By Robert Pollin

ECONOMIC PROSPECTS
Infrastructure Investments and the Obama Recovery Plan

THE UNITED STATES SYSTEM OF CIVILIAN PUBLIC INFRASTRUCTURE—WHICH ACCOUNTS for roughly one-half of all non-residential assets in the U.S. economy—has deteriorated badly over the past generation. The breaching of New Orleans' water levees in 2005 in the wake of Hurricane Katrina, and the collapse of the I-35W bridge in Minneapolis in 2007, offered tragic testimony to this long-acknowledged but still neglected reality. After all, the New Orleans levees were never built to withstand more than moderately strong hurricanes and were not constructed adequately to meet even that middling durability standard. The Minneapolis bridge was declared structurally deficient in 1990, but the problems were never fixed.

Amid this backdrop, President Obama has established public infrastructure investment as a central component of his two-year economic recovery program, now in its initial stages of implementation. Infrastructure spending over the next two years will account for $144 billion, or 19 percent, of the overall $775 billion program. One clear result emerging from the 2008 economic collapse is that private investors are not about to deliver an investment upsurge on their own. A major injection of public infrastructure investments is thus desperately needed to fight the recession and create millions of decent jobs within a year or two. Expanding public investments now provides a far stronger short-term stimulus than tax cuts for either households or businesses, which is another major component of the Obama recovery plan. With the tax cuts, a large share of the money will go toward purchasing imports, as well as saving or paying off debts as opposed to injecting new spending into the domestic economy. The public investments will also help far more than tax cuts to build the foundation for a more stable, safe, productive economy over the longer term.

But Obama's program also raises crucial challenges. We do badly need to repair and expand our system of roads and bridges, the largest single category of the country's physical infrastructure. But we also need to break our reliance on the automobile and fossil fuel energy sources, and make serious commitments to go green with all new infrastructure initiatives.

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This means, among other things, dramatically expanding support for public transportation and a renewable energy-based electrical grid system. We also need to weigh the benefits of infrastructure investments relative to other public spending needs, especially education and health care (though in part, health and education spending will also entail hospitals and school buildings).

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Finally, concerns have been justifiably raised about infrastructure investments favoring the construction industry, where employment has long been dominated by white males. We need to ensure that the job creation boost from the overall recovery program is fully shared by women, minorities, and workers across occupations. The construction trade unions can play a crucial role here in pushing both for good pay—thereby countering the long-term pattern of low wages in nonunion construction projects—and far greater opportunities within the trades for women and minorities.

LONG-TERM GROWTH ENGINE

TRADITIONAL INFRASTRUCTURE PROJECTS incorporate three broad groupings—transportation systems, energy transmission, and water management. These break down further to include, in addition to roads and bridges, airports, railroads, public transportation systems, drinking water, dams, electric grids, and pipelines moving oil and natural gas. Most of the country's infrastructure stock was created through public sector initiatives and remains publicly owned today. At the same time, the private sector has also played a major role in creating and maintaining the country's electrical utilities, railroad track systems, airports, and fossil fuel pipelines. The U.S. infrastructure system, in other words, has always been a joint venture of the public and private sectors, refuting the myth that private initiative alone is the wellspring of U.S. prosperity.

Both Democratic and Republican policymakers turned a blind eye over the past generation as our infrastructure crumbled. Recall that when Bill Clinton first ran for President in 1992, he set the rebuilding of the country's public infrastructure as a major priority in his "Putting People First" economic program. But even before taking office, Clinton's chief economic advisors Robert Rubin and Alan Greenspan, both speaking from the perspective of Wall Street, convinced him that reducing the government's fiscal deficit was more important than restoring the country's infrastructure. Clinton never followed through on his public investment agenda.

More generally, from 1950-1969, the real growth of traditional core infrastructure averaged 4.6 percent per year. Over this same period, overall GDP grew at a slightly lower 4.4 percent average rate. By contrast, from 1980-2007, core public infrastructure investments grew at only 2.3 percent per year—i.e. at half the 1950-1969 rate—while overall GDP growth in this period also slid, to 2.9 percent.

Was the high rate of public investment in the 1950-1969 period contributing to healthy overall economic growth in that period, or was it just a byproduct of the overall expansion?

Similarly, was the slowdown in public investment from the 1980s onward—to a rate below even the tepid GDP growth rate—a cause, or primarily just an effect, of the overall growth slowdown?

