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Foreword: The need for a new era economics

The 2008 financial crash and subsequent recession demonstrated with devastating effect serious flaws in the UK's economic model. These events demand a profound reconsideration of the principles that have guided economic policymaking in recent decades. However, the recent crisis also shone a light on a wider set of challenges facing the economy.

The economic environment is changing due to the increased pace of technological progress and the rise of economies such as China. New modes of economic thinking, such as evolutionary and complexity economics, are challenging our understanding of how capitalist economies work. And progressive thinkers are questioning whether economic policy should continue to focus primarily on GDP growth.

IPPR's New Era Economics programme is an ambitious project that seeks to address these big challenges about the economy – and, by extension, about society. Guided by an advisory panel, a group of men and women working at the cutting edge of economic thought, it seeks to develop a new, progressive economic model for the UK by:

- 1. Provoking new thinking on the economy
- 2. Understanding the role policy can play in moving us towards a more successful, progressive economy
- 3. Contributing to the building of a constituency to drive the change we want to see.

New Era Economics has sought to understand the implications of the changing economic context,² how paradigm change comes about,³ and the policy lessons from the new schools of economic thought – complexity and evolutionary economics – that are increasingly challenging neoclassical theory.⁴ Here we turn our attention to the aims of economic policy and whether a new era economy should target the same goals as in the past or focus on a different set of outcomes.

Every effort to rethink economic policy should be motivated by a consideration not only of 'what works' but also of 'to what ends'. This is particularly the case for a project that hopes to be radical, visionary, and contribute to the construction of a different, more progressive economy in the next decade. We need to define what a progressive economy should look like before we can start trying to build it.

¹ See at http://www.ippr.org/research-project/44/7469/neweraeconomics

² See Lent and Nash 2011

³ See Dolphin and Nash 2011

⁴ See forthcoming IPPR publication Beyond nudge: Translating new economic thinking into public policy

¹ IPPR | Wellbeing, choice and sustainability: What should economic policy target in a new era economy?

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Introduction

'The Gross National Product does not allow for the health of our children. the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage: neither our wisdom nor our learning; neither our compassion nor our devotion to our country; it measures everything, in short, except that which makes life worthwhile.' Robert Kennedy, 1968 (quoted in Bishop and Green 2011)

44 years on from Robert Kennedy's insightful statement, his sentiments still ring true. Gross domestic product (GDP) remains the main measure of economic and social progress in advanced economies and it lies at the heart of our economic thinking, despite evidence that the link between GDP growth and worthwhile lives has become much weaker.

The global financial crisis and what the Americans call the 'great recession' have brought into question the principles that have guided economic policymaking in recent decades. They have exposed the weaknesses in our current economic model and generated mainstream debate on how the economy is structured, what should it be designed to achieve, and how economic goals can be accomplished. This debate has highlighted a set of fundamental questions that demand a profound reconsideration of the key ideas that underpin economic policymaking.

This reconsideration builds on the work of trailblazers who have for many years been making the argument for a reassessment of what economic policy should target. These include Richard Layard of the LSE, who argues for happiness to be prioritised above all else (see Layard 2006). Tim Jackson and his allies at the New Economic Foundation have called on policymakers to target zero growth to achieve the goal they see as fundamental: to create economies that are environmentally sustainable in the long run (see Jackson 2009, NEF 2009). Others, such as Neal Lawson and the Labour group Compass (see Shah and McIvor 2006) advocate for equality to be placed front-and-centre in the UK's economic model.

We believe a new era economy should not be focused entirely on material progress – whether it is measured by GDP or by other means. It should prioritise worthwhile lives: wellbeing, choice and sustainability. GDP growth is not a sufficient target for a 21st-century progressive economy.

This is not to say that output growth is undesirable. Increasing output does not just result in increased consumption of goods, it also brings other achievements, in fields like medicine, that result in longer and healthier lives. Output growth is desirable, and probably inevitable, but on its own it is no longer a sufficient measure of progress.

This paper explores why GDP remains the measure of choice when assessing economic progress, and its strengths and place in our economic and social life. It then considers alternative – or, rather, complementary – measures of advancement and discusses what a more rounded assessment of progress might look like.

GDP as a measure of progress

There are good reasons why GDP – or national income – has become the principal measure of economic progress throughout most of the world. In particular, there is evidence to suggest wellbeing is closely correlated with income. As a result, promoting GDP growth as an economic objective has come to be seen as the best means to help people achieve better lives. This is not quite the same as saying that money can in every circumstance buy you happiness, but it does appear that a lack of it raises your chance of being unhappy.

