Measuring Progress: The Sustainable Progress Index 2019

2019

This report is written by:
Prof. Charles M.A. Clark, St. John's University, New York
Dr. Catherine Kavanagh, University College Cork

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SOCIAL
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working to build a just society

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Social Justice Ireland
Arena House
Arena Road
Sandyford
Dublin D18 V8P6
Ireland

www.socialjustice.ie

Tel: 01- 2130724

e-mail: secretary@socialjustice.ie

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Introduction

A decade after the financial crisis of 2008 and subsequent Great Recession, the Irish economy is approaching the pre-crisis level of 5% unemployment, which some regard as the full employment level.[1] In the third quarter of 2018, the number of people employed reached 2.27 million, almost equivalent to the peak reached in 2007. Having a paid job is how most adults receive an income so that they can meet their material needs. The recent boost to employment raises several interesting questions. Are we witnessing a return to the pre-crisis period? Or is Ireland one shock away from another depression and high unemployment? Is full employment enough to allow all Irish citizens to participate in the economy and society? Is full employment sufficient for a just and fair society, or is it necessary but not sufficient? And if it is necessary, is it also possible to have full employment as the norm, and not the exception to the norm? Since 1983, Ireland has had full employment (5% or less) approx. only 22% of that time period. When Ireland was last at full employment, the 'at risk of poverty rate' was over 14%. Should an individual's ability to live a decent life be determined by such changeable variables?

Economic growth is the primary way a society promotes high employment levels. Growth is also the primary determinant of a country's standard of living. It can provide the revenue which can be used to achieve other goals. Economists will argue that any challenge - from poverty, inequality and crime to climate change and international tensions – is caused in the main by lack of economic growth. And more growth is the solution. In the economists' world, almost every challenge is a nail, and economic growth is the hammer. Yet many rich countries still have high poverty rates, homelessness, inadequate housing, and communities where economic and

[1] There is no official definition of full employment. At one end of the spectrum is the Keynesian view that full employment is when job openings equal or exceed the number of people looking for a job (no cyclical unemployment). At the other end of the spectrum are proponents of the concept of the 'natural rate' of unemployment - the rate at which any reduction in unemployment will cause inflation. It is worth noting that there is no evidence to support that there is a natural rate – a point that even Milton Friedman acknowledged. We use the general 'rule of thumb' of a 5% unemployment rate corresponding to full employment.

social well-being mirror that of the developing world. There are many problems that higher GDP per capita does not appear to solve.

It is interesting to note that Harvard economist, Benjamin M. Friedman, has made a moral case for economic growth. While noting the material benefits of economic growth, Friedman suggests the urgency of these benefits eventually declines as a country reaches a certain minimum standard of living:

> "[t]he tangible improvements in the basics of life that make economic growth so important whenever living standards are low- greater life expectancy, fewer diseases, less infant mortality and malnutrition- have mostly played out long before a country's per capita income reaches the levels enjoyed in today's advanced industrialized economies. Americans are no healthier than Koreans or Portuguese, for example, and we live no longer, despite an average income more than twice what they have" (Friedman, 2005, p. 3).

Once a country has reached a certain level of income where it can afford to provide the basic needs for all, it is no longer a question of 'can we give all citizens adequate food, clothing and healthcare' but rather 'do we have the political will to provide a decent standard of living for all'. Friedman argues that economic growth is necessary for the conditions which will allow that political will: "[e]conomic growth - meaning a rising standard of living for the clear majority of citizens - more often than not fosters greater opportunity, tolerance of diversity, social mobility, commitment to fairness, and dedication to democracy" (Ibid., p. 4). However, the Irish experience with a high GDP per capita and high growth rates has not resulted in the level of social protection and social supports that builds an inclusive society.

In earlier reports (Clark and Kavanagh, 1996; 2015; and 2017), we explored some of the problems with the way economic activity, and economic growth, are measured. Although our arguments were mostly outside of the mainstream of economic discourse in 1996, it is now widely accepted that there are problems with measuring activity (SDSN, OECD, World Bank, EU, UN). For example, even the manual that countries use to develop their national accounting systems - the United Nations' *System of National Accounts* update for 2008 - includes a list of reasons why Gross Domestic Product (GDP) is an inadequate measure of social well-being (see Clark, Kavanagh and Lenihan, 2018a, p. 11-12)[2]. The emphasis in this report is different - we focus more on economic growth as a model of development rather than how it is measured.

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[2] See also: Reynolds, B. and S. Healy, (eds) (2009) Beyond GDP: What is prosperity and how should it be measured?. Dublin: Social Justice Ireland.

While affluence affords the resources to address social, environmental and political concerns, the evidence suggests that it is not enough. Some of the measures used to pursue economic growth (policies and values) are often barriers to social progress and environmental sustainability. Increasingly, policy analysts and international agencies are promoting a more direct approach to address these issues rather than pursuing the old strategy of economic growth with the hope that the benefits will trickle down to eradicate poverty, protect the environment and promote social exclusion. It seems obvious that the rising tide has not lifted all boats. A rising tide does not provide everyone with a boat (the foundation upon which to participate in society), or repair the damage to some boats caused by social and economic exclusion. An important message we should learn from the financial crisis and the Great Recession is that often a rising tide is a tidal wave of artificially inflated economic growth (financial bubbles) that can drown many individuals and communities. Further, in the era of climate change, the rising tide created by affluence has led to higher sea levels, warmer ocean temperatures, stronger storms and other more extreme weather patterns, and polluted waters that threaten the liveability of the planet in many areas. Maybe, unlike Chief Brody in Jaws, we do not need a bigger boat! Maybe we need a new social contract built for the realities of a 21st century economy.

Our primary argument is that such a narrow way of thinking about economic growth leads to policies that only promote one aspect of what can be called sustainable social progress, and either ignores or harms other aspects. We are not arguing against prosperity. Rather, we are arguing for a view of prosperity that is inclusive of all and is socially and environmentally sustainable. Driving up GDP leads to a false prosperity; temporary in its benefits, lasting in its costs. According to the OECD, Ireland was 0.3% below its potential output in 2017, (some commentators would argue this is near full employment). Yet Ireland still has 18.7% of its children at-risk of poverty[3] and a very visible homelessness problem (just two of the pressing social problems). Focusing on GDP as a measure of social progress provides a very narrow view of Ireland's potential. Rather than try to indirectly improve social and environmental outcomes, we recommend addressing them directly. We believe Ireland can do better. But different goals require different ways of measuring progress towards those goals.

[3] CSO (2017), Survey on Income and Living Conditions, 2017, Table 3.1.

2

The What and Why of Economic Growth

The story of economic growth typically starts in the early 17th century with the Age of Exploration. While there were periods of economic progress before then, they were always followed by significant periods of decline (often caused by wars, plagues, or bad weather). The long march to affluence began with profits from piracy (stealing gold) and the slave trade being reinvested into expanded ship building and stronger navies, so more foreign lands could be conquered, resources plundered, and the slave trade expanded further. Colonialism/mercantilism was the main economic growth strategy and it was very successful, at least for kings and merchants.

Adam Smith changed how we think about economic progress. He argued that economic growth is about increasing the output of goods and services that average people consume. In the introduction to *The Wealth of Nations* (1976b, p. 10), Smith states that the standard of living (ratio of total output to population) "must in every nation be regulated by two different circumstances; first by the skill, dexterity, and judgement with which its labour is generally applied; and, secondly, by the proportion between the number of those who are employed in useful labour, and that of those who are not so employed." While governments continued to practice mercantilist policies, market forces forced technological progress on producers, leading to the Industrial Revolution and increases in output that were previously unimaginable.

The first of Smith's two circumstances is determined by the division of labour[4]. It is worth noting that beside the benefits of increased output, Smith argued the division of labour can also have

[4] Although the benefits of the division of labour was not a new insight (Plato had also written about it), Smith linked it to a natural propensity to "truck, barter and exchange" (Ibid., p.25) and demonstrated that it is regulated by market forces. In particular, it is limited by the extent of the market, so that expanding the geographical range by which people trade will lead to greater labour productivity and higher living standard. This is the primary case for 'free-trade' zones like the European Union.

significant negative effects (social and personal) as people work in jobs doing one or two simple tasks repeatedly (e.g. assembly line production). Smith's warning is noteworthy here (1976b, p. 782):

> "The man whose whole life is spent in performing a few simple operations …. generally becomes as stupid and ignorant as it is possible for a human creature to become … incapable of relishing or bearing a part in any rational conversation. … [I]n every improved and civilized society this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall, *unless government takes some pains to prevent it* (Italics added).

The second way to increase economic growth is to move people from unproductive to productive employment. Productive employment is defined as employment that creates a surplus (profits). While Smith understood the need for some unproductive employment (police, army), the movement of people into the for-profit sector of the economy was an important part of his growth strategy. This move is evident in advanced economies over the past three generations; for example, women with children moved out of homecare and into paid employment. Many of the services previously performed by women at home were replaced by paid workers (housekeepers, child minders etc.). These services are now regarded as productive because they add to GDP and earn profits. The biases of paid work over homecare activities is one of the most frequently noted problems with GDP as a measure of progress.

Just about every aspect of a modern capitalist society is designed to serve the goal of economic growth, yet the need for higher levels of output is not to meet pressing basic material needs. As John Kenneth Galbraith noted 60 years ago in his classic *The Affluent Society* (1976, p. 127): "[p]roduction only fills a void that it itself created". This emphasis on for-profit production over every other type of activity (public sector, home activities, community engagement) leads to a situation of social imbalance where countries have "private opulence and public squalor." Galbraith notes that "[t]he line which divides our area of wealth from our area of poverty is roughly that which divides privately produced and marketed goods and services from publically rendered services" (Ibid., p. 190). In the US, the military is a notable exception. He argues that the affluent classes can avoid this public squalor by separating themselves from the public – e.g. private schools, gated communities, zoning laws to keep out polluting industries. Surely people are more than consumers; their well-being comes from more than just shopping!

3

The Economist's Model of Economic Growth

Economic growth is the accumulation of capital; it is both cause and effect, alpha and omega. Its ability to be both comes from the view of capital as both (i) productive assets and (ii) financial title that gives the owner control over those assets. Private control over productive assets is regarded as crucial to ensuring that they will be used efficiently (profitably); it is assumed that private owners will use the assets in a manner that yields the highest profit rate. This is why some hold the view that only business creates wealth; the underlying assumption is that governments will use property for political purposes, rather than to earn profits. Earning profits creates the surplus that is used to fund capital accumulation. Certainly, this is the case if the definition of creating wealth is limited to earning profits. However, it is incorrect if the concept of wealth consists of productive assets. The state provides roads and infrastructure, which dramatically raise productivity (the original way to expand the size of a market), but it does not typically earn a profit from these assets. Also important is the state's spending on education and research funding, both of which are key factors for raising a country's standard of living. Further, no economic activity would take place without the state's provision of a legal environment conducive to commerce (especially protecting property rights).

The economic theory of growth proposes that the process of the accumulation of capital is limited by the rate of savings. Pro-growth policies are those that increase savings, which usually means redistributing money upwards toward the already affluent (who can save and invest the extra money). It is not a coincidence that so-called pro-growth policies also generate greater income and wealth inequality. Policies like low top-rate taxes, low corporate tax rates, weak labour or environmental protection regulation, and loose financial and banking rules, provide more incentives to investors, with the hope that this will generate more economic growth.

There are numerous problems with this (neoclassical) economic growth model and the policies it implies (both theoretical and empirical). Here, we limit the discussion to three issues that encompass economic growth and sustainable progress:

- the problems with the narrow view of capital;
- the relationship between economic growth and social well-being outcomes (specifically, the goals of equality, inclusion, stability and protecting the environment); and
- the negative effect of the 'growth mentality' and related policies on social values.

