

Øystein Olsen: Does Norway save too much?

Speech by Mr Øystein Olsen, Governor of Norges Bank (Central Bank of Norway), at the Peterson Institute for International Economics, Washington DC, 22 March 2018.

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Accompanying slides of the [speech](#).

INTRODUCTION

First, let me thank you for the opportunity to speak to you today. I am very happy to visit the Peterson Institute.

Norway is a small, open economy which was transformed by the discovery of oil on our continental shelf almost 50 years ago. Back in 1970, the year after the first discovery, income levels were relatively low compared with other western countries. That picture has changed completely.

Lower oil prices in recent years have reduced the relative income level somewhat, but measured by GDP per capita, Norway still ranks among the richest countries in the world.

Graph: GDP per capita

Natural resource discoveries have been identified as a curse for some countries. For Norway, it has been a blessing. We have managed to transform oil and gas resources into real and financial assets. Luck has been supplemented with what I dare claim is a sensible handling of the resources. At an early stage, it was concluded that the resources belong to the Norwegian people. Large savings in recent years means that also future generations will benefit from the revenues.

Graph: The petroleum fund mechanism

Direct government participation in the industry and an extraordinary tax rate for oil companies, currently at 78 percent, ensure that most of the resource rents flow into government coffers.

All the revenue is channelled to the Government Pension Fund Global. The fund's capital is invested abroad. The annual transfers from the fund to the fiscal budget are guided by the fiscal rule, which stipulates that on average over the cycle spending must be limited to the expected real return on the fund – currently estimated at 3 percent.

The general view in Norway is that the management of our natural resource wealth has been a success. The OECD and the IMF have commended the framework. Still, there is an ongoing debate on whether current spending is too high. Some argue that the planned consumption profile takes too little account of future obligations, in particular pension liabilities. Others claim that the estimates of the expected real return on the fund's capital are too optimistic.

Bergsten and Gagnon (2017)¹ and Gagnon (2018)² present a different view. They point to high current account surpluses over a number of years and argue that Norway instead spends too little. Hence my presentation's title – does Norway save too much?

I will proceed by giving a few general perspectives on global current account imbalances. I will then turn to the question of how much oil producers should save – and the reasons for high saving in Norway.

Graph: Outline

WHY A SURPLUS OR DEFICIT?

The international capital market allows countries to decouple the size of savings from investments. The ability to run current account surpluses and deficits at different times facilitates a globally efficient capital allocation. In addition, it may help absorb country-specific shocks. Deficits allow countries to finance productive investments. Surpluses can generate higher returns than those available on domestic investments. And the possibility to smooth consumption is generally a benefit.

Graph: Current account balance for Norway

Norway is a prime example. Our oil history started with the country running significant deficits, enabling large investments without the need to cut consumption correspondingly. Deficits peaked at close to 12 percent of GDP in the 1970s, when the first investments in the oil industry were made. Since then, we have mainly run surpluses, but our net international investment position turned positive as late as in the mid-1990s, a quarter of a century after production began on the Norwegian continental shelf.

Graph: Current account balances

Global current account imbalances have increased since the late 1990s, as can be seen in this graph. If deficits persist over time, the financing of the debt can be challenging. High capital mobility increases the vulnerability of high-debt countries. Unbalanced developments can undermine support for open trade and flexible markets, in turn also hurting surplus countries. In addition, both high deficits and significant surpluses may reflect policy and structural distortions that could hamper growth.

A current account deficit or surplus can thus from both an individual-country and global perspective be either desirable or excessive, driven by distorted policies. To judge a given situation, we must therefore consider the fundamentals behind the imbalance.

For producers of non-renewable resources, it is important to remember that although extraction of a depletable resource is counted as income in the national accounts, these revenues are of a special kind. It would in many ways be more meaningful to view them as transformation of wealth – from natural resources underground to financial assets abroad.

We would expect such producers to run substantial current account surpluses during the production period. As the graph illustrates, this has also been the case, in particular in the 2000s, when oil prices were high. In recent years these countries as a group have actually been in deficit, while Norway has had a small surplus, barely visible in the graph.

HOW MUCH SHOULD OIL PRODUCERS SAVE?

Exactly how much producers of non-renewable resources should save is a more complicated question. One potential yardstick is that savings should be sufficient to avoid the so-called “Dutch disease”. The phrase was originally coined to describe the strong decline of the manufacturing sector in the Netherlands following the exploitation of natural gas resources in the 1960s and 1970s.

The classic paper by Corden and Neary (1982)³ describes the key mechanisms behind this development. They describe two effects in an economy experiencing a boom in an extractive industry, like oil or natural gas.

The first effect is the *spending effect*. An oil discovery will increase export revenues, allowing higher imports over time. Normally, demand for non-tradable goods will also increase. The non-tradable goods sector will require more domestic resources.

