

India: overcoming the infrastructure bottleneck

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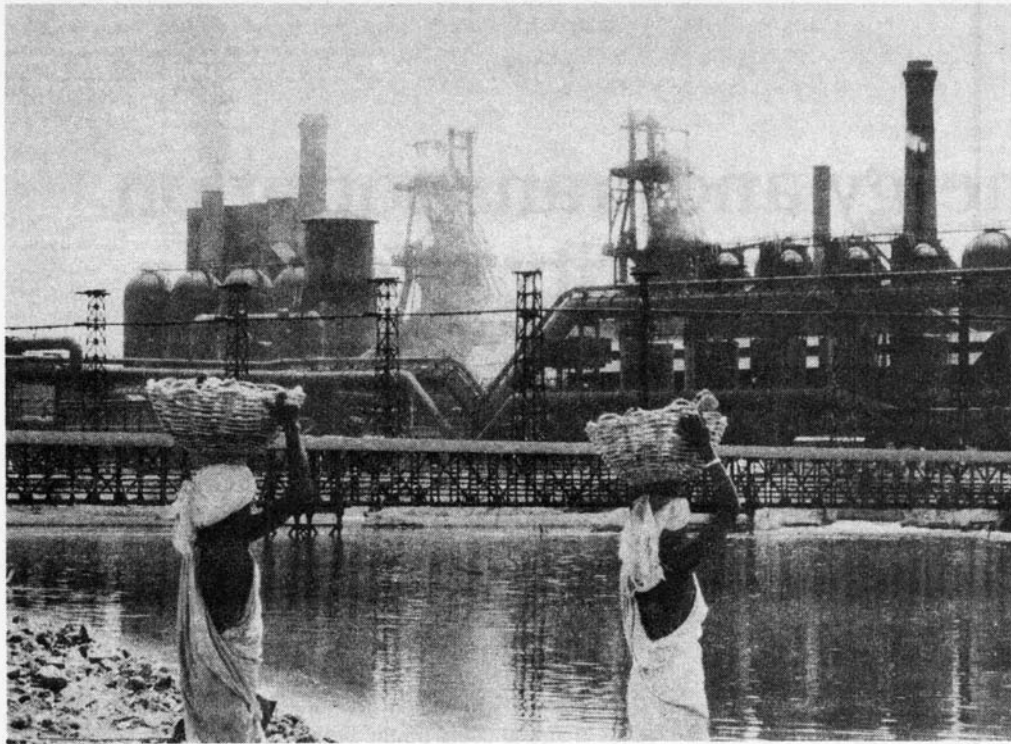
The absence of the most basic infrastructure in many areas of the world is a scandalous condemnation of international economic policy and practice.

In Africa today, famine and disease rage and millions are dying. Not only are national economies prostrate, but the rudimentary port and transportation capacity to handle the required level of emergency relief does not exist. In Asia, the tiny nation of Bangladesh has been devastated for the umpteenth time by a killer cyclone, only because the country's infrastructure is inadequate to protect the population from such regular natural occurrences.

There are many more areas of the world that remain essentially closed to positive economic development for lack of adequate infrastructure—communications, transportation, power, water management, and manpower development. Invariably, among the more advanced of the developing nations' economies, infrastructural bottlenecks, obsolescence, unevenness, and inadequacy of performance constitute the critical choke-point for more rapid economic growth. India is a case in point.

Even though infrastructure does not directly produce wealth, it is the crucial foundation of any economy. Modern and abundant infrastructural facilities have the unique effect of *producing productivity*. Infrastructure transforms technological advance into productivity gains for the economy, by ensuring optimal use of equipment and machinery. Its availability will largely determine how rapidly the transformation from agrarian backwardness to an industrial nation can be made. Contrary to the dogmas of the World Bank-International Monetary Fund (IMF), it is productivity which is the proper principal concern of any national leader or development planner. This was brought out at a conference on India's economy in New Delhi in April, sponsored by *Fusion Asia*. "If we concentrate on productivity, production will come automatically," Fusion Energy Foundation Research Director Uwe Parpart-Henke emphasized in a presentation abridged in the following pages; "but if we do not concentrate on productivity, production will stagnate."

The case of power is exemplary. Power plants are capital-intensive, particularly nuclear power plants, and it has been a consistent policy of the World Bank-



United Nations

After India gained independence, Prime Minister Nehru launched giant infrastructure development programs, like the Damodar River project shown here, which combined power generation with flood control, irrigation, and navigation. But since the 1960s, funds have dried up. Shown are electrical installations of the Indian Iron and Steel Company's plant at Burnpur, receiving power from the grid of the Damodar Valley Corporation in 1955.

IMF to oppose such investments in the developing countries. Yet, it is obvious that the most productive machinery requires electric power to run. With inadequate or unreliable power supplies, it is impossible to run a machine at full capacity—quite apart from the damage to machinery caused by sudden power outages and the like. The result is waste of investment capital, of resources, and of manpower.

Both oil- and diesel-fired machinery are expensive and dependent on finite resources. It is no accident that the most developed nations use the most modern and efficient machinery and have abundant supplies of electricity; it is no accident that per-capita electricity supplies in an economy correlate more or less directly with the standard of living.

The standard argument against high-technology and capital-intensive investments in infrastructure—besides the racist Malthusian allegation that these are not “appropriate” to developing nations populations—is one of alleged economy, namely that labor-intensive methods are cheaper and employ more people. In India, for example, many large hydroelectric projects, roadbuilding, and other infrastructural projects have been turned into giant employment schemes, where the premium is placed on *not* finishing the project. Cost and time overruns transform such projects into outrageously expensive propositions. Such a policy is suicidal.

Indeed, it is only through rises in productivity that the surplus—the economic “free energy”—is generated to allow the expansion and improvement in means of production and living standards. This recognition motivated former Prime Minister Indira Gandhi's productivity campaign, beginning in 1980, and is also reflected in the approach to the Seventh

Plan (1985-90). The Rajiv Gandhi administration is equally committed to the task. In this, the greatest obstacle is the country's vulnerable infrastructure.

Fortunately for India, the nation's first prime minister, Jawaharlal Nehru, a nation-builder with a scientific outlook, realized the importance of building a strong infrastructure. The first two Five Year Plans, executed under most difficult conditions, were devoted exclusively to infrastructural and basic industrial sector development. During this time, Nehru pushed through two major infrastructural projects—the giant dam at Bhakra Nangal and the Damodar Valley Projects. Bhakra, one of India's “Temples of Progress,” as Nehru called these large projects, opened up the dry lands of Punjab and Haryana for an agricultural revolution.

But these gains had to be fought for every inch of the way. Under conditions of drought and external aggression during the 1960s, the public investment Nehru insisted be steered into agriculture and infrastructure was cut dramatically. Infrastructure development lagged far behind the needs of a growing population, and as a result, productivity stagnated.

The result is seen clearly in the fact that India has not been able to achieve the agricultural productivity gains that will allow a marked shift in the labor force toward industry. In 1960, 75% of the population was engaged in agriculture; in 1980, it was still 71%.

The same danger now shadows the United States. With a three trillion dollar debt and a devolution of basic industries, the United States is facing an imminent collapse of its infrastructure.