3.1. A Broader View of Capital

Economists have long struggled with the 'dual' nature of capital. Capital theory developed in part to explain and justify the return on owning capital – to legitimate capitalism. But if our goal is to understand how society's achieve social progress, and grow in a way that promotes well-being, then we need a broader understanding of capital – one that sees capital as assets that contribute to economic and social progress (and not just profits)

It is easy to accept the definition of *manufactured capital* as 'capital' in the classic sense. Whether it is flints and stone axes, or GPS and CAD/CAM milling machines, humans are tool makers, and these tools make humans more productive.[5] The problem with neoclassical economics is its attempt to make owning the tools 'productive' (and hence worthy of earning an income). Tools are taken out of their social context. All manufactured capital (from flints to machine tools) is productive only in the correct social context; it is always an extension of the community's accumulated technical knowledge. A hammer is only a tool to someone who knows how to use it. Outside of this context, it is no longer capital. All economic progress comes from the community's accumulated technological knowledge and the factors that produce the most successful economies are those that promote the process of creating and disseminating knowledge.

In *The Accumulation of Capital,* Joan Robinson (1969, p. 3) observed that when the robin finds and eats a caterpillar, the act of production and consumption are "completely integrated." Here,

[5] Much of our history has been defined by the tools we used: the Stone Age, Bronze Age, Iron Age, Age of Steam, etc.

there is no capital. This is rarely the case for humans. Because manufactured capital is productive into the future, it needs to be financed; resources today have to be set aside and directed to make manufactured capital now so that people can use it in the future. For some manufactured capital, such as a factory, it can be 20-30 years into the future. An apartment building could be used for 50-100 years, and at least one bridge in Turkey has been productive for 2,869 years! Money (and the money instruments) that direct this investment is called *finance capital*. Money is able to do this because it is institutionalized purchasing power, in most cases enforced by the sovereign state. Prior to advanced capitalism, the process required someone to save (not consume) so that those resources can be used towards the making of manufactured capital. However, the reality of modern capitalism is that excess productive capacity is the norm and so investment spending does not require previous savings (a reduction in current consumption). Investment spending creates savings and not the reverse. The failure of neoclassical economics to understand this important Keynesian insight is one of its greatest shortcomings. If one were to agree with this evidence, then the idea that society needs to give money to the rich and then hope some of it will be allowed to trickle down to everyone else must surely be seen for what it is; the use of power to benefit the powerful.

In a capitalist economy, there is a need for a financial system to promote efficiency in the process of turning finance capital into manufactured capital. This system also provides a means to settle payments and debts and a system to allow for the spreading of risk (Clark and Zalewski, 2015). Because the future is unknowable (rational expectations and efficient financial markets are really a myth) and the outcomes of the financial system are critically important to society, financial markets need to be tightly regulated. Unregulated financial markets are impossible, lightly regulated ones are a roller-coaster, and tightly regulated markets (for example, in Canada) are stable. As Keynes (1936, p. 159) famously noted: "[w]hen the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done." Over a decade after the financial crisis began, Ireland is still recovering from the gross misallocation of its manufactured capital by the irresponsible use of financial capital.

Natural resources are now increasingly being viewed as *natural capital.* Certainly, natural resources are important for human existence, and they are most often gathered today so that they can be useful in the future. Many natural resources are traded like other capital goods in commodity markets; the underlying view is that they are commodities which should be privately owned so that they are used to generate the most profits. But like manufactured capital, natural capital is socially created - the result of the community's accumulated technological knowledge. Value comes not from the natural resource itself, and certainly not from the act of ownership, but from the social context. This broader understanding of natural capital easily includes issues

of sustainability and equity as these can be integral to society's needs in accumulating and using natural capital, and not as an artificial add-on to a market mentality[6].

In recognition of the role that education and skill acquisition plays in explaining income levels and income inequality, the category of *human capital* has also developed. Most economists treat human capital as an individual trait; for example, the number of years of education a worker has accumulated. But in our view, education and skill acquisition is very much an asset that promotes social progress in the future, so it should be included as part of capital accumulation that promotes social progress. Society's investment in education is more important for promoting material economic growth than either manufactured or finance capital. It is human capital that deliberates and develops manufactured capital, directs finance capital, and turns nature into natural capital. Healthy and educated citizens are the foundation of a prosperous society. When the World Bank forced African countries to cut healthcare and education spending in the past to allow them to pay their external debts, the Bank was in effect promoting the opposite of progress. While education is a key variable in explaining relative wage rates, the value of education goes well beyond the benefits to the individual. Education is not a private good that needs to be exclusive to be valuable. It is a public good that increases benefits as it is shared and spread.

In a 1997 study, *Expanding the Measure of Wealth,* the World Bank included human resources and natural resources in an analysis of the factors that promote economic growth. With the exception of the Middle East, all the regions derived between 60% and 79% (74% for Western Europe) of their 'wealth per capita' from Human Resources (human capital), with Produced Assets (manufactured capital) accounting for 15%-30% (23% for Western Europe) of growth. The remainder was attributed to Natural Resource Wealth (natural capital)[7].

Economic activity does not exist in a vacuum. And often, the distinction between 'economic', 'social' and 'political' is unclear. Because of the importance of institutions, some analysts are adding *social capital* to their concept of capital. The World Bank argued that social capital could

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6 At any given time each country has a stock of natural resources. Some are fixed and some are renewable. Investment decisions to extract natural resources only measure the costs of getting the resource and bringing it to market. They do not take into account the replacement costs, or the pollution costs unless they are forced to include them by government regulation. Only costs connected to enforceable property rights are rewarded in market transactions as only property has a market voice. The extraction industries are extremely profitable partly because they can shift part of their costs onto the community as a whole. When people breathe polluted air they are paying part of the cost of the activity that created the pollution. The free market argument that all (or most) environmental problems can be fixed through assigning private property rights is based on the assumption that free markets work. This is clearly not the case.

7 The World Bank appeared to have rediscovered what Adam Smith pointed out on the first page of *The Wealth of Nations.*

be the missing link in understanding why some countries are successful and others are less so. Social capital consists of those aspects of social groups that promote relationships, shared meanings, values, trust, cooperation and reciprocity. It is what allows groups to achieve more than the sum of their individual parts. The World Bank notes that:

> "[t]he process of producing economic growth requires the combination of different types of capital. Social capital is one of them, but it has a unique feature in that it also enhanced the efficiency of the combination process itself. … It is not just an input into the production function, but it is also a shift factor (or exponent) of the entire production function" (World Bank, 1997, p. 83).

Social capital, it is argued, like other forms of capital, is a stock variable that gets depleted when used, and thus requires continual reinvestment to maintain the social bonds that hold groups and society together[8]. There is growing evidence that social institutions are the key factors in determining social progress[9].

3.2. Growth and Outcomes in 21st Century Capitalism

Clark (1998) argued that 21st century capitalism faces three main challenges: rising inequality; technological unemployment and threats to the environment. The lived experience of the past 20 years has taught us two key lessons:

- financial instability should be added to this list; and
- the interconnections between these issues is equally important.

Technological change that poses a threat to a future of good jobs is also a contributor to rising inequality, as the early developers of new technologies use their new found monopoly power to capture much of the gains created by the new technology. Rising inequality weakens democratic systems of governance and polarizes the populace. This weakens the ability or desire of governments to enact policies to help people who are displaced by the new technologies. The financialization of the economy (which contributes to financial instability) shifts power away from labour and towards capital. The result is increased inequality which distorts society's

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8 Social capital is more difficult to quantify and even more difficult to privatize its benefits. But the other three aspects of capital also have significant measurement issues.

9 See for example, Acemoglu and Robinson (2012) *Why Nations Fail: The Origins of Power, Prosperity, and Poverty.*

investment decisions away from public needs and towards speculation for private gain. Further, the main environmental challenges of climate change and loss of biodiversity creates effects that often impact humans based on their socio-economic class. The poor have to pay a disproportionate share of the costs of climate change and are simultaneously excluded from a fair share of the benefits from the economic system that has caused human activity to change the environment. As is often said, everything is interconnected.

These four challenges (inequality, technological unemployment, environmental destruction and financial instability) are all not only interconnected with each other, they are connected to the primacy of economic growth as capitalism's principal motivating force. Financial instability stems from the manner in which the capital stock of a society is funded and allocated, based on the short term from betting on whether prices will go up or down. Both the inequality and the instability caused by an economy dominated by the financial services industry are creating significant strain on public institutions and fraying the social bond. Money manager capitalism misdirects a country's capital and is a barrier to social progress.

The accumulation of capital coincides with technological change, yet technological change is never neutral. Technology is developed to be useful to those funding and controlling the process. Often it has unintended consequences. The future is unknowable, as are the ramifications of our present actions. In early time, capital goods (tools) were developed by the worker to enhance their labour effort in the production process, but production for profit required the control of workers, which entailed reducing the value of the workers by replacing their skill and expertise with machines. In the early 19th century this led to the widespread replacing of skilled adult male workers with lower paid women and children. Today, we see artificial intelligence (AI) replacing bank tellers and accountants, and robotics replacing production line workers.

This model therefore implies that the way to increase economic growth (the purpose of which is to create high employment) is often investment in labour replacing technology! This is not a successful strategy for the long-run. It suggests that more and more spending is required to keep employment levels high. Ireland, for example, needs spending increases (not inflated GDP growth based on foreign owned companies avoiding taxes) of between 5-7% to keep unemployment rates around 5%. Such high growth rates only occur usually when a country is catching up with leader countries. But Ireland has already accomplished this catch-up.

Ireland's unemployment rate is linked to aggregate demand[10]. Table 3.1 shows the Celtic Tiger period (1995-2007) was driven by increases in private consumption, government consumption and investment spending. Unemployment fell to almost a third of the average observed 1980 to

[10] As argued by Keynes, the level of unemployment is a function of aggregate demand.

1992. This is an example of 'transformational growth'[11] – a movement from one growth path to another. This growth period ended before the financial crisis, when Ireland in effect caught up with other advanced capitalist economies, yet it wasn't fully exposed until the collapse of the housing bubble. All elements of aggregate demand declined, particularly investment spending, and unemployment more than doubled. Although consumption also fell, the decline was more modest, given the depth and length of the recession. The effects of forced austerity on government consumption and investment also had an effect. The export and investment led recovery of 2014-18 however shows how fragile the Irish economy can be. A long term boom in investment spending is unlikely in either the private sector (e.g. lack of expectations of future profits) or the public sector (e.g. debt overhang from the bailout and lack of fiscal space due to Ireland not having its' own currency). Exports depend in part on the health of Ireland's trading partners, and are likely to slow as world growth stagnates in 2019 (made worse by the US's likely recession in next 12 months)[12]. Ireland, like most advanced capitalist economies, needs a stable and sustainable growth strategy.

