Reading 3
Assessing the Impact of Government on the Economy

I. How the Government Affects the Economy

The government affects the economy in three distinct ways.[1] **First**, by taxing and spending it alters the size and composition of goods and services produced in the economy. That is, it impacts productivity and the diversity of goods. Some types of goods would never be produced if the government did not step in and produce the goods. These are called public goods. *A pure public good is anything that once produced can be used by everyone.* You cannot exclude people from using it once it is produced. National defense is the classic example of a pure public good. Government also affects productivity by creating goods and services that enhance our ability to produce – goods like roads and national defense. **Second**, government provides alternative demand during times when there is inadequate private demand in the economy. A small amount of government spending may lead to even greater outpouring of private production and spending. This is called the spending multiplier. It is unknown how large the spending multiplier is, some say it is near zero, while other say it is closer to 2. If the multiplier is 2, then one dollar of government spending creates an additional dollar of private spending, so that two dollars of total spending over a long time are created from an initial one dollar of spending. **Third**, the government is responsible for maintaining a just society. Not only do people want more goods and services – a rich life requires that people enjoy justice and goodness. No private company can give them that. This introduces an important role for the government. People want justice and fairness. It is the job of government to deliver this. Unfortunately, there is nothing stopping government from simply helping some members of society at the expense of others. For example, there is nothing stopping government from giving a monopoly right to friends or relatives. Such nepotism is found in every country in the world – some worse than others. This leads to extractive institutions and not to inclusive institutions, in the sense of Acemoglu and Robinson.[2] Our government must be structured to encourage freedom to compete and produce. Democracy seems to be the best way to ensure this.

II. Public Investment

The typical way the first of the three channels above is discussed is to consider infrastructural spending. This is sometimes called public investment. Infrastructure refers to all the social capital produced that we use in everyday life. Infrastructure is a stock of social capital and additions to the stock is called infrastructural investment. Gross public investment includes new spending to replace the portion of social capital that wears out. This wearing out is known as depreciation.

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[1] There are additional ways in which government affects the economy. I am limiting myself to these three because they are the ones people usually discuss.

[2] See http://www.huffingtonpost.com/david-k-levine/why-nations-fail_b_2007916.html We will discuss Acemoglu and Robinson's book Why Nations Fail towards the end of this class.

Net infrastructural investment is the net additional to the stock of social capital. We can write this relation as

Net investment = gross investment – depreciation

It is important to realize that depreciation used above in the equation does not mean that the capital has become useless. Many roads and bridges have depreciated out over the years, but are still being used. Physical depreciation is quite different from accounting depreciation. We all know about the twenty-year-old car that our poor professor drives, which has depreciated out, but nevertheless still works fine as a means of transportation. Accounting depreciation is merely a means of costing out physical capital over time and does not explicitly relate to the wear and tear on the machine.[3] Government capital depreciates, as well, and must be replaced over time. Here is a long list of public infrastructure examples

> Bridges, roads, bicycle paths, sidewalks, airports and rail services, water supply, water treatment, water resource management, flood management and coastal restoration infrastructure, power grids, power stations, wind turbines and solar panels, basic communication and network services, institutions of government such as a parliament, courts and regulatory bodies that provide social, economic and environmental stability, critical institutions in areas such as education, culture, health, social services and finance, parks, beaches, gardens, historical sites, nature reserves and other public spaces.

There are many other examples beyond that listed above.

Figure 1 shows data from the OECD on public investment as a percentage of total fixed capital formation (TFCF). Germany is particularly low at roughly 10% of TFCF. The discussion on the Net about this goes as follows. Germany needs to reduce its current account surplus. One way is to reduce its fiscal deficit (which is already near balance). However, interest rates are low and saving is high. Thus, to many it makes sense that raising public investment is a better choice. Greater public investment would drive GDP growth higher and this would reduce the trade surplus by raising imports. Many have commented on how that Germany's roads, schools, and bridges are falling apart and need to be renovated.