Battling poverty

Studies repeatedly show that people living in developing countries have much lower levels of life satisfaction than those in wealthier countries (see, for example, Beinhocker 2005 and New Economics Foundation 2009). This is in line with basic human intuition. Furthermore, poverty is not just found in the developing world: poorer people within developed societies tend to be less happy than those who are wealthier (see Clark et al 2008, Wilkinson and Pickett 2009).

More specifically, those in high-income countries have higher life expectancies than those in low-income countries. In 2002, a comprehensive study found healthy life expectancy (HALE) at birth ranged from 40 years for males in Africa to over 70 years for females in developed countries (Mathers et al 2004). It does not follow, however, that it is simply a matter of increasing GDP per capita to increase life expectancy. While higher incomes are a necessary condition for increasing life expectancy gains, they are not on their own sufficient. As low- and middle-income countries develop, they face a double burden of health risks. They are confronted with the traditional risks associated with poverty – undernutrition, poor hygiene and sanitation – and the more modern risks, of tobacco-, diet- and alcohol-related diseases. While higher income mitigates the risks associated with poverty, it also increases the exposure to health risks associated with richer countries. This makes a stronger case for both increasing incomes and strengthening public health interventions in order to tackle both modern and traditional risks (WHO 2009).

Even so, it is clear that GDP – or income or material wealth – is absolutely central to wellbeing in some instances. In places where incomes are not high enough to purchase enough food, decent shelter or sufficient clothing, expanding people's incomes is clearly vital to enhancing wellbeing. GDP may be only a measure of material progress, but in these cases, a shortage of the basic requirements of life means that the correlation between material progress and wellbeing is in fact very high.

Getting rich

In advanced countries like the UK, however, the correlation between material progress and wellbeing appears to be lower. The Easterlin paradox - named after the US academic Richard Easterlin - describes how, once economies reach a certain stage of development, the correlation between increasing incomes and happiness seems to break down. The paradox is that while cross-sectional analysis of an economy at any point in time shows richer people are happier than poorer people, analysis over a period of time shows that, despite increasing incomes, people do not become happier. As a result, some have questioned the point of pursuing further economic growth past a given stage of development.

This is too extreme a conclusion. Research into the phenomenon identified by Easterlin highlights that people's happiness is determined, in part, by their relative position in society. There is no need to draw out further conclusions as to any supposed wellbeingdampening effects of higher income.

Toting it up

It is important to remember that GDP is a monetary measure of economic activity. Money can be spent on any marketed good or service, and the act of spending provides a clear measure of how goods and services are rated against each other – by individuals and, at the aggregate level, across the economy as a whole. This was particularly relevant in the past, when the economy was dominated by marketable goods and GDP was both easy to measure and a reasonable proxy for what was valued by society. However, it is increasingly the case that the economy is dominated by non-marketed services, such as public health and education provision. These are included in GDP, but the fact that output in these areas is difficult to measure means GDP is now a less-reliable representation of the economy.

The value of GDP growth is not just located in the fact that it allows people to access more material wealth. It also allows for more choice, and choice influences wellbeing. In any market-led economy, enhanced income provides people with greater choice about their lives (Sen 1999). People's choices, and their ability to take life in the direction of their own choosing, are valued, even when those choices do not work out. Choice matters even if it does not lead to greater material possessions: do not only value outcomes when defining worthwhile lives, we are also interested in the process of reaching those outcomes (Chandy 2011). Growth in incomes provides access to more goods and services and thus to more choice - both of which can be expected to improve wellbeing.

A more general reason for the attraction of GDP growth as a measure of economic success is how easy it is to understand and the frequency with which it is measured and announced: on a quarterly basis but with monthly updates. This simplicity and frequency of publication gives the concept enormous power. It slots nicely into a newspaper column or TV or radio bulletin as a snapshot of whether the economy is doing well: in absolute terms, relative to its history, or relative to other economies. This single figure also offers a simple and indispensable guide for policymakers. Economic stability - GDP growth close to its long-run trend – is more desirable than big fluctuations in growth. Too much growth can lead to higher inflation, too little to deflation. Both tend to lower wellbeing.

GDP is also closely correlated with other significant economic variables, particularly unemployment. At times of economic weakness, there is a strong sense that greater economic growth will result in lower unemployment, and so getting people back into work by targeting GDP growth would be an appropriate way to improve overall wellbeing.

Therefore, there are a number of reasons for GDP's attraction as a measure of economic progress. Increasing GDP will generally lead to greater wellbeing. But it does not follow that GDP should be the sole measure of advancement. In a new era economy, other measures of progress should be taken into consideration.