Table 3.1 Average Changes in Aggregate Demand and Unemployment in Ireland, 1980-2018

	1980-92	1995-2007	2008-2013	2014-18
Real Private Consumption	1.7	6.3	-1.2	2.9
Real Public Consumption	0.9	10.5	-1.8	3.3
Total Gross Fixed Investment	-0.4	9.0	-5.2	16.4
Total Domestic Demand	0.3	6.0	-2.5	6.2
Real Exports	8.3	10.7	2.0	14.3
Real Imports	3.9	10.9	-0.2	11.2
Unemployment Rate	14.6	5.3	13.1	8.5

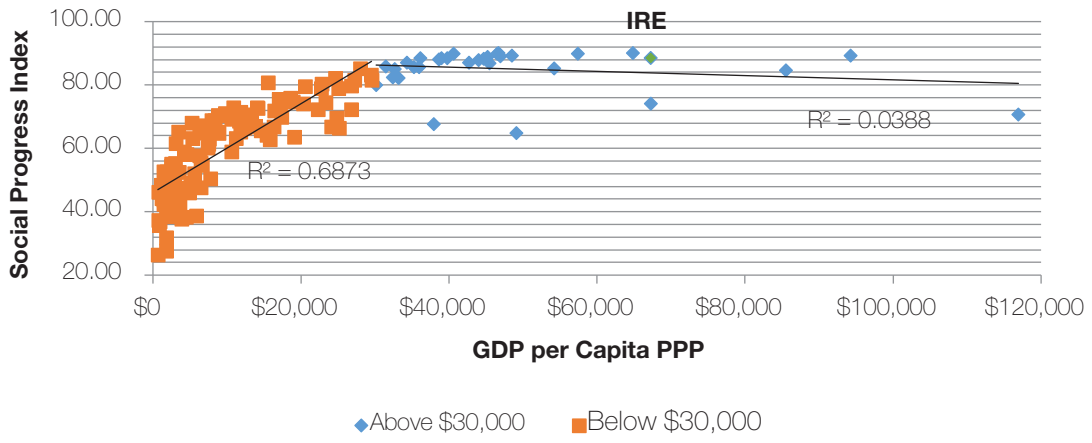
Source: OECD Outlook (2018)

It cannot be assumed that economic growth will provide for its main goal, full employment. Further, economic growth cannot provide all the social and environmental benefits it is supposed to afford. In the recent past, the rise in the availability of social indicators, and measures of well-being and happiness, provides us with further evidence that economic growth is not sufficient to promote a sustainable and just society.

11 Transformational growth is a concept proposed by Edward J Nell in *Transformational Growth and Effective Demand* (1992).

12 Nikiforos and Zezza, (2018), *Strategic Analysis*, Levy Economics Institute, April.

Figure 3.1 Social Progress and GDP, 2018



Source: Authors' analysis.

Figure 3.1 shows the relationship between GDP per capita and the Social Progress Index[13]. As expected, GDP per capita is closely correlated with social progress for low income countries. For high income countries, the relationship is less obvious and the correlation is low (although the trend line implies higher income levels lead to lower social progress).

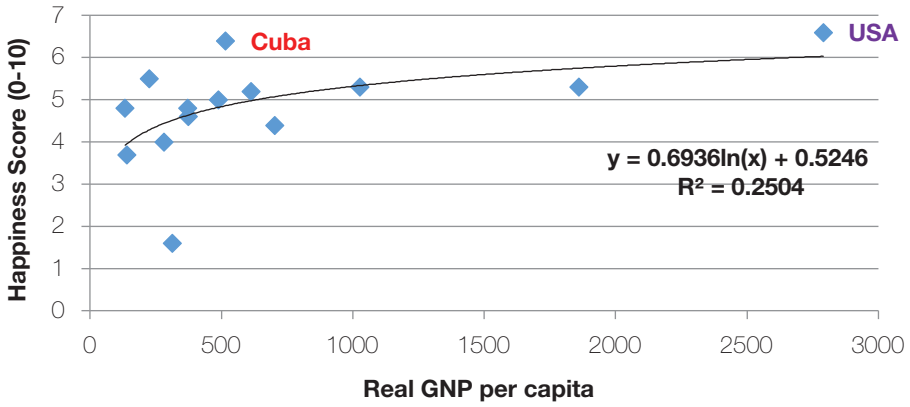
The economics of happiness is an approach to understanding wellbeing that has grown rapidly in the past decade, building on the seminal work by Richard Easterlin in the 1970s. Easterlin examined the link between economic growth and happiness. Economists have long noted the difference between social welfare (a subjective concept) and material or economic welfare (an objective measure of output) and generally assumed there was such a high correlation between the two. Promoting the latter, it was argued, would take care of the former. Easterlin's (1974) seminar paper challenged this assumption, showing that while there was a correlation between happiness and GDP at a given point of time, there is considerable evidence that over time, increases in income do not lead to corresponding increases in happiness. This 'Easterlin Paradox'[14] has held up empirically in the subsequent four decades, although it remains controversial.

13 The Social Progress Index (SPI) is published by the non-profit Social Progress Imperative and measures the extent to which countries provide for the social and environmental needs of their citizens. The index tracks 51 indicators along three broad themes: Basic Needs, Foundations of Well-Being; and Opportunity. The SPI is based on both subjective and objective indicators. Social and environmental factors include wellness (including health, shelter and sanitation), equality, inclusion, sustainability and personal freedom and safety.

14 At a point, in time happiness varies directly with income both among and within countries. However, over time happiness does not trend upward as income continues to grow. Hence, the paradox. Although many studies have been advanced over the years to explain the paradox, it remains an empirical generalization.

Figure 3.2 shows the data Easterlin presented from surveys conducted around 1960. Particularly shocking, at least in US, was the finding that Cuba and the US had a similar level of happiness, yet the US was over 5 times richer[15]. Also surprising was the extent of the relationship between changes in GDP and levels of happiness – approx. 25%[16]. So, although relationship does exist, much of the factors that determine happiness are clearly not income related.

Figure 3.2 Happiness and GDP, 1960



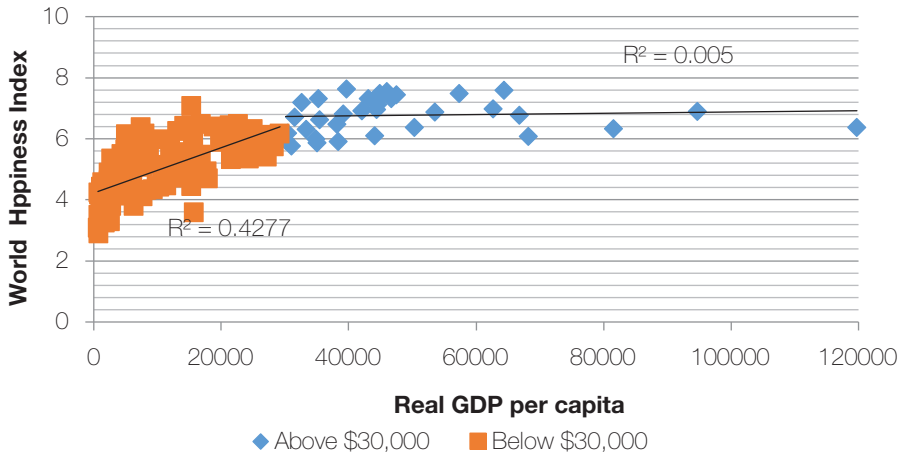
Source: Authors Analysis

The *World Happiness Report* (2018) presents data on 156 countries and identifies the factors that promote happiness. Explicitly based on a social view of human nature, it attempts to measure the social foundations of happiness. Figure 3.3 replicates the above relationship, this time for all of the countries for which data is available in the report. We divide the countries into two groups: (i) countries with per capita income below $30,000; and (ii) countries above $30,000 per capita income. The figure shows a strong connection between the two variables for countries below $30,000, but not for high income countries. This suggests that overall happiness is not based on the ability to afford the happiness that comes from meeting all material basic needs, at least for the rich countries.

15 A teacher at school in the US explained this to students as Cuba's 'revolutionary exhilaration'.

16 It is assumed causality runs from income to happiness, but there is also likely to be causation that runs from happiness to income - happy workers might earn more money.

Figure 3.3 World Happiness Index and Real GDP per capita, 2018



Source: Authors' Analysis.

A six factor explanatory framework is used in the report to measure the factors that contribute to happiness: four represent the social foundations of well-being (social support, freedom to make life choices, generosity and absence of corruption in government) and two factors are "strongly affected by the social context" and long seen as goals of development (GDP per capita and healthy life expectancy). Table 3.2 shows how each of the six factors contribute to the difference between an average country and a hypothetical dystopia country (one that has the lowest score for all six factors). The results are somewhat similar to Easterlin's 1960 findings: GDP per capita contributes approx. 26% to happiness. The top contributory factor is social support which is somewhat similar to the concept of social capital mentioned previously (family, friends, networks, etc. that are available when a person is in need).

Table 3.2 Decomposing the Differences in Happiness between Average Country and Hypothetical Dystopia, 2018

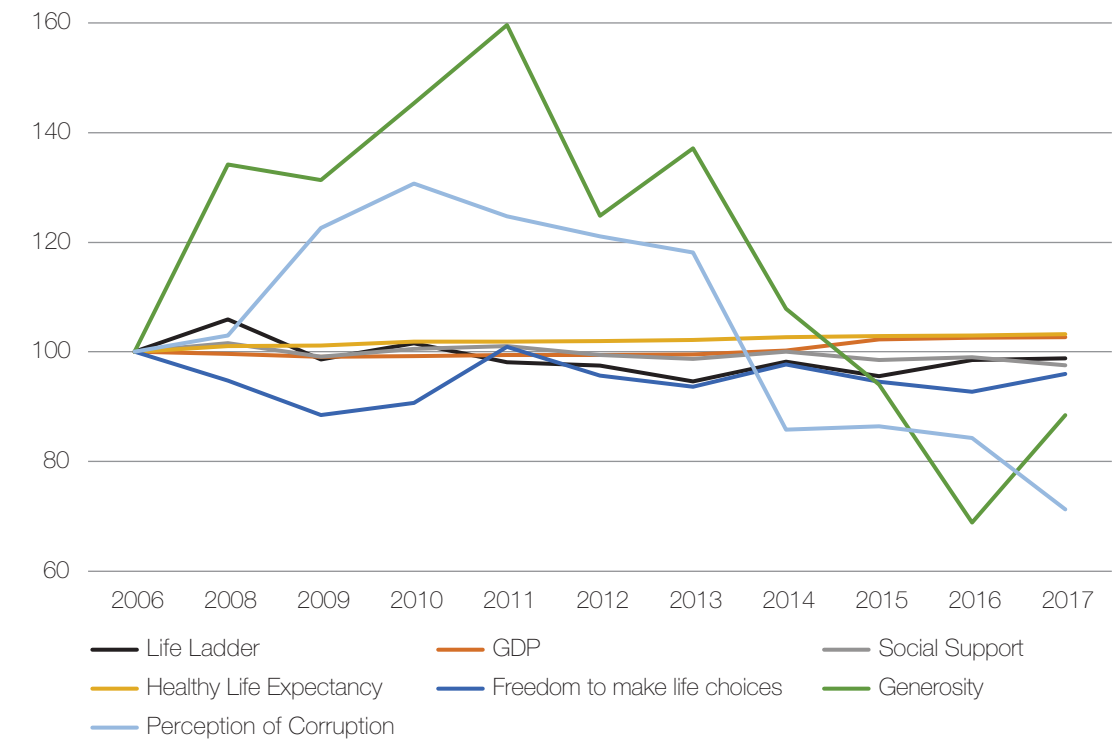
Social Support	.35
GDP per cap	.26
Healthy Life Expectancy	.17
Freedom to Make Life Choices	.13
Generosity	.05
Perception of Corruption	.03

Source: World Happiness Report (2018)

The World Happiness Report includes data that allows us explore changes in happiness overall (the Life Ladder) and the factors that contribute to happiness in Ireland from 2006-2017. We see in Figure 3.4 that both in periods of prosperity and recession, GDP per capita has remained

relatively stable. Overall happiness declines steadily from the peak of 2008 and hovers in that range thereafter. The role of generosity in happiness appears to be counter-cyclical. During the economic crisis, we see generosity becoming very important and it declines when the economy improves. The perception of corruption also increased during the same period, but has since fallen.