Public transportation, renewable energy sources, and a smart grid should increasingly become cornerstones of our economy.

Research on this question by my University of Massachusetts co-worker James Heintz does point clearly to a positive effect of public investment on GDP growth. In particular, Heintz found that sustained increases in public investment spending generate significant gains in overall productivity, which in turn brings faster GDP growth. Consider the situation for 2007, in which core public investment grew at 2.4 percent. If core public investment had instead grown by 3.4 percent—i.e. one percentage point higher than the actual 2007 rate but still more than a percentage point below the average rate over 1950-1969—this would have produced an additional $64 billion in GDP, a growth dividend of about $210 for every resident of the United States.

SHORT-TERM JOBS PROGRAM

INVESTMENT IN TRADITIONAL CORE PUBLIC investment projects is a strong engine of job creation. A combined package of spending on transportation, water, and energy transmission projects would generate, on average, about 17 jobs per $1 million in spending. Investments in public transportation—perhaps the single most important green infrastructure initiative—also have an especially strong employment impact, at 26 jobs per $1 million in spending. By contrast, the individual tax cuts that are part of Obama's recovery program will produce, at best, about 14 jobs per $1 million.

The major factor behind the disparity in job effects is that increasing household spending will bring relatively more imports—and thus jobs created abroad rather than in the U.S.—than infrastructure spending. But the actual job effects of the tax cuts are likely to be weaker still, since households will probably use some of their increased income for saving and paying off debts. By contrast, it is almost certain that government entities will spend all of the money they receive on public investment projects.

These differences become greatly magnified when placed in the context of Obama's overall $775 billion stimulus plan. For example, $72 billion per year ($144 billion over two years) in infrastructure spending will generate about 1.2 million jobs per year, while, at most, the same $72 billion in personal tax cuts will produce about 1 million—a difference of 200,000 jobs. But if we also allow, for example, that households use 25 percent of their tax breaks to save or pay off debts, then the job stimulus of the tax cuts falls to about 760,000. In this case, $72 billion in infrastructure spending will create about 460,00 more jobs than the same amount of money going to tax cuts.

RECOVERY FOR WHITE GUYS ONLY?

NEARLY 50 PERCENT OF THE NEW JOB CREATION generated by the public investment agenda will be in the construction industry, whereas employment within the construction industry accounts for only about 6 percent of total U.S. employment. At one level, this is a positive

development, since construction has been hit severely by the recession, with nearly 800,000 jobs having been lost since September 2006.

However, employment in construction has long been dominated by white males. The industry has a history of hiring discrimination against women and racial minorities and even now, nearly 60 percent of all construction jobs are held by white non-Hispanic males. Women who try to enter construction trades also face sexual harassment and work schedules that are not family-friendly. It will therefore be essential that the public investment agenda include strong measures to break down the full range of employment barriers in these trades. The construction unions could play a central role in fully opening their apprenticeship programs and breaking down discriminatory barriers throughout the industry, building on commitments some unions have been advancing now for decades.

But public infrastructure projects are also not the only way that we can deliver a strong short-term jobs stimulus with long-term productivity gains. Two other obvious spending targets that combine these features are health care and educational *services* (i.e. spending on teachers, administrators, student scholarships, hot lunch programs, and bus drivers, which would complement new school building construction projects). The employment impact of investing in health care is roughly equal to the average for public infrastructure—i.e. about 17 jobs per $1 million in spending. Educational services, at about 24 jobs per $1 million in spending, is about 40 percent higher, indeed, roughly equal to the job gains from public transportation investments. Jobs in education and health care are also divided much more evenly by gender and race than in construction (white non-Hispanic males make up only 15 percent of the overall workforce in health care and 22 percent in education). Finally, on average, wages in health care are somewhat higher than in construction, and are significantly higher in education.

Where does this leave us? The spectacular failures of the private economy have now, ironically, created an historic moment where we need not pit alternative, and similarly worthy, public investment projects against one another. We need now to both restore our traditional public infrastructure—so that levees don't burst and bridges don't collapse—and to transform it, so that public transportation, renewable energy sources, and a smart grid increasingly become cornerstones of our economy. These initiatives will also advance far more effectively in conjunction with equally strong commitments to health care and education. This combination can succeed both in fighting the recession today and in building a more productive, equitable, and green economy in the future.