Why dethrone growth?

Economic growth should be a means to an end: helping to deliver increased happiness, wellbeing and choice. But the search for growth has come to dominate the larger, more complex and more important task of building an economy and society that delivers worthwhile lives. This distracts attention from the wider range of priorities that policy needs to reflect, and it can in certain circumstances lead to policies that instead diminish people's ability to lead worthwhile lives. Although the positive growth-promoting effects of these policies are recognised, the larger, negative effects on, for example, work-life balance, our natural environment or the quality of our relationships often are not.

Even as a measure of material wellbeing, GDP is flawed because it does not effectively distinguish between productive and destructive practices. So, a doubling of the crime rate that leads to a consequent increase in spending on the police, the judicial system and prisons would in turn lead to an increase in GDP on the back of all the extra activity created. But no one would argue that a doubling of the crime rate enhances wellbeing.

Furthermore, some activities that increase production are deemed to contribute fully to GDP even though they have negative impacts on society's wellbeing. GDP cannot capture how the market frequently misallocates resources, which can lead to negative wellbeing outcomes. For instance, our failure to adequately price the externalities of carbon emissions affects the wellbeing of many, particularly the poorest in society those in developing, low-lying countries, and future generations.

However, GDP's real weakness is its diminishing ability to *reflect* wellbeing. The relationship between GDP, income and the key components of worthwhile lives has never been as strong as is generally assumed; in developed countries in the 21st century, they are increasingly weak. First, GDP growth now equates far less than it did in the past with higher incomes for most of the population. The link between GDP growth and median income has broken down. Second, higher median incomes are no longer all that is required for an improvement in the quality of our lives.

GDP ≠ income

If worthwhile lives are delivered by increasing incomes, then focusing on national income measures such as GDP as a reflection of progress seems reasonable. However, the data shows that GDP growth has an increasingly weak link with real median household incomes in many OECD countries (Stiglitz et al 2009). Over the last few decades, and increasingly over the past 10 years, growth in GDP in some countries has taken place alongside almost no growth in real median wages.

This break between growth and median incomes has been most pronounced in the United States, where it is referred to as the 'great decoupling'.⁵ In the period up to the 1970s, US GDP and median incomes tracked each other quite closely; after the 1970s, the trend changed (Plunkett 2011). Men's real wages began to stagnate while women's real wages continued to increase alongside GDP but at a lower rate. This trend has continued to the

⁵ Lane Kenworthy has written extensively about this phenomenon. See for example: http://lanekenworthy.net/2012/03/11/is-decoupling-real/

⁵ IPPR | Wellbeing, choice and sustainability: What should economic policy target in a new era economy?

point where US real median wages grew by only 0.3 per cent a year in the period 2000–2006, despite this being a period of markedly strong GDP growth (Coats 2011). The UK has seen a similar trend emerging. In the period just prior to the crash (2003–2008), real British median wages barely rose despite the economy expanding by 11 per cent over the same period (Plunkett 2011).

Real median wages are no longer responding to productivity in the way that neo-classical economic theory suggests they should. Between 2000 and 2008, UK labour productivity increased by 1.6 per cent a year on average but real wages rose by only 0.9 per cent (TUC 2009). Increases in national wealth have increasingly gone to capital, in the form of profits, and to higher incomes for those at the very top of the pay distribution. This has widened the gap between top-earners and the rest of the working population. It can no longer be assumed that national GDP growth, driven by increases in productivity, will be mirrored by trends in median incomes.

Consequently, even if wellbeing and incomes are correlated, if there is no assurance that GDP growth will translate into higher median incomes then there is no assurance that it will lead to greater wellbeing for the bulk of the population. Indeed, to the extent that people are concerned about their relative incomes, seeing increases in GDP translate into higher pay only for those with the highest incomes could instead lead to diminished wellbeing for much of the population.

However, even if GDP growth was leading to higher median incomes, higher median incomes do not necessarily lead to more worthwhile lives.

Income ≠ wellbeing

One way of illustrating how misleading income-based measures of wellbeing might be is to look at evidence across various countries on potential drivers of wellbeing that are not marketable. This gives a radically different impression of how well countries are doing in delivering worthwhile lives for their people. For example, income per capita in France in 2005 was 34 per cent lower than income per capita in the US. However, allowing for differences in estimates of the value of government-provided services in each country (such as health and education) radically changes these numbers, so that the gap narrows to 21 per cent. Adding in the value of work done within the home and the extra leisure that the French enjoy because of shorter working hours, which can contribute towards greater wellbeing, suggests the gap narrows further to 13 per cent (Stiglitz et al 2009). Hence, French peoples' ability to enjoy worthwhile lives is radically underestimated by a purely income-based measure.