Figure 3.4 Changes in Happiness (Life Ladder) and Happiness Factors in Ireland, 2006-2017 (2006=100)



Source: Authors Analysis.

We welcome the development over the recent past of new measures of progress by various organisations and agencies. Each index is usually focused on a different aspect of progress: what is clear however is that some countries that perform very well on GDP per capita do not perform well on many of these alternative measures of social progress and well-being[17].

[17] See Table A1 in Appendix A for a snapshot of how Ireland performs on various measures of progress in the most recent year. Table A2 in Appendix B provides some further detail on the Social Progress Index (2018).

3.3. The 'Growth Mentality'

Recognizing that there are many 'capitals' society needs to invest in to promote social progress is an improvement over the 'accumulate capital to produce economic growth so you can accumulate more capital' treadmill. It is an important step towards a new model for promoting social progress. It is also a more effective means for promoting economic growth and raising living standards - necessary but not sufficient. The trap, however, of calling everything that is valuable for future production 'capital' is that it brings along with it the logic of 'capital' and 'capital accumulation'. The temptation, especially for the economist, is to see them all as capital goods to be efficiently allocated in a capital market, with a future Nobel Prize going to the person who can simultaneously optimize all four in one grand general equilibrium model.

Another limitation of the current growth model is the impact this market mentality may have if applied to non-market decision making. During the past three centuries, the laws, customs and values of Western society have been moulded to serve the purpose of capital accumulation. Keynes noted: "all kinds of social customs and economic practices, affecting the distribution of wealth and of economic rewards and penalties … (are maintained) at all costs, however distasteful and unjust they may be in themselves, because they are tremendously useful in promoting the accumulation of capital" (2009, p. 199). Public policies increased the level of inequality with the hope that a rise in inequality would augment society's savings so as to fund capital (only people who had incomes well above their material needs could save at sufficient levels to fund investment). Political and social power, and status were transferred from the ancient order, based on land ownership and inherited titles, to the industrialists and growing business class. Even religious attitudes and values adjusted to be more compatible with capital accumulation (prosperity gospel is an extreme example). David Bell's (1996, p. 237) observation is therefore difficult to disagree with: "[e]conomic growth has become the secular religion of advancing industrial societies."

At some point, the morals of accumulation begin to eat away at the social values that hold society together. Social capital promotes economic growth, but economic growth does not necessarily promote social capital. As Robert Heilbroner noted in *The Nature and Logic of Capitalism* (1985), the drive to amass capital leads to capital expanding into all areas of life, eventually transforming political, social and religious virtues into cost/benefit decision making. Adam Smith based his "society of perfect liberty" on individuals being socialized so that they did not take advantage of others. Ethics come first and ethics allows for economics. The cost of doing business goes up when trust levels go down, and a decline in trust leads to unproductive defensive expenditures - money is spent not so that the consumer gains, but so that they don't lose. As economic life becomes more and more anonymous, the social distance between economic traders increases and the strength of the social bond gets weaker.

It is difficult not to notice that the advanced capitalist societies are now more fractured than they have been in recent memory. The winner-take-all economy that has left so many behind is based on the singular goal of economic growth to accumulate capital. The broken link between economic growth and social well-being (see Figure 3.1) suggests that we need a new model. The changing moral values caused by the 'economic growth alone mentality' changes political priorities. After decades of pursuing economic growth so that poverty can be eliminated (through the trickle-down effect), many advanced capitalist economies like Ireland have currently high standards of living and high poverty rates. This is because they have not enacted policies necessary to build the pathways towards participation for the poor. All social and political effort has been focused on building and maintaining pathways for the rich to get richer. Bringing everyone above the poverty line is seen almost as a betrayal of the secular religion of economic growth, punishing the 'makers' and rewarding the 'takers'.

4

Is there a Better Way?

All social theory, including economics, begins with the question: what does it mean to be human? In economics, this question was answered by a partial reading of Adam Smith; including only the 'self-interest' human motivation in his *Wealth of Nations* (1976b) but excluding the role of 'empathy' (he called it sympathy) in his *Theory of Moral Sentiments* (1976a). We should remember that Smith, who argued that people should follow their own-self interest in their market lives, also first wrote:

> "How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it. … The greatest ruffian, the most hardened violator of the laws of society, is not altogether without it" (Ibid., 7; 137). .

He also argued that each person needs a moral compass to teach

> "the propriety of resigning the greatest interests of our own, for the yet greater interests of others, and the deformity of doing the smallest injury to another, in order to obtain the greatest benefit to ourselves" (Ibid., 7; 137).

However, instead of these insights, we are left with the more popular view, clearly espoused by Francis Edgeworth (1967, p.16):

> "[t]he first principle of Economics is that every agent is actuated only by self-interest."

If one adopts the 'rational economic man[18]' model which views individuals as utility maximisers with unlimited wants who act only in their own self-interest, and who can only rationally maximize their utility in a market setting, then it follows that any notion of progress is obviously tied to levels of consumption. Thus, GDP per capita becomes a proxy for how people are doing because the only thing they are doing that matters is consuming. While it ignores the effect of income inequality on consumption, if inequality is based on market forces and marginal productivities, then any variations in actual consumption levels in the model can be explained away.

However, if human nature has an essential social aspect to it, such that human well-being and happiness is not reduced to the autonomous individual, and if each person is not Robinson Crusoe, but instead is a social being whose well-being is partly determined by the communities and by their relative position in the community, then consumption levels will not tell the full social progress story. Drawing on Maslow's hierarchy of needs, we would expect that for low levels of income, there is a high correlation between well-being and income levels, as people are not meeting all their basic material needs. But once the basic needs of adequate food, clothing, shelter and security are met, the relationship between changes in well-being and GDP per capita is likely to be less significant.

How one views human nature is important. Poverty is a good example - how it is explained and measured. Further, reducing poverty is often given as a reason for promoting economic growth. If one follows the neoclassical theory and the 'rational economic man' model, poverty is understood as an individual outcome based on individual choices and endowments (with little discussion of how these initial endowments actually came about). Markets generate incomes based on supply and demand, and in the long run, a person's income will be determined by how much they contribute to the economy. This 'marginal productivity theory of distribution' was developed by John Bates Clark who said: "the distribution of the income of society is controlled by a natural law, and … this law, if it worked without friction, would give every agent of production the amount of wealth which that agent creates" (Clark 1965, p. v). So, people are poor because:

(i) they cannot contribute due to age or disability (the deserving poor); or

(ii) some "friction" prevents the natural law from working fully (market failure to be assumed away); or

(iii) they have not made the right choices that would allow them to be more productive and thus earn more money (the non-deserving poor).

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[18] An important concept used in neo-classical economic theory is of rational economic man. The concept of rational economic man allows economists to model, for example, how consumers and firms will respond to different situations.

The approach suggests the solution to reducing poverty is to generate more economic growth and provide the right incentives (market signals) to the poor so that they make better decisions.

Most sociologists and heterodox economists view poverty as a structural feature of an economy, emphasizing the social and historical factors that play a role in explaining not only aggregate poverty, but also the observation that specific groups have higher average poverty rates. The approach proposes that patterns of property ownership, discrimination, bargaining power (such as unionization rates), inequality and social protection systems are major determinants of poverty. Further, poverty is viewed as more relative than absolute. Economic growth here is not seen as sufficient for reducing poverty rates. Evidence from the US shows that changes in economic growth greatly determined poverty rates in the past, but after the Reagan Revolution, poverty was less influenced by positive economic growth rates. It is argued that the policies pursued helped to shift the benefits of economic growth towards very high income earners, so that very little 'trickled down' to the poor. Structural changes in the economy, many related to globalization, seem to have shifted the balance of power away from labour and more strongly towards capital, resulting in stagnant real wages, increases in the share of income going to capital, declines in the spending power of the minimum wage, lower unionization rates and anti-labour government policies. If economic growth is not enough to reduce poverty, if it is not a means to this important end, then other means must be found.

Economist Amartya Sen proposed a 'capabilities' approach to understanding human development. Sen argues that money or commodities do not provide for an individual's well-being, but instead they provide capabilities. "At the risk of oversimplification" Sen writes, "I would like to say that poverty is an absolute notion in the space of capabilities but very often it will take a relative form in the space of commodities or characteristics" (Sen, 1983, p.161). In previous centuries, physical abilities were a major determinant to how successful one was in the economy. Today, education and skills acquisition are of paramount importance. It is critical that people have the capabilities to fully participate in a given society. How these capabilities are met will differ from society to society, and change from year to year. Thus, there is an absolute need for capabilities to allow for participation, yet how these capabilities are fulfilled is related to historical and social context.

Sen's work has led to changes in development theory and policy, much of it through the UN. Beginning with the Human Development Index (which Sen helped develop), the UN continues to promote alternative measures of progress. The aim was to move away from the strategy of promoting economic growth and the hope that growth would provide for other economic, social and environmental goals, to directly supporting these other goals as ends in themselves. The expectation was that many of these ends would also end up promoting economic growth. The 'women's rights are human rights' agenda is an example. Barriers to women participating in the economy is seen not just as a violation of human rights, but also as

economically inefficient, because gender discrimination dramatically reduces the productivity of half the potential workforce, lowering everyone's income. The UN actively supports women's equality as an economic growth and development strategy. Recognizing that humans are more than just 'rational economic actors', the UN has since developed other indicators of progress, starting with the Millennium Development Goals, and leading to more recently, the Sustainable Development Goals and its long list of indicators.

5

The Sustainable Progress Index 2019

In 2015, the UN proposed and adopted the 2030 Agenda for Sustainable Development and identified 17 Sustainable Development Goals (SDGs) based on 169 targets and over 230 indicators. In January 2016, the SDGs came into force. The SDGS are designed to refocus efforts towards policies that directly help people and communities in the long run. They aim to provide both a pathway out of poverty for about a billion people in the world, and a pathway to a sustainable future for all countries and peoples. The World Bank, WHO, IMF, OECD and Eurostat have all committed to data collection efforts to support the monitoring of the SDGs.

Since the adoption of the SDGS, there have been several attempts to track countries' progress on achievement of the goals (see Sachs et al, 2016. 2017 and 2018[19]; Eurostat, 2017[20], OECD, 2017). Incorporating 100 indicators, the Eurostat report concludes that the EU has made progress

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19 The SDG Index and Dashboard report is published by Sachs et. al. on an annual basis since 2016. It is produced by the Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung. Although not an official UN publication, the work by Sachs et. al. is important. The latest report reports on 157 UN countries using official and non-official indicators (data limitations prevent full coverage of all UN indicators and some countries had to be excluded due to insufficient data availability). The index provides a measure of absolute distance towards the goals. Country specific dashboards provide guidelines to policymakers of areas of specific challenges.

20 The European Union (EU) adopted the first statistical overview of trends relating to the SDGs in the EU in 2017. Eurostat published *Sustainable development in the European Union – 2017 monitoring report of the progress towards the SDGs in an EU context*. Progress on 4 goals was unable to be calculated due to incomplete data.

towards the 17 SDGs over the past five years (see Figure 5.2)[21]. The improvement of goals has occurred at different paces for each SDG, ranging from moderate to significant progress. The goals are ranked in terms of significant progress made, (5 SDGs) and moderate progress (8 SDGs). It is important to emphasise that the report states that ***progress in a specific goal is not necessarily satisfactory for the EU[22].***

Figure 5.1 The 17 Sustainable Development Goals

Source: United Nations (UN)

The most recent report by Sachs et al concludes that Ireland performs relatively well on SDG1 (some of the indicators are more appropriate to the developing countries) but faces major challenges with other SDGs (see Figure 5.3). The dashboard colour codes identify the progress being made under each SDG. A green indicator rating implies achievement but all indicators under the goal need to be also green for the SDG to get a green colour. Yellow, orange and red indicate increasing distance from the SDG achievement (Sachs et al, 2018). Their analysis suggests Ireland scores particularly poor on SDGs 12, 13, 14 and 17 (Figure 5.3).