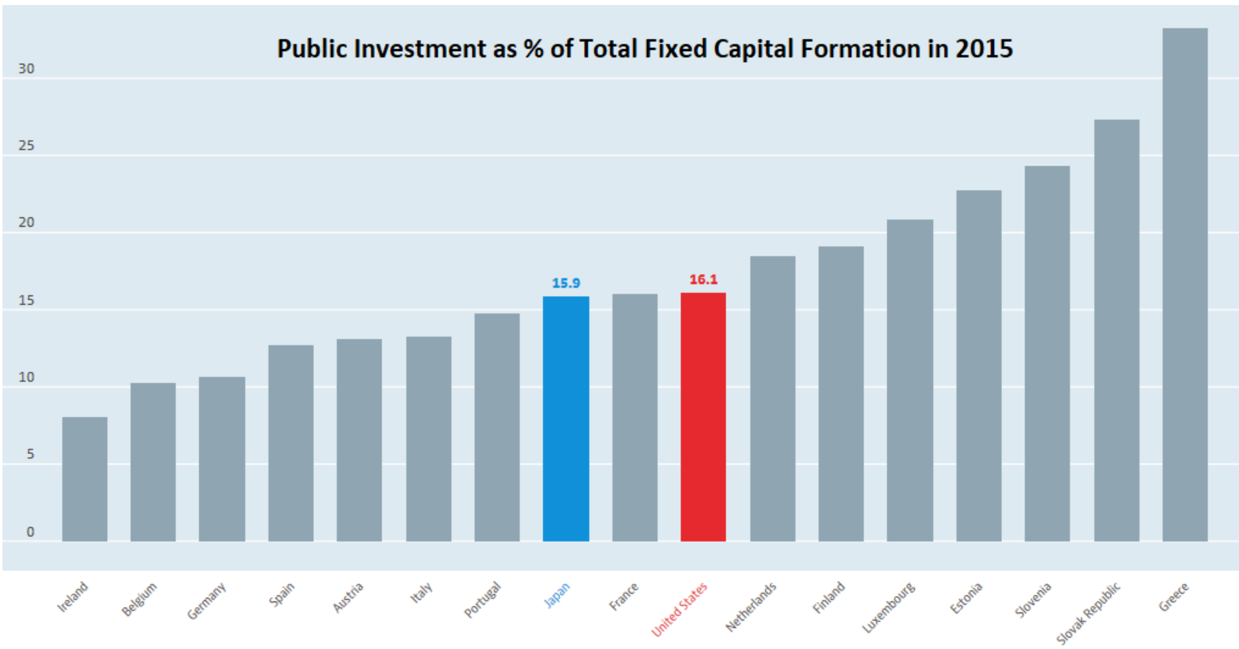
Ireland also shows a remarkable low in Figure 1. Part of this is due to the drop following the Great Recession. After 2010, annual infrastructural spending was 1/3 what it was prior to the recession. What is worse is that Ireland did not adopt sufficiently rigorous cost-benefit analysis in

[3] So, what is the difference between amortization and depreciation. Capital expenses are either amortized or depreciated depending upon the type of asset acquired through the expense. Tangible assets are depreciated over the useful life of the asset whereas intangible assets are amortized. An intangible asset is an asset that is not physical in nature. Corporate intellectual property, including items such as patents, trademarks, copyrights and business methodologies, are intangible assets, as are goodwill and brand recognition.

undertaking projects and therefore some of the big ticket items have proven to be of questionable worth.

Greece is also an interesting case study in how that private investment has deteriorated and

Figure 1



public investment has had to pick up the slack. This is a constant problem for the Greeks since such large public investments merely increase the debts they owe. Greece is precisely the opposite of Ireland since the Irish adopted austerity whereas the Greeks were opposed to austerity and sought stimulus instead. The US, Japan, and France remain close together at about 16% of TFCF.

Public investment may help long run growth potentials in some countries, but it can also be a fiscal weight, raising deficits and debts. In this era of low interest rates, many countries see this as a golden opportunity to borrow and spend with little cost. The obvious danger however is that a return to higher interest rates could drive the interest service part of government budgets to record and unsustainable levels. This is especially true of Japan where the debt is 230% of GDP.

III. Fiscal Stimulus and the Multiplier

Government affects the economy through its fiscal stimulus. That is, when the government taxes or borrows, it can use these resources to buy goods and services in the economy and therefore drive economic growth higher. That's stimulus. The basic formula for this is

$$\Delta GDP = (\text{multiplier})*(\Delta \text{ Government Spending})$$

The reason there is a multiplier is simple. If the government borrows people's saving and they buy goods with it, this purchase forms new income for the seller. The seller will save part of it and use the rest to buy things, this passes income on to the next seller who does the same, and so on. Over time, this new spending accumulates across hands to create new income and the amount can be much larger than the original government spending. Thus, government borrowing $100 and spending it can create a sequence of spending in the economy that maybe creates an additional $100 in income. Altogether you have $100 from the original government spending and $100 from the sequence of spending for a total of $200. In this case the multiplier is 2.