Graph: Labour market in a three-sector model

As a result of higher labour demand from the non-tradable sector, the general wage level will increase, and the non-tradeable sector will expand at the expense of the two tradable sectors.

Graph: "Spending effect"

But this is only half of the story. The second part is the *resource movement effect*. Also the oil related-sector will demand more labour. As a result, wages will move up further, and the manufacturing sector will shrink even more.

Graph: "Resource movement effect"

This crowding-out of manufacturing is unavoidable if the benefits of the oil resources are to be enjoyed. But the process may go too far. The economy may find itself in a difficult situation when resources are exhausted. The structural changes in the economy have to be reversed. Workers who become unemployed must find new jobs in manufacturing. This could be quite challenging. It is at this stage you can really assess whether a resource economy has escaped the "Dutch disease" or not.

Gagnon (2018) argues that the necessary adjustment costs will be minimised if spending follows the permanent income principle, i.e. the expected real return of the resource wealth should be spent every year. On this background he claims that Norway has saved too much and that spending should rather have been based on a modified version of the permanent income principle.

REASONS FOR HIGH SAVING IN NORWAY

The Norwegian fiscal rule implies a more cautious spending path than the permanent income rule. The government spends the expected return on its current *financial* assets, which is significantly lower than total oil and gas wealth.

Graph: Oil and gas revenues and government spending

The fiscal rule implies that real spending will increase as long as production continues, i.e. until all oil and gas resources are transformed into financial wealth. As the economy grows, spending as a share of mainland GDP will nevertheless fall slowly. This is illustrated in the graph.

The graph also illustrates that we have been able to cut through the very large, but temporary income flows at the beginning of the present century. Since 2016, government spending has exceeded the net cash flow from the oil sector. This means that we are running a primary deficit and will continue to do so for the foreseeable future. Currently, the transfer from the fund equals 8 percent of mainland GDP.

Eventually, as delayed consumption increases accumulated returns, spending according to the fiscal rule will also surpass the current estimate of the permanent income. The real issue is thus a question of timing.

Has this spending profile been too conservative, and the increase in consumption delayed for too long, as Bergsten and Gagnon claim? My brief answer is no. My first argument is that the conclusion to spend the permanent income does not take into account the resource movement effects discussed above. But also intergenerational concerns, uncertainty and considerations about political processes may favour a more cautious spending rule. I will address these issues in turn in more detail in the following.

Graph: Arguments for higher saving

Resource movement

As described in the seminal paper by Corden and Neary, a resource economy is affected by strong structural changes also due to increased demand for labour and capital from the extraction industries. Eventually, demand from the oil-related sector will decline, and it will be necessary to reverse a downsizing of manufacturing. To avoid “Dutch disease” effects, spending should be well below the permanent income level during the extraction period.

Let me shed some light on the direct demand from the companies that operate on the Norwegian continental shelf.

Graph: The Norwegian Troll A platform and some other structures

Crude oil and natural gas are extracted from large depths below the sea level. In particular, capital expenditure is high. The platform “Troll A” provides a striking example. If most of it was not covered by water, it would dwarf some other, well-known structures. In the years prior to the recent oil price fall, oil companies invested about as much as all businesses in the mainland economy combined. Total oil-sector demand⁴ amounted to more than 13 percent of mainland GDP in 2014. This is well above current government spending of oil and gas revenues, and also more than the estimate of the permanent income.

Graph: Demand from the oil and gas sector and government spending of oil/gas revenues

It has been estimated that one in nine jobs in the Norwegian economy was related to oil sector demand in 2014.⁵ The step-wise development of oil and gas reserves in the North Sea has helped to create a supply industry that has become world leading in special areas.

The downturn following the oil price decline in 2014 has highlighted the oil-dependence of the Norwegian economy. As oil-sector demand plummeted, the blow to the economy was cushioned by a substantial increase in government spending. This room for manoeuvre in fiscal policy was provided by the significant savings in preceding years. Without it, the recent downturn could have become much more painful.

Intergenerational concerns

Graph: Old-age dependency ratio

Allow me to move on to another argument for relatively high saving: the intergenerational challenges facing the Norwegian economy. Like many other countries, we must cope with the challenges associated with an ageing population. As we have developed a more extensive welfare state than many other countries, the impact on public finances is significant. The pension system is basically pay-as-you-go and health care is also funded by the government. An ageing population will therefore weigh quite heavily on public finances.

In the 1990s and 2000s the demographic trend was different. During those years, the share of the population 67 years or older actually declined, mirroring low birth rates between the two world wars. Since around 2010 the long-term trend towards a higher old-age dependency ratio has resumed. Public pension costs have shot up as baby boomers have retired. The burden on the health and long-term care system is rather light at the moment. But this will change in the coming years.

