

# The Debt Question

*For mature economies, public investment  
needs cannot justify large additional deficits.*

BY DANIEL GROS

Europe's fiscal rules were put in abeyance when the Covid-19 crisis started. Governments had to lock down the economy to slow down the spread of the virus. As a result, the economy tanked (in some countries briefly by more than 10 percent). Government revenues fell and expenditures rose to compensate enterprises and workers for the loss of income. The European economy is now recovering quickly, allowing governments to reduce their deficits. However, many argue that this is not a good time to return to austerity because Europe needs a large investment effort to underpin a green and digital economy.

The question is thus whether more public investment can constitute a case for even higher public debt. An answer requires a careful look at the numbers.

Over the lifetime of the euro, the member states of the euro area have accumulated public debt worth over €8,000 billion (despite the seemingly strict fiscal rules). Over the same time span, the total amount spent on public investment has been of a similar order of magnitude, €7,600 billion. One could thus argue that over 90 percent of the deficits incurred over the last twenty years were justified by public investment.

However, this would overlook one key aspect. Most of what is called public infrastructure investment (in official statistics it is called "gross fixed capital formation") represents in reality repairs and maintenance to offset wear and tear on the existing stock. Roads, railways, and bridges need constant repairs as could be seen tragically in Italy when a motorway bridge in the city of Genoa suddenly failed, causing considerable loss of life.

If one deducts maintenance from the overall expenditure, one arrives at what in national accounting is called "net fixed capital formation," that is, the addition to the stock of public capital. This is much smaller than (gross) public sector investment. For the euro area, one finds that about nine-tenths of all public investment consists of repairs and maintenance.

In rough numbers, this implies the following: if a country spends about 3 percent of GDP on gross public investment (roughly the past euro area average),

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*Daniel Gros is Director of the Centre for European Policy Studies.*

THE INTERNATIONAL  
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220 I Street, N.E., Suite 200  
Washington, D.C. 20002  
202-861-0791  
www.international-economy.com  
editor@international-economy.com

the increase in the capital stock, which is the part which might justify more public debt, would be equivalent to about 0.3 percent of GDP.

If one puts the increase in the public capital stock in relation to the increase in public debt in the euro area, one thus finds that only 12 percent of the total increase in public debt corresponds to new capital created by the government. If one were to use the numbers over the last decade, one would arrive at an even lower value, 4 percent. One finds similar proportions for the entire European Union. For the United States, the ratio between the addition of new public capital to new debt is a bit better, but the available evidence suggests that it is around 20 percent.

There are of course large differences across individual countries, in the part of the increase in public debt which could be justified by (net) investment. However, the values remain almost everywhere below 20 percent in Western Europe. The country where the increase in debt was least justified by an increase in the public capital stock is Germany. Only 2 percent of the (relatively) small increase in German public debt one can observe over the last twenty years finds its counterpart in an increase in the German public capital stock. It is thus not surprising that more than half of the motorway bridges in Germany need urgent repairs.

One must thus conclude that almost none of the debt accumulated in Europe over the last two decades has been used to finance a higher stock of public capital.

An immediate objection is that one should use a wider concept of the public capital stock. The economy needs not only “fixed” capital such as roads, but also “soft” capital. Education is mentioned often as an additional public expenditure which creates so-called human capital. But with near-stagnant population growth, the human capital of a nation can only increase if the average level of education of the young is higher when they start working than that of the elderly already in the labor force. This was very much the case a generation ago when mass higher education began.

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## 18th- and 19th-Century Development

**B**arry Eichengreen describes in his magisterial work *In Defense of Public Debt* how public investment financed by debt supported economic development in the eighteenth and nineteenth centuries. However, this is a case where the historical analogy might be misleading if uncritically applied to today’s mature economies.

The first canals, turnpikes, or railroads constructed during the early modernization period represented new and highly productive capital, creating opportunities for growth which justified the expenditure. Mature economies, however, already have a large capital stock in place. Most of what is called public investment is thus in reality maintenance.

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But today, the difference between the young and the elderly in terms of education is rather small, especially in the mature economies of northern and western Europe. This implies that most education expenditure also does not create new capital but is needed to maintain the existing one.

This argument applies of course particularly to countries with a shrinking labor force, such as Germany. An increasing effort to raise the level of education of the younger generation is needed just to keep the total human capital of the country constant given that the younger generations are so small.

Europe thus finds itself in the awkward position of having lots of public debt, but an insufficient public capital stock (and a stagnant stock of human capital). At this point arrives the *deus ex machina*, the Next Generation EU project to finance about €700 billion in reforms and investment through 2024. However, even this unprecedented effort is unlikely to change the fact that most public debt is accumulated to pay for transfers. First, not all of the NGEU funding will be for investments. A substantial part is destined to subsidies, for example, for electric vehicles. Second, not all of the NGEU funding destined for investment will represent additional investment expenditure. Some of it might finance spending that would have taken place anyway. All in all, a good guess is that about one-half of the NGEU funds will finance new public capital, or about €350 billion over the next four years.

If the past is any guide, public debt accumulation over the next four years will probably be in excess of €1,000 billion. The best one can hope for is thus a situation in which

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in the immediate post-pandemic years a fraction (about one-third?)—admittedly a substantial fraction—of debt accumulation finances new public sector capital.

A further caveat is that the value of public capital is usually measured by the amount spent. But large increases in public infrastructure spending do not always lead to productive investment, as one could observe in Japan. When Japan's growth rates began to decline in the early 1990s, governments massively increased public infrastructure spending to as much as 6 percent of GDP, about twice the level of other developed economies. The public sector capital stock increased by almost 50 percent (as measured by the amounts spent) over the decade, but growth rates continued to decline, with subsequent reports pointing out that much of the additional spending had financed the construction of bridges to nowhere.

The wider question behind this analysis is the general link between public debt and public investment. Barry Eichengreen describes in his magisterial work *In Defense of Public Debt* how public investment financed by debt supported economic development in the eighteenth and

nineteenth centuries. However, this is a case where the historical analogy might be misleading if uncritically applied to today's mature economies.

The first canals, turnpikes, or railroads constructed during the early modernization period represented new and highly productive capital, creating opportunities for growth which justified the expenditure. Mature economies, however, already have a large capital stock in place. Most of what is called public investment is thus in reality maintenance. This applies in particular to Europe with its shrinking working-age population.

One can make the case that the Maastricht fiscal rules should take into account public investment. But if one measures investment properly by looking at net investment, one finds most existing public debt finance to be 90 percent transfers, rather than new public capital. Post-Covid investment needs can only justify rather modest additions to the huge debt inherited from the past.

The general conclusion is simply that public investment needs cannot justify large additional deficits for mature economies. ◆