

# What is 'basic economic infrastructure'?

*Lyndon H. LaRouche, Jr. outlines the basics of the American System of political economy of Alexander Hamilton and Friedrich List.*

The term "basic economic infrastructure" signifies a group of improvements in land-areas which are typified by physical forms of capital investments in the usefulness of land for production and habitation.

Featured improvements of this type include improvements in the fecundity and fertility of soil, as this is expressed in growing of crops, in animal husbandry, and in forestry. They include large-scale systems of water-management, including desalination, water-purification generally, dams, canals, irrigation, and so on. The most prominently featured categories of physical infrastructural improvements are water management, transportation, power production and distribution, sanitation, and communications systems. Three types of services are also included as infrastructural improvements of land-areas: general education (including related forms of classical culture), science and technology (for households, agriculture, and industry), and health-care delivery systems as needed by both private medical professionals and their business and family-household clientele.

These improvements are measured in three terms: *per capita* (of the labor force), *per household*, and *per square kilometer of land-area used*. Typical measures include cubic meters of water, kilowatt-hours of power, and linear ton-kilometer-hours per square kilometer.

These improvements, called *basic economic infrastructure*, are traditionally the economic responsibility of government. Since the improvement of the land-area of an entire nation, or large regions of that nation, cannot be accomplished competently as the "happenstance" result of random initiatives by private entrepreneurs, government must either supply and maintain such infrastructure, or must regulate privately owned public utilities efficiently, according to the purpose of ensuring the required net result for the affected areas at large.

## **The role of government in infrastructure**

Today, unfortunately, there are many influential persons, who, like former British Prime Minister Margaret Thatcher, are thoroughly illiterate in economic science, and who, under the slogan of "privatization," have been increasingly successful in terminating governments' traditional role in this sector. Such illiterates are found in very high places even in the United States of America, where the successful model of modern in-

dustrial society was first established under our Federal Constitution. Therefore, in defining infrastructure for today's reader, we are obliged to stress the pitiable, but dangerous ignorance of economic history, and of U.S. history in particular, among Margaret Thatcher and kindred ideologues.

The rise of the United States to the rank of the world's leading economy was made possible through the principles of political economy presented by U.S. Treasury Secretary Alexander Hamilton in his famous three reports to the Congress of 1790-91.<sup>1</sup> Those reports defined what became known worldwide as "the American System of political-economy of Hamilton and Friedrich List."

This American System, like the American War for Independence (1776-83), was premised on the recognition that the 1776 proposals of British East India Company propagandist Adam Smith's *Wealth of Nations* were the deadly adversary of the American people. In fact, the creation of the constitutional federal union, over the interval 1787-89, was based upon the recognition that this republic could not survive under the loose confederation provided in the original Articles of Confederation. The pivotal economic issues of the new Federal Constitution, were two. First, the need to have a federal government capable of fostering the development of such essential elements of basic economic infrastructure as interstate highway systems, canals, bridges, and ports. Second, the need for a federal government empowered to regulate interstate as well as foreign commerce.

This lesson taught by the founding fathers of our republic had to be relearned after the painfully disastrous economic effects of the administrations of Presidents Thomas Jefferson and James Madison, both of whom were misled by British agent Albert Gallatin into devastatingly ruinous dabblings in the British doctrine of "free trade." That painful lesson had to be learned all over again, under the disastrous administrations of Presidents Andrew Jackson, Martin van Buren, James Polk, Franklin Pierce, and James Buchanan. Under "free trade," the economy of the United States was invariably wrecked; under the anti-free-trade policies of Hamilton and List, our republic always prospered.

It is fairly said, that the American System of political-economy (of Hamilton, List, et al.) has proven itself repeatedly the only durably successful mode of modern economy. That system has two legs: the development of basic economic

infrastructure, and the fostering of investment in high rates of progress in science and technology. Although the principal functions of agriculture, manufacturing, and commerce are left to private entrepreneurship, the climate required for the success of entrepreneurship is provided by the federal government's role in fostering both basic economic infrastructure and progress in science and technology.

