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Where do we go from here? Principles for the 2020s economy

A playbook

The Western European economies are suffering their deepest recessions in decades. Even so there is potential for a strong recovery should the virus be contained and the right policies taken at national and European levels.

Thus far the correct approach has been taken. Wage subsidy and furlough schemes will help preserve productive capacity while income supports will help preserve demand. Governments and central banks have expressed willingness to do whatever it takes to rescue their economies. Looking ahead, governments will need to act as the liquidity and income source of last resort until such time as the economy can fully reopen and then reassume these responsibilities if and when there is a second lockdown.

While the economic context is highly unusual the broad principles of good economic management remain in place. This NERI long-read looks beyond the current crisis to discuss some of the principles that should guide economic policy into the 2020s, whether in the Republic of Ireland, Northern Ireland, or further afield.

Why should we look to economics? One answer is it can help us evaluate the merits of various strategies for sustainably improving living standards and quality-of-life. Remarkably, the standard of material wellbeing for most people living in developed economies

today is superior in almost every respect to the living standards of even the wealthiest people just one hundred years ago. A simple consideration of developments in health, nutrition, education, communication, transport and entertainment bears out this claim. Why did this happen and can it be sustained?

The enormous variation in cross-country living standards reflects long-term differences in economic growth and development. Indeed, one of the fundamental assumptions of mainstream economic analysis is that growth is central to improving living standards. Of course, there are some pretty major caveats to this claim.

Not all forms of growth are desirable

Take an economic system that generates highly unequal growth. Such a system won't necessarily benefit much of society. It will also be inefficient at reducing poverty, will gradually erode social capital and trust, and is likely to prove politically unstable over the long-run.

Other forms of economic growth are also undesirable. Growth that comes from environmentally damaging practices will entail costs for current and future generations. These costs are rarely if ever captured in growth statistics and they may well outweigh the economic benefits. This is particularly so when we factor in long-term consequences.

There are many additional examples of undesirable growth such as using tax cuts to temporarily accelerate growth at a time when the economy is already performing strongly. A notable recent case was the Irish property boom of the mid-2000s which ultimately brought about a damaging economic crash and massive job losses.

So, what should be our primary economic goal? I propose that we should strive for 'sustainable' and 'inclusive' improvements in living standards for everybody. If this is considered reasonable we next must consider the policies that might achieve this goal. What should our playbook look like? Let's break down that playbook into three parts, namely, growth in the economy's productive capacity, closer economic equality and long-run sustainability.

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Let us start with the economy's productive capacity and the related concepts of economic growth, potential output, and economic development. Growth in productive capacity [can come from a number of different sources](#). One such source is the raw accumulation and deployment of inputs such as people, land, materials, infrastructure, machinery, and other capital goods. Demographic and resource limitations mean that this type of 'extensive' growth is constrained in the long-run.

Growth can also come from productivity gains. This is known as 'intensive' growth and is the only form of growth compatible with environmental sustainability. Productivity gains could arise from new knowledge embodied as technological change and innovation, from scale economies, or simply from more efficient use of resources.

Crucially, productivity-based growth allows us to obtain higher levels of output from the same volume of inputs or the same level of output using less inputs. In other words, productivity-based growth does not rely on an ever-increasing use of resources and is potentially unconstrained in the long-run. Paul Krugman [makes the point](#) that, "*Productivity isn't everything, but in the long-run it is almost everything.*"

The only sustainable long-run growth is growth based on the production, diffusion and application of new knowledge and ideas

Ultimately, the determinant of average living standards is output per worker for a given effort – productivity – and an economy can only grow ad infinitum if it is able to generate productivity gains year-on-year.

Learning, new knowledge, and the economic application of that knowledge are the ultimate sources of sustainable growth. "*Knowledge...is power*" to quote Francis Bacon's [Famous dictum](#), while Joel Mokyr [describes](#) the generation

and application of new knowledge or new ideas as the “*wellspring or lever of riches that propels economies forward*”.

What do we mean by a new idea? In economics, a new idea is simply a ‘new instruction or set of instructions’ for transforming inputs into outputs, or more evocatively, for transforming nature to better suit human needs.

Economics also has the related concept of innovations. Innovation is a catch-all-term for new ideas, or combinations of existing ideas, that manifest as a new product or service, a new production process, a new market, a new source of supply, or even a new organisation.

New knowledge is the key to unlocking economic growth

Unfortunately the economic [characteristics of knowledge](#) mean that the private market will, if left to its own devices, invest less than the socially optimal amount in knowledge generating and knowledge diffusing activities. Why is this?