GDP does still matter for our wellbeing. It is particularly important in boosting the incomes of those with less, and income does add to everybody's wellbeing in terms of its ability to boost resources devoted to health and education. However, it is apparent that as a society our wellbeing does not just come from income, but from a wide range of sources. This suggests the solution is to push for income growth while paying more attention to other sources of wellbeing – and at the simplest level this is true. However, not only should we re-weight our resource allocation priorities, from income growth to a more balanced scorecard, we need also to recognise that focusing on income growth can in some circumstances actually damage our ability to deliver some of the other drivers of wellbeing. Pursuing income growth as the guarantor of worthwhile lives might fail not because income does not matter but because doing so creates a powerful incentive to focus on income at the expense of non-income drivers of wellbeing.

In other words, income-based measures of value not only miss a large part of what matters to us, they create incentives to increase income at the expense of other sources of wellbeing, because the former (income) is measured, while what we trade off to get it (the non-marketable elements of wellbeing) are not. This can potentially damage overall wellbeing, because we do not know what we are sacrificing to get income. It also distorts choice, because people are not offered a neutral choice between different elements of the wellbeing picture: policy is channelling them towards income.

Alternative measures of progress

A number of alternatives have been put forward in an attempt to more accurately measure and report economic performance, wellbeing and sustainability. These range from attempts to tweak GDP to measures that seek to replace it altogether. The Genuine Progress Indicator (GPI), for example, adjusts GDP for income inequality, crime and environmental degradation, while the Human Development Index (HDI) takes account of life expectancy, educational attainment and income. Some measures emphasise the environment, such as the Ecological Footprint; others, such as the Index of Sustainable Economic Welfare (ISEW), emphasise inequality.

None of these attempts to resolve GDP's inadequacy as a measure of material and non-material wellbeing have caught on, and economic policy remains focused on GDP. In part, this is because they all have their own downsides as a measure of performance. Some might be effective for policymaking but are less useful for analytical purposes (such as conducting cost–benefit analysis), while others get into the complicated business of monetising non-monetary activities via shaky, subjective measurements.

A more radical approach is needed. Policymakers must accept that targeting more worthwhile lives means not relying on quantifying everything in income terms. They must be more realistic about what can and cannot be measured in this way and more accepting of different kinds of evidence. The policymaking process should move away from focusing solely on the effect of policy on GDP and towards a broader consideration of effects. This will include the effects on income, other effects that can be translated into income equivalents and some that cannot – the decrease in the quality of a job, for example, or a change in the culture of an important institution.

In recent years, researchers and government agencies in some countries have shown a willingness to overcome the hurdles that such an approach presents. There is growing interest in measuring the determinants of wellbeing. This work uses a range of different methodologies, from opinion polls asking people what makes them feel they have a good quality of life to studies that try to determine which people in a society have greater wellbeing and which less, and identify the drivers of the differences.

Three models of wellbeing

The most significant contribution in this field is the work of the commission set up by the French government and led by Joseph Stiglitz and Amartya Sen. This drew on a broad survey of the literature to examine drivers of wellbeing. It suggested there were at least eight distinct drivers of wellbeing across the world (Stiglitz et al 2009):

- Material living standards (income, consumption and wealth)
- Health
- Education
- Personal activities, including work

- Political voice and governance
- Social connections and relationships (including care within families)
- Environment (including noise, air and water pollution, reduced ecosystem health and natural disasters)
- Insecurity (physical and economic).

Some elements in this list are closely related to income. Increasing income at the national level can, through an increased tax base, play an important role in ensuring society is able to support individuals' own efforts to improve their wellbeing through health, education and security. In other cases, such as social relations, any connection to income is more tenuous.

Significant headway in measuring national wellbeing has been made in Canada with the Canadian Index of Wellbeing,⁶ an attempt to capture the quality of life experienced by Canadians. It measures wellbeing across a wide range of areas that have an impact on quality of life. The index identifies eight pertinent areas, or domains: democratic engagement, community vitality, education, environment, healthy populations, living standards, leisure and culture, and time use. Like GDP, an overall single figure is derived to ensure the resulting measure of wellbeing is easily understood and intuitive. Over a 14-year period, 1994–2008, Canadian GDP increased by 31 per cent while quality of life, as represented by the Canadian index, increased by only 11 per cent. This raises important questions for policymakers about where the rest of the proceeds of growth go, if not to wellbeing, and lays down a challenge for them to improve future decisions in order to enhance Canadian wellbeing.

