse the capital flight? I am not the first to provide the answer: Significant structural reform. Namely, privatization, deregulation, and tax and pension reform.

With no constraints on capital flows, the euro, the dollar, or any other currency will migrate to earn its highest expected return. After all, there is worldwide competition for capital and labor. Institutions that restrict capital movement, or lower its return through excessive taxation, will not be able to compete with those countries whose policies help foster economic growth. And this is becoming more evident as the speed of information increases.

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<sup>4</sup> See, for example, Martin Wolf's April 25, 2000 article in the *Financial Times*.

This problem is not specific to the European Union. In Peru, the recent presidential challenger, Alejandro Toledo, established his platform on exactly these points. Privatization and restructuring of debt were his major priorities. He viewed establishing credibility with investors and encouraging long-term investment projects as crucial to ensuring economic growth.

Another example that illustrates the importance of appropriately structured institutions in fostering long-term growth is the trend toward dollarization in some developing countries. While it may be tempting for the monetary authority to tax money holders by expanding the money supply, as a long-run strategy this is usually counterproductive. An important role of fiat money is to increase standards of living by decreasing the costs of transactions. As inflation rises, actors in the economy will be less willing to accept the inflating currency as payment. Sometimes the actors will act on their own devices and find a substitute medium of exchange in times of acute inflation.

Lately, governments of some economies, attempting to establish credibility and attract capital, have discussed adopting the U.S. dollar as currency. This is a way to begin to build an infrastructure for an economy that is unable to maintain a constant purchasing power of its own fiat money. In a recent conference on this topic held at the Federal Reserve Bank of Cleveland, it was surprising how many contemporary international economists spoke about dollarization as an issue arising in countries characterized by an absence of strong institutions to protect property rights.

One final example of the role of institutions in providing an infrastructure conducive to fostering long-run growth, and one that I am intimately involved with, is openness regarding how decisions by the Fed are made with respect to monetary policy. My goal for monetary policy is neither new nor a secret. I have said many times that it is imperative that we maintain the purchasing power of the dollar. Not minute by minute, not necessarily at the frequency at which the FOMC meets, but over some longer time horizon, maybe three to five years. The rules I set out for institutions earlier apply equally well here. Predictability is an important component. If the rules are transparent enough, people know with some amount of certainty how the monetary authorities will respond. If they know that policymakers have a three- to five-year horizon, then seeing an uptick in price statistics in one quarter will not cause them to alter their behavior.

I would like it to become clearer that the Federal Reserve is focussed on one goal, the long-run stability of the purchasing power of the dollar. There should be no perception that the central bank is “antigrowth” as has often been portrayed in the media, or that it pursuing some sort of “countercyclical stabilization policy.” If an economy’s monetary unit is known to be a stable standard of value, then changes in money prices will accurately reflect changes in the relative values of goods and assets. This is the best that can be done. While the monetary authorities are focussed on this one intermediate goal, there is no sacrifice of output or employment. The notion of a social/political trade-off between prosperity and price stability is a mischievous myth. When monetary stability is certain, substantial resources are preserved since people do not have to solve a complicated signal extraction problem, trying to decide if the price changes they observe are relative or more general. Resources will not be wasted searching for and using near-money.

The monetary authority of any country has an important role in the ideal infrastructure envisioned by Hayek. Therefore, it is imperative that we understand, in a structural sense, how money fits into a dynamic, equilibrium economy.

## **Conclusion**

I began my remarks today with a simple premise—that the economic infrastructure plays a major role in determining economic prosperity. I attempted to show that infrastructure depends crucially on the culture of the institutions that are supported by the state. The best economic performance occurs where the state has fostered an infrastructure that functions as, in the words of Vaclav Klaus, the former prime minister of the Czech Republic, a “market economy without adjectives.”

Protections often taken for granted—patents, copyrights, and other intellectual property rights—are largely unknown or are ineffective in many places in the world today. Without such protections, incentives for creative talents to design and develop new products and services are substantially weakened.

Finally, let me say that while we are fortunate to be in the midst of what appears to be a new technological revolution, we should keep in sharp focus the environment that

encourages such great leaps forward. And it would be false hope for countries or regions without such an environment to think that adopting the new technologies will allow them to achieve the tremendous gains experienced by those with a more conducive infrastructure in place.