21 The EU report does not produce an index. It examines the SDGs at indicator level and by key themes to arrive at an overall assessment of progress.

22 In Clark, Kavanagh and Lenihan (2018b), we assess Ireland's performance on the same EU indicator set employed by Eurostat, for each SDG, relative to EU28. Eurostat argues in their report that their choice of indicators for monitoring the SDGs better reflects EU policy and initiatives, while still reflecting the principles of the official UN indicators incorporated in the SDGs. In our report (2018b), we monitor short-term trends in each indictor and arrive at an assessment of how Ireland is doing in the context of the EU28. See Appendix C for a summary table of our results.

Figure 5.2 EU Progress towards the 17 SDGs

Source: Eurostat (2017)

Figure 5.3 Ireland's Current SDG Dashboard

Source: Sachs et al (2018), http://sdgindex.org/dashboards/

The SDGs have become an essential part of scoring economic, social and environmental progress. This is the third in a series of reports that examines Ireland's performance in the context of its peers in the EU. The main aim of our analyses (Clark and Kavanagh, 2017; Clark, Kavanagh and Lenihan, 2018a, 2018b) is to complement the work being done by others by specifically monitoring Ireland's progress. We believe this is valuable, because as noted by Klaus Schwab, Chairperson of the World Economic Forum, in his commentary on the SDGs: "[w]e must continually measure progress on the ground, at local, national and international levels" (Sachs et al, 2017, p. 4).

5.1 Data Selection

Data collection for the analysis was far-ranging. As in our earlier reports, the starting point for data selection is the UN Indicator Set (2017) and we attempt to align our indicator set as closely as possible with this list.

We employ some simple rules to guide our choice of data.

- Relevance and applicability: the data must be directly related, similar, or relevant to monitoring the SDG. For some SDGs, indicators are chosen because they are more applicable to EU policies and initiatives (Eurostat, 2017).
- Quality: to ensure the best measures are used to capture the SDG, we only use official published data from international sources such as OECD, WHO, UN, etc. and non-governmental organisations such as Gallup and Transparency International.
- Coverage: data must be available for all 15 countries.
- Most recent available: all data must refer to the most recent year available.

The above criteria imply that for some SDGs, we replace the official indicators (e.g. prevalence of undernourishment, prevalence of stunting, incidence of extreme poverty), with indicators that better reflect high income countries in the EU. For example, the prevalence of obesity – a major risk factor for a number of chronic diseases - is increasingly becoming a problem in high-income countries (and also some low-middle income countries). Other indicators, although not official UN indicators, are included to capture the theme of a particular SDG. The incidence of low pay in the population is included to capture the theme of 'decent' work of SDG8. Household debt is included in SDG10 as we argue the level of debt resulting from the financial crisis and global recession has impacted on the ability of many EU households to lead decent lives[23].

We have added several new indicators[24] and dropped others[25]. Some data are not gathered annually and only become available every few years. This implies that when estimating SDG performance at a point in time, some data can be relatively old. We decide not to use data that

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23 Sachs et al (2017, 2018) also focus on international spill-over effects in their reports. Although important, we do not take account of these effects in our index.

24 For example, SDG6 includes measures of drinking water quality and sanitation that were not used in previous reports. We emphasise that our analysis is based only on what can be measured. Because changes have been made to the indicator set, the rankings in this report are not directly comparable to the earlier versions of the index. Changes in country rankings over time can be influenced by both changes in data as well as progress (or not) in achieving the SDGs.

25 We are also grateful for several comments on previous reports work and some additional data used in this report reflects the decisions made following this useful consultation process.

is considered out-dated; for example, some official measures and EU indicators have not been updated since 2012, and we deem them less relevant for monitoring the SDGs[26].

We believe these changes provide a richer and more accurate assessment of Ireland's SDG performance. But some problems remain. Data coverage across the goals is unequal. For some SDGs (SDG1, SDG17), because we only use official published data, only one indicator is available for all countries to reflect the objectives of the goal. This is far from ideal. SDG13 is problematic because it is difficult to get reliable data to reflect all the themes of climate mitigation, impact and initiatives[27]. Notwithstanding these issues, our data selection criteria identify 65 indictors across the 17 goals. The complete list of indicators used in the construction of the SDG measures is provided in Appendix D.

5.2 Method

We still believe it is important to compare Ireland to its peers. Hence, the focus, as in previous reports, is the EU15 countries. Comparing relative performance among countries from a similar regional or income group is valuable. Sachs et al (2016) have emphasised the substantial variations observed in small groups of similar regions should encourage policymakers to better understand reasons for divergence and design strategies for achieving the SDGs by 2030.

Since the aim is to compare performance across all goals, the first step in constructing the index is to make the data comparable across indicators. The data is highly heterogeneous and must be rescaled. We use a similar method to Sachs et al (2016). The approach allows us to benchmark Ireland against its peers, at individual indicator level, SDG level and aggregate index level.

We proceed as follows. A percentile rank is first assigned to each indicator. A percentile rank of 100 is assigned to the best performance, 0 to the worst performance. All indicators are expressed in ascending order, so that a higher score on the indicator corresponds to a higher overall SDG score. This allows for clarity and ease of interpretation.

Next, we aggregate the percentile rank of each indicator to compute the SDG score for each country. Given that we have data on every SDG, this implies that every country has an SDG score for each of the 17 goals.

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[26] However, for a small number of indicators, data relates to 2014 as it is the latest available and alternatives do not exist.

[27] We envisage that many more indicators will be added to the index, as SDG data improves over time.

Finally, to arrive at the composite Sustainable Progress Index, SDG, we aggregate across all goals. Equal weight is assigned to each SDG (and each indicator under each goal), as all goals are equally important. This follows the UN's (2015, paragraph 5) commitment to treat all SDGs equally[28]:

> "These are universal goals and targets which involve the entire world, developed and developing countries alike. They are integrated and indivisible and balance the three dimensions of sustainable development".

The scores allow us to rank the countries on the aggregate measure, to identify the countries that are making most progress in achieving the SDGs.

Agenda 2030 sets ambitious targets across the three dimensions of sustainable development: economic development, social inclusion and environmental sustainability. Although we fully recognise that all goals are interdependent and interconnected, we think there is value in attempting to understand how countries are doing on the three aspects of progress. Hence, using our judgement, we cluster the goals by these three dimensions: economic, social and environment. We then present the results of the composite SDG index[29].

5.3 The Economy Index

Table 5.1 shows the overall Economy Index score for Ireland, which includes SDG 8 and 9[30]. Ireland ranks 11th relative to its EU peers on this dimension[31].

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28 There is no agreement about assigning higher weights to some SDGs over others. The approach here has the benefit of allowing for the addition of new indicators for a particular SDG without affecting the relative weight of each SDG in the composite measure.

29 Statistical tests were conducted as part of the analysis. We assessed both collinearity between the goals and between the indicators under each goal. Based on the Pearson's pairwise correlation exercise for the goals, there is no sign of collinearity (defined as > 0.9). We found little evidence of collinearity at indicator level and retain the choice of indicators as they are directly related or relevant to the official UN list.

30 The score compares average performance across SDGs 8 and 9.

31 The arithmetic mean and the geomean averages were explored as two approaches to aggregating the data. Both indices show a high degree of correlation (Pearson's correlation coefficient of 0.97). For ease of interpretation, we settle on the arithmetic mean.

Table 5.1 The Economy SDG Index – Ranking by Country

Country	Index Score	Country Rank
Sweden	81.54	**1**
Denmark	79.25	**2**
Netherlands	72.74	**3**
Finland	65.11	**4**
Austria	64.53	**5**
Germany	63.51	**6**
Luxembourg	61.20	**7**
Belgium	57.14	**8**
United Kingdom	46.49	**9**
France	45.26	**10**
Ireland	40.16	**11**
Portugal	29.10	**12**
Italy	22.19	**13**
Spain	17.28	**14**
Greece	8.24	**15**

Source: Authors Analysis

SDG 8 'Decent work and economic growth'

SDG 8 appeals for providing opportunities for full and productive employment and decent work for all while reducing child labour, and human trafficking by promoting labour rights and secure working conditions.
4 indicators are used to compute this SDG. Real GDP per capita in Ireland is high relative to the other EU15 countries, second only to Luxembourg. Ireland also had the highest rate of growth in GDP. Ireland's unemployment rate shows good improvement, however, the NEET Rate (youths not in employment, education or training) ranks Ireland 11th on this indicator.

We include the incidence of low pay in SDG8 to capture the idea of quality work in the economy, although there is yet no agreed measure of decent work developed for use in the SDGs. With approx. 22.5% of employees in Ireland considered low-paid, Ireland scores at the bottom for this indicator. The overall rank for Ireland on SDG 8 is 9.

SDG 8: Rank = 9

SDG 9 'Industry, innovation and infrastructure'

Enhancing innovation, technological progress and entrepreneurship are the aims of SDG 9. In doing so, the goal is to promote increased access to financial services and information and communication technologies.

Expenditure on R&D (% of GDP) is the lowest in Ireland relative to the EU15, based on the latest data.. Sweden, Austria, Denmark and Germany score highest and all have expenditure greater than 3% of GDP. Ireland's spend was 1.05%, moving further away from Europe 2020 target of spending 3 % of GDP on R&D by 2020. Ireland's share of R&D researchers, both as % of population and per 1000 workers employed has increased over the years, as had the extent of patents (per million) although we are below the EU average on this indicator. Internet use (% of population) is also less than the best performing countries. Ireland's overall score ranks Ireland 11 out of the 15. There is therefore scope for improvement on this SDG.

SDG 9: Rank = 11

5.4 The Society Index

The Society Index[32] score and country ranking are presented in Table 5.3. Ireland is in 10th place.

32 Our society index here consists of scores for SDGs 1, 2, 3, 4, 5, 10, 16 and 17.

Table 5.2 The Society SDG Index – Ranking by Country

Country	Index Score	Country Rank
Sweden	74.20	**1**
Denmark	73.66	**2**
Finland	66.23	**3**
Netherlands	59.83	**4**
Austria	53.29	**5**
France	52.21	**6**
Germany	52.15	**7**
Belgium	50.93	**8**
United Kingdom	50.83	**9**
Ireland	49.04	**10**
Luxembourg	48.21	**11**
Italy	35.54	**12**
Spain	33.77	**13**
Portugal	31.85	**14**
Greece	19.67	**15**

Source: Authors Analysis

SDG 1 'No poverty'

SDG 1 pleads for an end to poverty in all its manifestations. According to Eurostat, Ireland had 15.6% of its population at risk of income poverty after social transfers in 2017, just below the EU average of 16.9%. As the focus of our analysis is the EU15 countries (with broadly similar levels of development), we exclude some of the less relevant UN indicators variables that capture extreme poverty (such as the poverty headcount ratio at $1.90/day, % population). One indicator is used to reflect SDG1: poverty is measured as the share of the population whose incomes fall below half the median disposable income for the entire population after taxes and transfers. On this measure, using the latest available data, Ireland is ranked 7th. Denmark and Finland score the highest on this SDG.