The private incentive to undertake such activity is lessened by the fundamental uncertainty of production combined with the inability of private knowledge producers to internalise all of the benefits of their research and development (R&D) and other knowledge investments.

This leads to systemic underproduction. It is also a clear rationale for activist innovation policies, while leaving open the question of what precisely those policies should be.

The quality and scale of the resources we put into generating innovation will heavily influence the economy’s potential to sustainably grow.

The classic image is of people in white coats working in a lab and developing new types of widget. Yet this is a narrow and misleading way to think about innovation. Innovation does not come about as a linear input-output process. It is not a normal good and we cannot reliably produce it in the same way as other goods.

It is also misleading to think of innovation as being solely about the invention of new cutting-edge technologies. Instead, we should think of innovation as something that happens dynamically in a complex economic system in both low-tech and high-tech ways.

What is an economic system? We can think of it as a multitude of interacting individuals and organisations, each with their own abilities and incentives and operating under their own set of evolving rules and constraints.

The specific economic system relevant to the production and diffusion of innovation is the innovation system.

An economy's innovative capacity refers to the ability to generate original ideas and to communicate and assimilate existing innovations. This capacity is a function of types and levels of education and skills, of networks, of the cost of accessing knowledge, of R&D policies, and of the quality of capital markets, among other things. All of the above form part of the innovation ecosystem.

Technology diffusion is the driver of most productivity improvements

The economy's innovative capacity is a key driver of its long-run productive capacity. In practice, the driver of most productivity improvements will be the spread or diffusion of technology to a new individual, organisation or context. In this sense, technology diffusion is a much more significant driver of growth than new-to-the-world inventions.

Fundamental to the diffusion process is communication. This means that the linkages and 'knowledge flows' between individuals and organisations are crucial to the innovation process. In turn, this suggests that governments should find ways to support collaboration between economic actors, support dissemination of information, and support the creation and enhancement of knowledge flows within the system.

The government will always be the most significant actor within the

innovation system. Most obviously, governments have the power to set the legislative and regulatory rules of the game. Governments can also provide fiscal and other incentives for markets and other actors to engage in innovation activities.

In this way, governments can counteract the structural market failures leading to the slow diffusion and underproduction of knowledge and innovation. Governments themselves provide much of the inputs to innovation in the form of spending on science and education, on R&D, and on knowledge infrastructure.

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There are a number of policy levers we can use to enhance the economy's innovative and productive capacity. One way is to invest in **education** and in upskilling or re-skilling (human capital). A second way is to invest in machinery, equipment and **infrastructure** (physical capital), while a third option is to invest in the production and diffusion of new ideas, for example through **public R&D**.

Human capital development, which is a life-long process, not only enhances labour productivity but is also a necessary input for and complement to innovation and technology adoption. Spending on education generates positive externalities to the extent that it represents genuine investment in human capital.

Strong education systems are empirically associated with increases in the long-run rate of per capita growth. The [OECD contends](#) that half of the growth achieved by OECD countries in the second half of the 20th century was driven by progress in education.

Strong education systems are associated with faster long-run growth

[Other research](#) finds that skill levels for the population as a whole, as well as for the top of the achievement distribution, exert positive and independent effects on growth. Thus, while it is important to have large numbers of scientists and engineers, it is also important to have a well-educated population in aggregate.

In addition, population-wide improvements in human capital enable more inclusive growth and less economy-wide inequality. Crucially, [the earlier the investment in human capital the larger the returns](#).

The early years are the most important for development, and external factors, like poverty, can have extremely damaging and lasting effects on human capital. Increasing the skills and learning ability of disadvantaged children may provide the largest potential dividend to society, both in terms of economic growth and lower inequality.

Increasing the skills and learning ability of disadvantaged children may provide the largest potential dividend to society

It is a concern therefore that on a per pupil basis both the Republic of Ireland and Northern Ireland substantially under-invest in education relative to other high-income European countries. The under-spend in the Republic is particularly pronounced at primary and especially tertiary level (higher education), whereas in Northern Ireland the under-spend is most pronounced at primary and especially secondary level.

Any budgetary savings are likely to be a false economy in the long-run. The [NERI estimates](#) that increasing per pupil spending to the average of high-income Western Europe would cost in the order of €3 billion in real terms in the Republic, and €16 billion on a UK-wide basis.

It is also a concern that both countries chronically and significantly under-spend on public R&D. NERI estimates show that the UK had the lowest per capita public R&D spend of any high-income Western European country in 2017 and then again in 2018. The Republic of Ireland was second lowest in both years.