With the alternative strategy of spending the permanent income, we would have spent more of the oil wealth in the 1990s and 2000s, when demographic costs for the government were low. The present fiscal rule, on the contrary, allows increased spending of oil revenue also in a period where age-related costs are expected to grow much faster.

Uncertainty

A third concern related to wealth management is uncertainty. Both oil price movements and the resource base are uncertain. Returns on foreign financial investments also fluctuate.

Graph: Oil price

In 2014, we were once again reminded that future oil prices are uncertain. Prices have roughly halved from the peaks reached in 2011 and 2012. Still, prices are much higher than they were in the 1990s. In 1998, the nominal price dropped to USD 10 per barrel. A decade later, oil was trading at more than USD 100 per barrel.

Graph: The current account and value added in oil and gas extraction

With oil prices closer to the historical average, current account surpluses have been reduced substantially in the past few years. In 2016, our surplus was less than 4 percent of GDP, including the return on the fund assets. Trade was roughly in balance. The oil price has rebounded somewhat recently, but is not expected to reach the levels we saw a few years ago. Thus, the high Norwegian current account surpluses may belong to the past. Given the uncertainties related to petroleum wealth, a spending rule more cautious than the permanent income rule seems to be a reasonable strategy.

Political feasibility

Allow me to round off this discussion with some reflections concerning practical policy. My point is that fiscal guidelines must be politically acceptable and understandable to the wider public. Simplicity and robustness are important concerns. Rules that are not adopted by policymakers carry little value.

The Norwegian fiscal rule was introduced in 2001, exactly 30 years after the first oil was extracted from the Norwegian continental shelf. This illustrates that it was not straightforward to arrive at a strategy for how our natural resource wealth was going to be spent.

The need to decouple current spending from current revenues was underscored early on, and potential mechanisms were discussed, but these concerns were not reflected in actual policy. In periods, all the oil and gas revenues and more were spent.

The fund mechanism was established in 1990, during Norway's deepest recession in the postwar period. At the time, it was not obvious that the fund would gain much value. The government ran budget deficits in the following years. A first deposit was made in 1996, reflecting a net fiscal surplus. From then on, the value of the fund started to increase quite rapidly. Higher oil revenues towards 2000 led to calls for higher spending. The fiscal rule was established in response to this development.

A fiscal rule based on the permanent income from petroleum wealth would require agreement on what this number should be. Since 2001 we have seen large revisions in the estimated permanent income, as oil prices and resource estimates have changed. The future development of the value of the fund is also uncertain, but at least the value of the fund at a given point and the actual return from year to year are observable.

It is also worth noting that the proposed rule enabled a smooth transition from the actual level of spending at the time. In comparison, a permanent income rule would have implied a very large increase in spending back in 2001.

In 2017 the estimated real return on the fund was revised downwards from 4 percent to 3 percent. This spurred no significant debate and was largely considered more of a technical matter. This serves to illustrate the broad political consensus regarding the fiscal framework. The

framework has served us well for 17 years, and seems set to continue to do so.

CONCLUSION

Graph: Conclusion

The Norwegian economy has benefited tremendously from the oil and gas resources. Public and private consumption have increased. Solid public finances have provided scope to make active use of fiscal policy to counter external economic shocks. The accumulated wealth in the fund is approaching three times mainland GDP, enabling a lasting annual income contribution to future welfare of 6-8 percent of mainland GDP in the coming decades.

The present guidelines allow temporary income flows to be transformed into permanent gains, benefiting all future generations. They are simple and robust. They take account of the effects on the rest of the economy and on the economic policy debate.

Norway's experience serves as an example of why temporary shocks in general, and more specifically discoveries of natural resources, justify deviations from a balanced current account. Deficits used to finance investments that generated high returns have served us well.

I guess there is no such thing in the real world as an "optimal spending rule". In the Norwegian case, there were definitely lessons to be learned during the first two-three decades of resource development. Still, over the years, and in particular with the present fiscal rule, I think we have struck a reasonable balance.

Thank you for your attention.

¹ Bergsten, C.F. and Gagnon, J. (2017): *Currency Conflict and Trade Policy. A New Strategy for the United States*, Peterson Institute for International Economics

² Gagnon, J. (2018): [Can a Country Save Too Much? The Case of Norway](#), Policy Brief 18–7, Peterson Institute for International Economics

³ Corden and Neary (1982): [Booming Sector and De-Industrialisation in a Small Open Economy](#). *The Economic Journal* (92), pp. 825–848.

⁴ This is measured as the sum of labour costs, intermediate consumption and fixed capital investment.

⁵ Also including jobs related to exports from the oil-service industry, see Nordbø and Stensland (2015): "[The petroleum sector and the Norwegian economy](#)", Norges Bank *Economic Commentaries* 4/15.