SDG 1: Rank = 7

SDG 2 'No hunger'

SDG 2 is concerned with food security and the eradication of hunger. Many of the official indicators under this goal are more applicable to developing countries. Food security, in terms of sufficiency and supply, may not be considered a major concern for the EU15 countries, but malnutrition problems are evident. Consumption patterns and lifestyles have changed in the EU, including in Ireland, and obesity is on the rise with implications for people's quality of life and resourcing the health care system. SDG2 is also concerned with ensuring long-term productivity and the sustainability of agriculture. We use 5 indicators to capture the theme of SDG 2: obesity rates capture the malnutrition aspect; and cereal yield efficiency, ammonia emission from agricultural land, gross nutrient balance of land, and the extent of organic farming reflect the sustainable agricultural aspect.

Obesity in Ireland is the one of the highest among the EU15, second only to the UK. Over 25% of the population are categorised as obese. Ireland's organic farming share of the total utilised agricultural area (UAA) is well below the EU average at just under 1.7%; it scores lowest of the EU15 on this indicator. Ireland performs well compared to other countries on the cereal yield indicator, although less well on ammonia emissions and nutrient balance of agricultural land. The overall SDG score gives Ireland a score of 10 of 15 countries.

SDG 2: Rank = 10

SDG 3 'Good health and wellbeing'

Improving healthy lives and promoting wellbeing at all stages of life is the focus of SDG 3. As well as being important to the individual in terms of improving their quality of lives, good health is also valuable for social and economic growth. 9 indicators are used to reflect this goal, including indicators for alcohol and smoking consumption, deaths from chronic diseases, and subjective wellbeing. Other indicators that are more relevant to the developing countries are excluded.

Ireland's score puts it in the middle of the ranking for this SDG. Sweden and Netherlands perform the best on health and wellbeing with Portugal and Greece at the bottom of the ranking.

SDG 3: Rank = 9

SDG 4 'Quality education'

SDG 4 advocates inclusive and equitable quality education and promotes lifelong learning opportunities for all. Education is seen as key in meeting other SDGs; it aims at reducing poverty, inequality, gender inequality and contributes to growth, employment, productivity, innovation, competiveness and healthier lifestyles (Eurostat, 2017:89).

Ireland performs well on the indicator representing 3rd level tertiary qualifications in the population. It ranks best of the EU15 on the early leavers from education indicator. The PISA score is also impressive - Ireland is ranked second to Finland and ranked 4th for expected years of schooling. We include a new indicator – the expected employment rate of graduates and Ireland is mid-way in the ranking on this indicator, based on Eurostat data. The overall score puts Ireland at the top of the list of countries for this SDG, second only to the UK[33].

SDG 4: Rank = 2

SDG 5 'Gender equality'

SDG 5 aims at ending all forms of discrimination, violence and any harmful practices against women and girls. It calls for equal rights, recognition and equal opportunities of leadership at all levels of political and economic decision making. We use 5 indicators in our construction of SDG 5.

Ireland scores at the top end for the indicator that captures female education as a percentage of male education. Indicators for both the share of women in national parliament and in senior management roles show Ireland well below the EU average and in the bottom 3 countries for both indicators. The female participation rate is also lower than the best performing countries. Ireland is ranked 7th on the gender pay gap indicator, while Luxembourg and Belgium score highest. Overall, Ireland is ranked 10 on this SDG indicating there is scope for improvement. Sweden, Denmark and Finland are the highest ranked countries.

SDG 5: Rank = 10

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33 Of course, the NEET rate is also important but is considered under SDG 8, as per the UN Official Indicator List.

SDG 10 'Reduced inequalities'

SDG 10 aims at reducing disparities in terms of income, sex, age, disability, race, class, ethnicity, and religion.

We use four indicators to capture the theme of this goal. The Palma Index, (the ratio of the richest 10% of the population's share of gross national income divided by the poorest 40%'s share) shows Ireland is ranked 9th. While the absolute debt level has declined over the years, it remains high. Ireland is ranked 11th on this indicator. The Netherlands and Denmark are the worst performing countries for household debt. Ireland's performance on the social justice indicator is poor at rank 11 while the Scandanavian countries have the highest scores. Overall, Ireland's rank of 11 shows there is a need for greater progress on this SDG.

SDG 10: Rank = 11

SDG 16 'Peace, justice and strong institutions'

SDG 16 calls for peaceful and inclusive societies based on human rights, protection of the most vulnerable, the rule of law and good governance. The construction of this SDG uses different indicators to earlier reports in an attempt to better reflect the theme of the goal. For example, we include a measure of confidence in the judicial system (Eurostat)[34]. We retain the measure of corruption and measures of homicides, crime, and feeling safe walking home. Ireland's corruption score ranks it in 10th place. Denmark, Finland and Sweden are the top 3 ranked countries with Italy, and Greece at the bottom.

The data indicate Ireland is a relatively safe society with a low number of deaths due to homicide or assault, and the perceived occurrence of crime, violence and vandalism. Overall, Ireland's rank of 4 suggests Ireland is doing relatively well on this SDG.

SDG 16: Rank = 4

[34] We decide not to include a similar measure that captures population perceptions of the EU institutions as all countries are in the EU and higher scores on this indicator may not actually reflect better country performance.

SDG 17 'Partnership for the goals'

Goal 17 seeks to strengthen global partnerships to support and achieve the targets of the 2030 Agenda, by bringing together national governments, the international community, civil society, the private sector and other actors. Despite advances in certain areas, more needs to be done to accelerate progress.

Availability of published data for all EU countries is limited for this SDG. The % of GNI devoted to Overseas Development Assistance (ODA) is the exception and the latest data suggest that Ireland's contribution of 0.3 is well below the EU average. Ireland is ranked 11th on this indicator in 2017. Sweden, Luxembourg, and Denmark top with Portugal and Greece at the bottom. In Budget 2019 the Irish Government made a substantial move towards increasing its ODA. However, that increase will not yet register on these numbers.

As a member state of the EU, Ireland has a commitment to dedicate 0.7 % of GNI to official development assistance by 2030. Clearly, much needs to be done to accelerate progress on this SDG.

SDG 17: Rank = 11

5.5 The Environment Index

Country scores and rankings for the Environment Index[35] are shown in Table 5.4. Ireland's score puts it in 13th place on this dimension.

Table 5.3 The Environment SDG Index – Ranking by Country

Country	Index Score	Country Rank
Sweden	65.42	**1**
Austria	59.82	**2**
Finland	56.53	**3**
Denmark	54.91	**4**
Germany	51.99	**5**
United Kingdom	51.78	**6**
Netherlands	50.17	**7**
Portugal	48.49	**8**
Spain	46.69	**9**
Belgium	45.42	**10**
France	44.74	**11**
Italy	44.50	**12**
Ireland	43.98	**13**
Greece	43.44	**14**
Luxembourg	38.15	**15**

Source: Authors Analysis

35 SDGs 6, 7, 11, 12, 13, 14 and 15 are combined to reflect our environment index.

SDG 6 'Clean Water and Sanitation'

SDG 6 calls for universal access to safe and affordable drinking water, sanitation and hygiene. It aims at improving water quality, water use efficiency and sustainable supply. Indicators for access to improved drinking water and improved sanitation show further development is required on this goal. We also include a measure of freshwater withdrawal as % total renewable water resources and Ireland scores well on this indicator. Ireland's overall rank on this SDG is 5.

SDG 6: Rank = 5

SDG 7 'Affordable and Clean Energy'

SDG 7 emphasises improving energy efficiency, access to modern energy services and increasing the share of renewable energy.

Final energy consumption in household per capita has fallen since 2000 but it remains just above the EU average (2016 data, Eurostat). Ireland's share of renewable energy is poor relative to our EU peers. Ireland's CO2 emissions from energy fuels combustion/electricity output (MtCO2/TW) are one of the highest in the sample, ranked 11th. The overall score on this SDG is 12, and we argue this goal poses significant challenges for Ireland.

SDG 7: Rank = 12

SDG 11 'Sustainable cities and communities'

SDG 11 focuses on quality of life in cities and communities, sustainable transport and adverse environmental impacts. It aims to make cities safe and sustainable by ensuring access to safe and affordable housing, investing in infrastructure, and improving planning and management in a way that is both participatory and inclusive.

Some of the official indicators for this goal are more relevant to developing countries. We use 3 indicators to reflect this goal. Ireland scores well (3rd place) on the air pollution in urban areas indicator; Sweden and Finland have the highest scores. We use updated data on the access to transport indicator and include a measure of rent over-burden. Taken together, Ireland's score gives it a rank of 8 for quality of life in our cities and communities.

SDG 11: Rank = 8

SDG 12 'Responsible consumption and production'

SDG 12 calls for sustainable consumption and production by the adoption of sustainable practices and procedures for business and an increase in environmentally friendly activity by consumers. Ireland's performance on this SDG is poor, based on the indicators used here. More waste is generated than the EU average (kg per capita), the percentage of waste water not treated is the lowest of the EU15 (based on 2016 data) and the recycling rate is the lowest among the EU15. Significant improvement is required if Ireland is to be on track to achieve this goal in the timescale proposed by Agenda 2030.

SDG 12: Rank = 14

SDG 13 'Climate Action'

Implementing the commitment to the UN Framework Convention on Climate Change and operationalizing the Green Climate Fund are the key aims of this SDG. Problems with data availability, for example, reliable and comprehensive measures of mitigation, impacts and initiatives, make this one of the SDGs that international agencies still find problematic when attempting to determine important trends. A key indicator used by Eurostat is GHG emissions. Ireland witnessed an increase in its GHG emissions from 1990 to 2001 (see Figure A2 in Appendix E) and although these emissions have since fallen, they remain well above EU average. Given data limitations, our SDG measure here focuses on just 2 indicators: CO_2 emissions per capita indicator, and the effective carbon tax rate. Ireland is ranked 10th.

SDG 13 Rank = 11

SDG 14 'Life below Water'

The conservation of the oceans by safeguarding and ensuring their sustainable use is the aim of SDG 14. Lack of data in the past has meant it was difficult to estimate how each country is contributing to ocean health. More recently, different indicators have been used to capture sustainable fishery and healthy oceans. Examples include protected marine sites, fish stocks, extent of fish trawling, estimates of ocean health, including ocean acidity, etc. But complete data remains a problem for accurately estimating achievement on this SDG for most countries.

We use 5 indicators[36] based on data from the Ocean Health Index and Birdlife International/IUCN to capture the SDG's theme. The data suggests Ireland is performing poorly in meeting its sustainable objectives in this area. Ireland is ranked 9th of 13 countries[37].

SDG 14 Rank = 9 (out of 13)

SDG 15 'Life on land'

SDG 15 seeks to protect, restore and promote the conservation and sustainable use of terrestrial, inland water and mountain ecosystems. We settle on five indicators to mirror this goal, drawing on data from BirdLife International (2018) which estimates the share of protected terrestrial areas and freshwater areas. Both of these indicators illustrate Ireland is doing well and is ranked among the top two for both. The share of land dedicated for forestry use, at just under 11%, is well below the EU average. The extent of artificial land coverage per capita (used by Eurostat to reflect land degradation per capita) also shows Ireland ranked low relative to our EU peers. The overall rank on this SDG is 8.

SDG 15: Rank = 8

5.6 How Are We Doing Overall? - The Sustainable Development Index

The SDGs provide an ambitious, comprehensive plan of action for people, planet and prosperity. The goal of the SDGs is to change the perspective of public policy and we have shown the scale of the challenge facing Ireland under the headings of economy, society and environment. Table 5.4 provides a picture of how Ireland ranks on each SDG in each of the 3 dimensions; economy, society and environment.

The composite Sustainable Progress Index (SPI) is presented in Table 5.5. It provides a simple report card to track Ireland's overall performance on the SDGs compared to its EU peers: countries that have experienced similar levels of development. Sweden, Finland and Denmark top the rankings. **Ireland's overall ranking is 11**.