The relative spending gaps were €12.8 billion and €900 billion respectively in 2018. Such under-spends can only hinder the development of a stronger innovative capacity and is another false economy.

Productivity gains also stem from investments in physical capital such as machinery, equipment and infrastructure. Machinery and equipment represent embodied knowledge that either improves the efficiency of transforming inputs into outputs or enables the production of new types of outputs.

Efficient investment in infrastructure is strongly related to long-run increases in the economy's productive capacity. A [meta-analysis of 68 studies](#) concluded that public capital investment has positive long-run effects on output while the [IMF point to](#) short term increases in output from demand effects and long-term increases arising from supply effects.

The net benefits to investment are particularly high during recessions

The net benefits to such investment are particularly high during recessions, where the cost of borrowing is low, and where central bank interest rates are close to zero. All of these factors are in place for both of the economies on the island of Ireland. This points to a fairly compelling case for an investment-based stimulus to rebuild the economy in the wake of the Covid-19 induced recession.

Certain types of investment contribute to knowledge-based growth and innovative capacity and are therefore particularly beneficial in the long-run. Examples include school buildings, broadband infrastructure and research institutions such as universities.

Private investment is also crucial to long-run growth. Tax expenditures or tax breaks that incentivise R&D or environmental protection can potentially reduce private market underinvestment in those areas. However, in most cases it is generally unwise to fuel the market via tax breaks as this will lead to

a misallocation of capital. Investment decisions can become predicated on tax considerations rather than underlying economic considerations.

The resulting market distortion will damage growth in the long-run. The Republic's 2008 housing bubble and subsequent crash starkly illustrates the potential risk. Overall, most interventions in the form of tax breaks will lead to inefficiency and deadweight losses.

Governments should instead ensure that potential investors have adequate access to finance at a reasonable cost via well-functioning and competitive capital markets and that barriers to investment are low. Where capital markets are not well-functioning there will be a strong case for a state investment bank to provide patient long-term finance to support innovative effort and technology diffusion.

Changes in productivity arise not just from changes in technology but also from changes in policies and institutions. Changing the rules of the economic game can promote innovation.

For example, a lack of competition will lead to inefficiencies in the absence of robust regulatory measures. In addition to regulation, policies that can reduce barriers to firm exit and entry, or that break-up monopolies, can improve productivity performance.

Independent regulation is particularly important in the case of natural monopolies, but also in the case of professional bodies to ensure there are no non-essential barriers to entry or inflated costs. Tax reform is another lever available to governments. For example, inheritance tax exemptions for business assets may prolong the existence of poorly managed family-owned firms.

Childcare costs are a major barrier to employment, especially for second earners and lone parents

Finally, increasing output is not just about labour productivity. Output also depends on employment levels and on the average number of hours worked.

Sustainable increases in the employment rate will shift output upwards.

For example, the policies pursued during the Covid-19 lockdown to protect jobs in viable firms represent potentially good value despite the risk of deadweight. This is because it is much easier to protect jobs than it is to create them in the first place.

Similarly, countercyclical fiscal policies help preserve existing skills and prevent deterioration in the quality of human capital and the wasteful idleness of depreciating physical capital.

One way to structurally increase total hours worked is to remove barriers to labour market entry. The cost of childcare is a particularly significant barrier as Ireland and the UK have amongst the highest [childcare costs](#) in the world relative to average wages. These costs are a major barrier to labour force entry especially for second earners and lone parents.

The high cost of childcare disproportionately acts as a barrier to female participation in the workforce. Accessible and affordable childcare would increase the effective size and quality of the available workforce while retaining human capital within the workforce.

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Lower levels of economic inequality are associated with a range of quality of life and well-being benefits across the economy and society. These benefits range from improved social cohesion, life expectancy and happiness, to lower levels of crime and stress.

The [IMF](#) also note that excessive inequality can lead to slower and more [fragile](#) growth. Closer economic equality can be achieved through a number of different channels.

Lower inequality is associated with a range of quality of life and well-being benefits

Firstly, policies to increase the labour share of GDP will generally improve distributional equity. This is because wealth tends to be more unequally distributed in the population than income. [Thomas Piketty estimates](#) 25% of total wealth in France, 30% of total wealth in the UK and 32% of wealth in the US were held by just 1% of the population in 2012.

The high concentration of net wealth means that capital income disproportionately accrues to a small percentage of the population. This means that increasing the labour share of income at the expense of capital will generate a more even distribution of income across the population. Wage floors and measures to strengthen the bargaining power of labour are two ways to influence the labour share to the benefit of workers.