However, not everybody buys this simplistic approach to the multiplier. There are two caveats to be considered. First, what if raising government spending lowers private spending. This is certainly possible, and in some cases, it is almost certain. Thus, government spending of an extra $100 might force private spending down by $100. Hence, there is no multiplier at all. It is zero! As Milton Friedman pointed out, think of what is being multiplied – maybe it is zero. Second, it is possible that raising government spending drives the multiplier itself lower. For example, before the spending occurs the multiplier is thought to be 2, but when spending actually occurs, changes in interest rates, exchange rates, and various risks drive the multiplier to a much lower number, such as 1.2.[4] There is nothing in the equation above that prevents this.[5]

The topic of fiscal multipliers is very important in the on-going debate over stimulus versus austerity. Should we try to raise the economy by having government spend more and tax less. Or, should we try to eliminate debts and deficits by raising more revenue and having government spend less.

IV. Government and Justice

Government plays an important role in maintaining a fair and competitive marketplace. This is why that monopolies need not be nationalized. You only need to make them competitive by either opening the country to foreign trade or by breaking the company up into competitive parts. Antitrust regulation is a good way to deal with such problems. By contrast, nationalization is a radical policy that seldom works well. The English have had a constant back and forth over the issue of nationalization. Most of the UK's major strategic heavy industries and public utilities were nationalized between 1946 and the early 1950s, only to be returned to the private sector between 1979 and 1990. Here are the pros and cons of nationalization.

The advantages of nationalization

The main motive for nationalization during the post-war period was to ensure a coordinated approach to production and supply to ensure economic survival and efficiency in the face of war, and post-war reconstruction. For example, the advantage of a nationalized rail network, as with other natural monopolies, was that central planning could help create a more organized and

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[4] A good article taking a critical look at fiscal multiplier is by Barro.

[5] Greg Mankiw of Harvard sees tax multiplier as being large and spending multiplier as being much smaller.

coordinated service. This argument was applied widely to the so-called commanding heights of the economy.

It can also be argued that much infrastructure provides a considerable external benefit to individuals and firms. For example, a nationally and centrally funded and efficient rail network helps keep road traffic down and hence reduces pollution and congestion. It may also help reduce business costs, which may be passed on to other businesses.

Another advantage of national ownership is that economies of large scale can be gained that would not be available to smaller, privately owned enterprises. For example, a nationalized rail service could purchase materials, rail track, and rolling stock on a large scale, thereby reducing average costs and supplying more efficiently than smaller operators.

In more recent times, the failure of major banks has highlighted the fact that, under national ownership and control, failing banks can be funded more quickly and for larger amounts than under private ownership. This enables the banking infrastructure to be rebuilt, as well as ensure the closer regulation of banks in the future.

The disadvantages

By the late 1970s it became increasingly apparent that many of the industries nationalized between 1945 and 1951 were running into difficulties. The major problems that the industries faced were:

They were being managed ineffectively and inefficiently. The principal-agent problem is highly relevant to public sector activities given that the managers of the utilities were generally not required to meet any efficiency objectives set by the state. There was growing criticism that, because these industries were protected from competition, they had become increasingly ‘X’ inefficient.

Nationalized industries were also prone to suffer from moral hazard, which occurs whenever individuals or organizations are insured against the negative consequences of their own inefficient behavior. For example, if a particular nationalized industry made operating losses, the government would simply cover those loses with subsidies. Knowing that the taxpayer would come to the rescue meant that the inefficient behavior could continue. This is, perhaps, the most significant criticism of the recent 'bail out' of failing banks. Given that they know the taxpayer will bail them out this may be an encouragement to continue with their inefficient and highly risky lending activities.

In addition, the nationalized industries had limited scope to raise capital for long term investment and modernization because they would have to compete with other government spending departments, like education, health and defense. The result was a prolonged period of under-investment in these industries.

By the late 1970s, and throughout the 1980s, most UK's major state-owned industries were sold off to the private sector through privatization. The intention was that, back in the free market, these industries would become more efficient and would be able to modernize by having greater access to the capital markets, and by employing more modern and dynamic management. Privatization also generated huge revenues for the UK Treasury as well as allowing tax cuts and creating an environment where other supply-side reforms could be implemented.

Following the banking collapse of 2009, nationalization was put firmly back on the agenda, if only in terms of the financial system.

Questions:

#1. What are three broad ways that government affects the economy?

#2. How can the spending multiplier be zero?

#3. Why does a country need public investment?

#4. What are two ways to finance public investment? Which way is better?

#5. What is meant by the term "austerity versus stimulus"?

#6. What is meant by the term gross investment?

#7. What factors affect public investment that do NOT affect private investment?

#8. In fiscal policy, you can increase government spending or reduce taxes. How are these different?

#9. What are the benefits of nationalizing an industry?

#10. What are the shortcomings of nationalizing an industry?