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36 These indicators were not used in previous reports for estimating this SDG. Our choice of indicators is influenced by ensuring complete coverage for all 13 countries. The EU have noted problems with this SDG in particular, and were unable to estimate trends in SDG progress in their report (Eurostat, 2017).

37 Both Austria and Luxembourg are landlocked – hence no data for this goal.

Table 5.4 Ireland's Rank by Dimension and by SDG

Ireland Overall Rank on the SDGs		**11**
Economy		11
SDG 8:	Good Jobs and Economic Growth	9
SDG 9	Industry, Innovation and Infrastructure	11
Society		**10**
SDG 1	No Poverty	7
SDG 2	Zero Hunger	10
SDG 3	Good Health and Well-being	9
SDG 4	Quality Education	2
SDG 5	Gender Equality	10
SDG 10	Reduced Inequality	11
SDG 16	Peace and Justice	4
SDG 17	Partnerships for the Goals	11
Environment		**13**
SDG 6	Clean Water and Sanitation	5
SDG 7	Affordable and Clean Energy	12
SDG 11	Sustainable Cities and Communities	8
SDG 12	Responsible Consumption and Production	14
SDG 13	Climate Action	11
SDG 14	Life Below Water	9
SDG 15	Life on Land	8

Source: Authors analysis

Table 5.5 The Sustainable Progress Index – Ranking by Country

Country	**Index Score**	**Country Rank**
Sweden	**71.45**	**1**
Denmark	**66.60**	**2**
Finland	**62.11**	**3**
Netherlands	**57.37**	**4**
Austria	**57.14**	**5**
Germany	**53.42**	**6**
United Kingdom	**50.71**	**7**
Belgium	**49.39**	**8**
France	**48.32**	**9**

Luxembourg	**46.06**	**10**
Ireland	**45.91**	**11**
Portugal	**38.38**	**12**
Italy	**37.66**	**13**
Spain	**37.15**	**14**
Greece	**28.12**	**15**

Source: Authors Analysis

Strengths: Ireland is in the top third for 3 SDGs. Our analysis suggests that Ireland does well on SDGs relating to **Quality Education** (SDG 4); **Peace and Justice** (SDG 16) and **Clean Water and Sanitation** (SDG6). Ireland has a good reputation internationally for quality education, and skilled graduates are in high demand. Ireland is also regarded as a relatively safe place to live with lower homicides and crime rates relative to other countries.

Weaknesses: 4 SDGs are in the bottom third: **Partnerships for the Goals,** (SDG 17); **Affordable and Clean Energy** (SDG 7); **Reduced Inequality** (SDG10); and **Responsible Consumption and Production** (SDG 12). Significant challenges lie ahead if Ireland is to achieve its objectives on these goals.

In the Middle: 10 SDGS are in the middle of the rankings, implying there is still scope for improvement. Going forward, it is important to continue to monitor all relevant indicators under each to track progress towards goals.

6

Conclusions and Future Considerations

At the beginning of the Great Depression, John Maynard Keynes wrote an unusual article titled "The Economic Possibilities of our Grandchildren". In it, he argued that the economic hard times the rich countries were facing at the time was just a temporary setback. The long-run march to solving the economic problem - of providing sufficient material standard of living for all - would continue. He further argued that this state should be reached within the following 100 years, in the lifetime of the grandchildren of the people living in the 1930s.

Adam Smith had earlier stated clearly that the provision of a decent standard of living for all was crucial: "[n]o society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable. It is but equity, besides, that they who feed, clothe and lodge the whole body of the people, should have such a share of the produce of their own labour as to be themselves tolerably well fed, clothed and lodged" (1976b, p. 97).

Smith argued that the 'invisible hand' of the market would move us towards a society of perfect liberty in which the benefits would be shared by workers (the lower class) provided people were sufficiently ethical to control their self-interests (not take advantage of others) and that the government was not used to benefit the rich classes (landlords and business owners). It is worth noting that Smith also supported government regulations that supported workers[38].

[38] "Whenever the legislature attempts to regulate the differences between masters and their workmen, its counsellors are always the masters. When the regulation, therefore, is in favour of the workmen, it is always just and equitable; but it is sometimes otherwise when in favour of the masters" (Smith, 1976b, p. 158).

However the drive to amass wealth in the form of capital accumulation became the dominant strategy for the economy, with social morals and institutions adjusting to support this drive. Periodic depressions and financial crises, which are a natural part of capitalism, showed the pain and suffering that resulted from a lack of economic growth. The Great Depression not only led to widespread unemployment, homelessness and hunger, it also contributed to the rise of authoritarian governments, lost individual liberties, World War II, and the rise of communism (USSR and China). It is little wonder that keeping capitalist economies growing and providing high levels of employment became the primary public policy goal. Economic growth was a national goal, becoming, as we noted above, "the secular religion of advanced industrial societies."

Keynes noted that one of the benefits of solving the economic problem was that we can rid ourselves of the glorification of these morals and direct our energy to higher purposes, to move from affluent societies to just societies. Keynes (ibid., p. 199) stated that:

> "[w]hen the accumulation of wealth is no longer of high social importance, there will be great changes in the code of morals. We shall be able to rid ourselves of many of the pseudo-moral principles which have hag-ridden us for two hundred years, by which we have exalted some of the most distasteful of human qualities into the position of the highest virtues. We shall be able to afford to dare to assess the money-motive at its true value. The love of money as a possession - as distinguished from the love of money as a means to the enjoyments and realities of life - will be recognised for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental disease. All kinds of social customs and economic practices, affecting the distribution of wealth and of economic rewards and penalties, which we now maintain at all costs, however distasteful and unjust they may be in themselves, because they are tremendously useful in promoting the accumulation of capital, we shall then be free, at last, to discard."

The benefits of economic growth do not naturally flow to everyone. Without state intervention, benefits remain at the top. The 'trickle-down' effect should be at best seen as a light mist (spending by the rich does create some employment), but it is not enough of a shower to create fertile conditions for full employment, or greater equality and social well-being. In all the rich countries, a welfare state developed so that the state could provide a level of social protection to all citizens (minimal in the English speaking countries, more comprehensive in Scandinavian countries and northern Europe). However, since the 1980s, the revolt of the 'haves' has led to limits on social protection measures and cuts to top tax rates so that even more wealth and income is concentrated in the hands of the rich, all justified as pro-growth policies.

It is clear in poor countries, that there is a connection between economic growth and many social well-being indicators. In rich countries, the connection is often seen during periods of economic hardship with increases in mortality rates and other social well-being measures, but it is less clear when the economy is growing. Most of the connections are just correlations, and correlation is not causation. The results change when other factors are considered and when attempts are made at showing the direction of causality. This is very evident in the literature on inequality and health outcomes. New research on economic growth and health outcomes indicates that health contributes to economic growth, often more so than economic growth contributes to health. So, for example, this implies that if a policy goal is to reduce infant mortality, the most effective way to achieve this outcome is to increase female literacy rates. While economic growth can provide resources to increase spending on education, perhaps a more effective strategy is to directly target females and break down the barriers to females acquiring education to achieve the policy goal.

Directly focusing on social and environmental goals, rather than waiting for economic growth to trickle down and produce desirable outcomes, is what underpins the SDGs. It is also what makes them revolutionary. The SDGs are a rejection of the paradigm of one way causality of economic growth leading to everything else. Clearly the economy and economic growth are important, but they exist in a context, and economic growth is as much an effect of social progress as a potential contributor to social progress.

We are at a time when we can identify and measure what promotes integral human development, for individual and communities. Promoting the development of the whole person and all people leads to a healthier and more stable economy; it promotes an economy which puts people first. We are also at a stage in human history where promoting an economic growth model based on private profits and ignoring the environmental costs of human actions can no longer be accepted. A disposable society that uses up and discards people and resources with the single goal of ensuring the continuation of the process of capital accumulation is not sustainable, socially or environmentally. The world needs a new model based on a broader understanding of what it means to be human and how humans relate to one another and to their common home. We hope that our report demonstrates that policy insights can be learned by exploring a wider number of indicators. Critically, our message is that the SDGs are not just another list of suggestions for poor countries; they can be a tool for all countries, informing decision making and public policy. Our efforts over the years have always been to push this conversation forward. We don't believe there is a single policy solution to solve every problem; in fact we doubt one exists. But the analysis in this report suggests that Ireland can improve its performance in specific areas: we can learn from the other countries. Some countries have discovered how to pursue growth while also reducing the impact on the environment. Others can provide higher levels of public services. Of course, countries can also learn from what Ireland does well. There are no natural advantages in promoting social well-being; it is a matter of social choices.

Policy Considerations

1. **Measuring progress by GDP** and other traditional measures is seriously problematic.
2. If **a sustainable environment** is to be developed, Ireland's share of renewable energy and Co2 emissions are a challenge – far greater action is required.
3. Economic growth alone will not solve the problem of **poverty**.
4. Ireland's performance on **gender equality** is well below the EU average; eliminating the gender pay gap should be a priority.
5. Balance is required in **regional development**.
6. Ireland's performance on **education** is good, but there is an issue with those not in education, employment or training (NEETs).
7. Ireland should strive to be a leader on the **Corruption Index** indicator
8. Increasing ODA as % of GNI would be a strong sign of our commitment on **partnership for the goals.**
9. Ireland has an excellent opportunity to **partner with developing countries** towards supporting their attaining of the SDGs
10. There is a need to **gather evidence and track progress –** on policies that drive outcomes in order to implement the 2030 Agenda
11. It is critically important that Government **integrate all 17 SDGS into all policy-making processes** - give them the priority that they require if they are to be achieved by Ireland
12. There is an ongoing need to **gather evidence** especially on environmental indicators – this is one of the most urgent issues as many indicators lack the necessary data.
13. There is also an urgent need to focus on securing **policy coherence** – several aspects of current Government policy are at odds with the SDGs e.g.
    a. generating economic growth by increasing agricultural production
    b. Prioritising job-creation via transnationals while Ireland's infrastructure (e.g. housing, public transport, rural broadband) and social services (health, education, older people) are below SDG requirements
14. Develop **Satellite National Accounts** – GDP is not appropriate for 21st century.
15. **Badge all policy initiatives** with the relevant SDG(s)

7

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Table A1 Country Rankings on Various Progress Indices

GDP per capita, 2017, PPP		Social Progress Index 2018		Sustainable Development Goal Index 2018		World Happiness Report 2018		Human Development Report 2018		Global Comp. Report 2018	
Country	**Score**	**Country**	**Score**	**Country**	**Score**	**Country**	**Score**	**Country**	**Score**	**Country**	**Score**
LUX	$94,278	DNK	90.0	SWE	85.0	FIN	7.6	**IRL**	**0.938**	DEU	82.8
IRL	**$67,335**	FIN	89.8	DNK	84.6	DNK	7.6	DEU	0.936	NLD	82.4
NLD	$48,473	NLD	89.3	FIN	83.0	NLD	7.4	SWE	0.933	UK	82
SWE	$46,949	LUX	89.3	DEU	82.3	SWE	7.3	NLD	0.931	SWE	81.7
DNK	$46,683	DEU	89.2	FRA	81.2	AUT	7.1	DNK	0.929	DNK	80.6
AUT	$45,437	SWE	89.0	AUT	80.0	**IRE**	**7.0**	UK	0.922	FIN	80.3
DEU	$45,229	**IRL**	**88.8**	NLD	79.5	DEU	7.0	FIN	0.92	FRA	78
BEL	$42,659	GBR	88.7	BEL	79.0	BEL	6.9	BEL	0.916	BEL	76.6
FIN	$40,586	FRA	87.9	GBR	78.7	LUX	6.9	AUT	0.908	LUX	76.6
GBR	$39,753	BEL	87.4	**IRL**	**77.5**	GBR	6.8	LUX	0.904	AUT	76.3
FRA	$38,606	ESP	87.1	LUX	76.1	FRA	6.5	FRA	0.901	**IRL**	**75.7**
ITA	$35,220	AUT	86.8	ESP	75.4	ESP	6.3	ESP	0.891	ESP	74.2
ESP	$34,272	ITA	86.0	ITA	74.2	ITA	6.0	ITA	0.880	ITA	70.8
PRT	$27,937	PRT	85.4	PRT	74.0	PRT	5.4	GRE	0.870	PRT	70.2
GRC	$24,574	GRC	82.6	GRC	70.6	GRC	5.4	PRT	0.847	GRC	62.1

Source: Authors' analysis

Appendix B: Social Progress Index (2018) Results for EU15 Countries

Table A2 provides some further detail from the Social Progress Index (2018). Focusing on the three broad categories in the index, we see that Ireland is ranked at the top for Opportunity, 7th for meeting Basic Needs, and 13th for Foundations of Well-Being.