Research from [the IMF finds](#) that less prevalent trade unions and collective bargaining are associated with higher market inequality, while [Joe Dromey used](#) OECD data to show that higher levels of collective bargaining are associated with lower inequality for OECD member states.

As it happens, the decline in trade union density and a hostile policy environment in most OECD countries since the 1970s has shifted power from labour to capital and led to falling labour shares. The larger declines in the labour share have tended to occur in those countries with higher falls in union density and collective bargaining coverage. The decline in union density in the UK [is estimated](#) to be responsible for a 4.4 percentage point decline in the labour share.

The policy implication is that measures to strengthen collective bargaining coverage should reduce market inequality over time.

Strengthening collective bargaining coverage would help reduce market inequality over time

Secondly, we can use fiscal policy to ameliorate inequality while minimising potential trade-offs between efficiency and equity. For example, taxes on property, wealth and passive income are generally progressive, in the sense that the tax falls on wealthier households, as well as being growth friendly relative to higher public spending or other forms of taxation.

In addition, we can increase the tax-take from higher income households in a way that is growth friendly by minimising the use of tax expenditures. While an individual tax may have a negative impact on growth when considered in a vacuum, it is important to assess these economic costs against the economic benefits arising from the revenue generated.

For example, the long-run economic value of increased spending on education or infrastructure may well outweigh the economic cost of a tax increase. Huge shifts in tax rates in the US since 1870 have been accompanied by [no observable shift](#) in growth rates but do appear to impact on inequality.

Finally, we can also reduce the severity of market inequalities via social transfers or via measures to de-commodify essential goods and services through the provision of [universal basic services](#) or UBS.

Universal basic services entail the provision of free or extremely low-cost public services available to all on the basis of need and sufficiency and funded by taxation. Essential needs include health, education, housing, transport, childcare and adult social care.

Universal service provision amounts to a virtual income or ‘social wage’ and is preferable to cash transfers in many instances. [Anna Coote and Andrew Percy](#) show that UBS offers benefits that range across four dimensions: greater equality, efficiency of outputs, solidarity and environmental sustainability.

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Economic growth is of mere temporary value if it is unsustainable. Sustainable in this sense can mean a number of different things.

Procyclical fiscal policy is the classic example of misguided and unsustainable growth policy. For example, using tax policy to temporarily accelerate growth at a time when the economy is growing, or to privilege certain groups, will merely amplify the economic cycle, distort economic activity and weaken the economy in the long-run.

In addition, the current environmentally damaging economic model is unsustainable on a finite and fragile planet. Future industrial strategy and growth policy will need to focus on the just transition to a decarbonised economy.

Growth is of mere temporary value if it is unsustainable

In particular, my NERI colleagues have [highlighted](#) the need for investment in clean and renewable energy production, in retrofitting buildings, and in public transport. In addition, investment in high-speed broadband would facilitate carbon reductions through home working and could help preserve regional jobs.

Yet a new growth model may be politically unsustainable if it leaves behind certain groups and regions. For example, the move to an ecologically sustainable economy will require a just transition for the workers and communities most affected. Entire sectors ranging from agriculture to transport will be affected by this transition and if these regions and households are not compensated for their losses then there is a risk that the reforms will be rolled back.

Finally, growth based on persistent large gaps between public spending and revenue raising is financially unsustainable over the longer-term. The NERI have consistently pointed out that the Republic of Ireland and the UK are

relatively low revenue and low spending states in relation to comparable Western European countries. The low levels of revenue raising act as constraints on public spending.

Meeting our social and economic goals will require reforms to the revenue base and in particular reforms to the social insurance system in both jurisdictions. Increasing employer social insurance contributions to the Western European average would indirectly enable us to address spending gaps in key areas for long-run sustainability such as education, R&D, childcare, and capital investment.

Meeting our social and economic goals will require reforms to the revenue base

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AS we move past the support and stimulus stages of the response to Covid-19 we will have to make difficult choices about what to prioritise. My view is that economic policy should focus on the triple bottom line of growth, equity and sustainability.

In terms of fiscal policy, and in order to support sustainable growth, the emphasis post 2021 should be on green infrastructure, on significant increases to public R&D and education spending, on public transport, and on expansion of subsidised childcare.

Increased funding for universal basic services, especially housing and healthcare, alongside sufficient levels of social transfers will help ensure that the economic recovery and future development is more inclusive. This applies to both to the Republic of Ireland and to the UK.

On the other hand, there is little merit in further narrowing the revenue basis over the medium-term. Rather, there is a strong case for increasing revenue from taxes on wealth, on property, on passive income and on employer social

insurance.

Sustainable and inclusive development will only happen if we make the right choices.