### How much infrastructure do we need?

The population of modern Iraq is only a fraction of the population of the same region under the reign of the caliphate of Harun al-Rashid. The repeated cyclical collapses of the economy of Mesopotamia, from whose effects that region has yet to recover fully today, were caused by a practice of usury which had catastrophic effects upon the maintenance of indispensable water-management systems. In significant part, the wealth taken out of agriculture through the parasitical practice of usury was squeezed out of the portion of labor-cost required to maintain that basic economic infrastructure. This is similar to the process of net decline of the United States as a physical economy since approximately 1970. If we take into account the net deterioration in basic economic infrastructure since 1970, the U.S. physical economy has never had a genuine economic recovery since the period between the combined Chrysler and Penn Central collapse of 1970 and the dollar crisis of August 1971. To a large degree, this nation has been living upon its pre-1970 savings in infrastructure-development; that pot is nearing bottom. Clearly, there are levels of required investment in both maintenance and repair of basic economic infrastructure below which no sanely managed economy will drop.

What are those safe minimum levels of government investment in maintenance and improvement of basic economic infrastructure? How are those measurements to be made?

The indispensable role of irrigation systems, of barge canals, of ports, and of roadways is shown by the most ancient civilizations. Without these infrastructural improvements, the sustainable level of population of those civilizations would collapse—and did collapse, repeatedly—whenever the folly of neglecting the maintenance of those improvements was repeated. That is the general requirement of civilizations through and beyond the time of Charlemagne; western and central Europe's advantage over eastern Europe and vast tracts of Asia includes prominently the fact that western European economy has maintained and developed the infrastructure systems already specified by Charlemagne, about 1,200 years ago.

Yet, as modern European civilization emerged, about 550 years ago, around the great ecumenical Council of Florence, Italy, new kinds of infrastructural developments became necessary. Today, the very existence of modern civilization depends on a supply of clean water, per capita, per household, and per square kilometer, far beyond the requirements of medieval society, or even 18th-century Europe. Railways are

irreplaceable. Power requirements vastly exceed anything conceived during the 18th century.

The amount of infrastructure development we require, the percentile of the total labor-force required for this work, are variable. These amounts increase as technology advances, and as population densities increase. For this purpose, "measurement" implies an optimum expenditure, not too much of that which is desirable, nor too little. When future President Abraham Lincoln learned the rudiments of his government's economic miracles, the term used to describe the standard for defining this optimum was "economy of labor."<sup>2</sup>

To make labor more productive (per capita of labor-force, per household, and per square kilometer of land in use), requires that we satisfy an incurred increase in the average hourly physical cost per capita, represented by the productive employment of that labor. This is relative to the corresponding cost of less productive labor. "Economy of labor" presumes that when outputs (production) and costs are measured in the same physical units of per capita market-baskets, the gains in productivity (per capita) exceed the increased costs required to secure that gain.

Generally, it is convenient to effect these comparisons for periods corresponding to some relatively large fraction of the half-life of the capital investment involved in that productive employment. The "half-life" cycle of improvements in infrastructure are accounted in that calculation.

Although these considerations were understood by the founder of modern economic science, Gottfried Leibniz, and by American System economists such as Treasury Secretary Hamilton and Henry C. Carey, certain problems of making such a measurement first began to be understood in 1952, when this writer applied his earlier discoveries in physical economy to Bernhard Riemann's 1854 habilitation dissertation. It is only when the notions of technology, as defined by this writer, are correlated with the phenomena of "economy of labor," that a meaningful general theory of these relations is feasible. Only by applying the relativist conceptions first introduced by Riemann in that 1854 dissertation, can these notions be understood in terms relative to a mathematical physics.

Nonetheless, even without that refinement, the founding fathers of our constitutional republic had already grasped the general idea of such a set of relations among technological progress, increasing capital-intensity, rising energy-density, productive powers of labor, and infrastructural improvements.<sup>3</sup>

### Notes

1. *Report on Public Credit* (1790); *Report on a National Bank* (1790); and *Report on the Subject of Manufactures* (1791).

2. Cf. Henry C. Carey, *Principles of Social Science* (1859) (New York: Augustus M. Kelley, 1963).

3. See Hamilton, *Report on the Subject of Manufactures* (December, 1791), passim.