Table A.2 Three Broad Categories of Social Progress, SPI 2018

Country	Basic Needs	Country	Foundations of Well-being	Country	Opportunity
NLD	96.41	FIN	92.49	IRL	82.29
AUT	96.21	FRA	92.20	DNK	81.64
DNK	96.17	DNK	92.06	DEU	81.57
SWE	95.86	GBR	91.98	LUX	81.43
FIN	95.66	NLD	91.65	SWE	81.20
DEU	95.35	LUX	91.41	FIN	81.16
IRL	95.03	AUT	91.40	GBR	79.99
LUX	94.97	ESP	91.39	NLD	79.97
PRT	94.85	DEU	90.71	BEL	79.70
GBR	94.25	ITA	90.28	FRA	77.82
ESP	94.02	SWE	89.90	ITA	76.35
FRA	93.62	BEL	89.34	ESP	75.92
BEL	93.14	IRL	89.14	PRT	74.18
GRC	92.13	PRT	87.03	AUT	72.68
ITA	91.49	GRC	85.43	GRC	70.21

Source: Social Progress Index, 2018

Given the low ranking for the Foundations of Wellbeing dimension, Table A4 takes a closer look at the ranking of each of the four categories that make up this index. While Ireland scores well in Access to Basic Knowledge (5th place), it is ranked 10th in Access to Information and Communication and second last on Health and Wellness and Environmental Quality. The Health and Wellness is strongly influenced brought Ireland's poor score on the access to Quality Healthcare indicator, while the Environmental Quality score is low because of poor scores in Wastewater Treatment; Greenhouse Gas and Biome Protection.

Table A.3 Four Elements of Foundations of Wellbeing, SPI 2018

Access to Basic Knowledge		Access to Information and Communications		Health and Wellness		Environmental Quality	
Country	**Index**	**Country**	**Index**	**Country**	**Index**	**Country**	**Index**
DNK	98.01	GBR	97.01	FRA	87.26	FRA	94.21
FRA	97.55	NLD	96.56	FIN	86.68	ESP	94.08
LUX	97.52	FIN	95.02	SWE	86.50	DNK	93.29
ITA	96.89	DNK	94.57	ESP	86.44	ITA	93.20
IRL	96.65	AUT	92.79	NLD	85.35	SWE	93.06
NLD	96.38	DEU	91.86	AUT	85.27	FIN	92.94
GBR	95.84	LUX	90.17	LUX	85.12	AUT	92.93
DEU	95.79	FRA	89.78	ITA	84.92	LUX	92.82
ESP	95.58	ESP	89.47	BEL	83.68	GBR	92.77
FIN	95.32	IRL	89.39	DEU	83.13	PRT	92.22
AUT	94.59	BEL	88.00	DNK	82.38	DEU	92.05
GRC	94.42	SWE	87.96	GBR	82.28	BEL	91.63
BEL	94.02	ITA	86.11	PRT	81.38	GRC	89.80
PRT	93.47	PRT	81.06	IRL	81.11	IRL	89.42
SWE	92.09	GRC	76.45	GRC	81.06	NLD	88.30

Source: Social Progress Index, 2018

Appendix C: Clark, Kavanagh and Linehan (2018) Summary Results

Table A2 replicates table 2 from Clark, Kavanagh and Linehan (2018b). It provides a summary of Ireland's performance on the SDG drawing on the EU Indicator set and the same method used by Eurostat (2017).

Table A2 Classification of Ireland's Progress on the SDGs over Time, Eurostat Indicator Set

Sustainable Development Goal	Progress	Subthemes	Directions	Overall Short Term progress Movement
1 'No Poverty'	Moderate	1. Multidimensional poverty 2. Basic needs	→ ↑	→
2 'Zero Hunger'	Moderate	1. Malnutrition 2. Sustainable agricultural production 3. Adverse impacts	↓ ↑ ---	→
3 'Good Health and Wellbeing'	Good	1. Health lives 2. Health determinants 3. Causes of death 4. Access to healthcare	↑ ↑ ↑ ↑	↑
4 'Quality Education'	Moderate	1. Basic education 2. Tertiary education 3. Adult education	→ ↑ ↓	→
5 'Gender Equality'	Moderate	1.Gender-based violence 2. Education 3. Employment 4. Leadership positions	--- → ↓ →	→
6 'Clean Water and Sanitation'	Good	1. Sanitation 2. Water quality 3. Water use efficiency	↑ ↑ ---	
7 'Affordable and Clean Energy'	Moderate	1. Energy consumption 2. Energy Supply 3. Access to affordable energy	→ ← ↑	→
8 'Decent Work and Economic Growth'	Good	1. Sustainable economic growth 2. Employment 3. Decent work	↑ ↑ →	
9 'Industry, Innovation and Infrastructure'	Moderate	1. R&D and innovation 2. Sustainable transport	← →	→

10 'Reduced Inequalities'	Moderate	1. Inequalities by countries 2. Inequalities within countries 3. Migration and social inclusion	⇦ ⇨ ----	⇨
11 'Sustainable Cities and Communities'	Good	1. Quality of life in cities and communities 2. Sustainable transport 3. Adverse environmental impacts	⇧ ⇧ ⇧	⇧
12 'Responsible Consumption and Production'	Moderate	1. Decoupling environmental impacts from economic growth 2. Energy consumption 3. Waste generation and management	⇨ ⇨ ⇨	⇨
13 'Climate Action'	Poor	1. Climate Mitigation 2. Climate Impacts 3. Climate initiatives	⇨ ---- ----	⇩
14 'Life below Water'	Poor	1. Marine Conservation 2. Sustainable fishery 3. Ocean health	⇦ ⇨ ---	⇩
15 'Life on Land'	Moderate	1. Ecosystem status 2. Land degradation 3. Biodiversity	⇦ ---- ----	⇦
16 'Peace, Justice and strong institutions'	Good	1. Peace and personal security 2. Access to justice 3. Trust in institutions	⇧ ⇧ ⇧	⇧
17 'Partnership for the Goals'	Poor	Global Partnership Financial governance within the EU	⇩ ⇩	⇩

Significant improvement towards SD objective	⇧
Moderate improvement towards SD objective	⇨
Moderate movement away from SD objective	⇦
Significant movement away from SD objective	⇩
Insufficient data to comment	---

Source: Clark, Kavanagh and Lenihan (2018b, pp. 46-48)

Appendix D: List of Indicators Used in the Construction of the Sustainable Progress Index

Table A.5 List of Indicators Used in the SDGs

SDG	Indicator	Source
1	Poverty rate after taxes and transfers; poverty line 50% (% of population)	OECD
2	Prevalence of obesity, BMI>30 (% of adult population)	WHO
2	Cereal yield (kg/ha)	World Bank
2	Ammonia emissions from agriculture	Eurostat (from EEA)
2	Gross nutrient balance on land on agricultural land	Eurostat
2	Area under organic farming (% of UAA)	Eurostat
3	Life expectancy at birth, total, years	Eurostat
3	Adolescent fertility rate (births per 1000, age15-19)	UNDP
3	Subjective wellbeing (average ladder score)	Gallup (2018); from Sachs et al (2018)
3	Daily smokers (%, aged 15+)	Eurostat
3	Road traffic deaths (per 100,000)	WHO
3	Self-reported unmet health needs (% of population)	Eurostat
3	Deaths from NCDs (per 100,000)	WHO
3	Suicide Rate	OECD
3	Alcohol Consumption (litres per capita, age 15+)	WHO
4	Population aged 25-64 with tertiary education (%)	OECD
4	PISA Score	OECD
4	Expected years of schooling	UNESCO
4	Employment rate of recent graduates	Eurostat
5	Proportion of seats held by women in national parliaments (%)	Eurostat
5	Proportion of women in senior management positions (%)	Eurostat
5	Gender Wage Gap (% of male median wages)	OECD
5	Female labour for participation (% of males)	World Bank
5	Female years of education (% of males)	UN
6	Population using safely managed water services	JMP (2018)
6	Population using safety managed sanitation services	JMP (2018)
6	Freshwater withdrawal as % total renewable water resources	FAO (2018)
7	Share of renewable energy in consumption (%)	Eurostat
7	CO2 from fuels and electricity	IEA
8	Unemployment Rate (%)	OECD
8	Real DGP per capita	OECD
8	Low Pay (the share of workers earning less than two-thirds of median wages, %)	OECD
8	NEET rate (youths not in employment education or training (%)	OECD

9	R&D expenditure, % of GDP	OECD
9	Internet use (%)	ITU
9	Patent applications (per 100,00)	OECD
9	Number of R&D researchers (per 1000 employed)	OECD
10	GINI index	OECD
10	Household debt, % NDI	OECD
10	Palma index	OECD
10	EU Social Justice Index	Social Inclusion Monitor Report
11	Exposure to air pollution of PM2.5 in urban areas	Eurostat
11	Difficulty in accessing public transport (% of population)	Gallup (2018); Sachs et al (2018)
11	Rent over-burden rate	OECD, Sachs et al (2018)
12	Municipal waste generated per capita	OECD
12	Waste water treated (%)	EPI (2018)
12	Recycling rate of waste, excluding major mineral waste (% of total waste recycled)	Eurostat
12	E-waste generated (kg/capita)	UNU-IAS (2015)
13	CO2 Emissions per capita (tCO2/capita)	World Bank
13	Effective Tax Emissions	OECD (2018); Sachs et al, (2018)
14	Mean area that is protected in marinesites important to biodiversity (%)	Birdlife International et al. (2018)
14	Ocean Health Index Goal – Biodiversity	Ocean Health Index (2018)
14	Ocean Health Index Goal – Fisheries	Ocean Health Index (2018)
14	Ocean Health Index Goal – Clean Waters	Ocean Health Index (2018)
15	Mean area that is protected in terrestrial sites important to biodiversity (%)	BirdLife International (2018)
15	Mean area that is protected in freshwater sites important to biodiversity	BirdLife International (2018)
15	Artificial land coverage per capita	Eurostat
15	Percentage of land covered by forestry	OECD
15	Red List Index	Bird Life International (2018)
16	Corruption index	Transparency International
16	Homicides per 100,000 population	Eurostat
16	Population reporting Occurrence of crime, violence or vandalism in their area (%)	Eurostat
16	Perceived independence of the justice system (%)	Eurostat
16	Feel safe walking at night (%)	Gallup (2018)
17	Overseas Development Assistance (% of GNI)	Eurostat

SOCIAL JUSTICE IRELAND
working to build a just society

Social Justice Ireland
Arena House
Arena Road
Sandyford
Dublin D18 V8P6
Ireland
www.socialjustice.ie
Tel: 01- 2130724
e-mail: secretary@socialjustice.ie

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