In the UK, the Office for National Statistics (ONS) is in the process of exploring how best to measure national wellbeing. Its stated aim is to find a measure that combines people's quality of life, environmental and sustainability issues and economic performance. It began with a consultation exercise to discover what people say matters to them. This found that family, friends, health, financial security, equality and fairness are fundamental in determining wellbeing. As a result, the ONS is now in the process of developing new measures of wellbeing that incorporate as many of these factors as possible. At the same time, it has produced a survey-based measure of subjective wellbeing that allows comparisons across the regions and countries of the UK. It will be a few years before it has refined its methodology, but it hopes eventually to have a high-quality, well-respected and regularly published measure of UK wellbeing. It will then be for policymakers to give it the prominence that it needs in order to become part of the public consciousness and central to economic debates.

The role of choice

Each of these three approaches – the Stiglitz/Sen commission and the Canadian and UK models – focus on wellbeing, but as noted already there is another, related element in what makes a worthwhile life: choice. The concept of capabilities, as developed by Amartya Sen, offers a broader framework for addressing welfare and human development. This defines progress as the expansion of capabilities, or people's ability to live lives that they have reason to value. The capability approach emphasises what people are able to achieve, to be or to do. It places value on the freedom of individuals to achieve lives and things that they value: to enhance their own wellbeing. In essence, the capability approach

⁶ See http://ciw.ca/en/

⁷ See http://www.ons.gov.uk/ons/guide-method/user-guidance/well-being/index.html

⁸ IPPR | Wellbeing, choice and sustainability: What should economic policy target in a new era economy?

defines worthwhile lives as involving wellbeing and choice, so these should be the twin pillars of economic and social policy.

Policymakers in the UK will need to build on the work of the ONS to shift the focus of economic debate towards increasing wellbeing. But they should also seek to expand the set of outcomes that people can potentially achieve. This might, for example, include improving the healthcare options that are on offer to people and the quality and range of educational establishments they can access. Prioritising an expansion in capabilities involves combining increased wellbeing with enhanced choice.

Implications for policymakers

Wellbeing and choice need to be brought into the policymaking process. A new era economy cannot be created simply by measuring the things people care about, just as economic growth does not directly result from the calculation of GDP. A commitment to sustainable wellbeing and choice would have to be reflected in day-to-day policymaking.

This means the current process for making policy decisions has to change. At present, the likely efficacy of policies is judged by cost–benefit analysis: an attempt to translate all costs and benefits into monetary terms and weigh up one against the other. But giving non-monetary effects a monetary value may underestimate them. And effects that cannot be translated into monetary values are often left out of the calculation altogether. This is the wrong approach. By only measuring what can be counted in monetary terms, things that matter for wellbeing and choice will be missed out.

While income is important for those who have little of it, for many there are other drivers of wellbeing. A purely monetary approach might lead policymakers to boost incomes by pushing people into low-skill, highly flexible agency employment. But an approach centred on wellbeing and choice would also account for potential drawbacks with such a policy prescription: the reduced time parents might have with their children, for example. A wellbeing and choice framework explicitly evaluates the importance of all the potential effects of a policy, weighing up how much an extra increment of income matters versus other potential effects.

Ultimately, people have worthwhile lives if they are able to take them in the direction they value and so increase their wellbeing. So, if progress means making lives more worthwhile, it means increasing people's choices and their ability to improve their own wellbeing. GDP growth may be *one* of the ways that lives can be made more worthwhile, but it should not be the ultimate arbiter of success and failure.

Sustainability

The focus of this paper so far has been the wellbeing and choices of the current population. But a new era economy should also be concerned with leaving future generations at least as well-off, in terms of wellbeing and choice, as the present generation. For perhaps the first time since the industrial revolution, there is a risk that this might not be the case across advanced economies.

The scientific evidence suggests climate change poses a major threat to our way of life if temperatures rise above a tipping point. More generally, there is good reason for concern about the impact that the current economic model is having on the natural environment and ecological systems. According to the Millennium Ecosystem Assessment, a survey of the environmental stock, nearly two-thirds of the 'services' provided by the environment are in decline globally (MEA 2005). This is not reflected in GDP measures.

Sustainability was defined by the landmark Brundtland Commission as ensuring that the needs of present generations are met without compromising the ability of future generations to meet their own needs or goals (UN 1987). A new era economy is one that ensures the natural resources and ecosystems that underpin the way we live are maintained at some 'sustainable' level. Policymakers must seek to enhance wellbeing and opportunity sustainably, delivering more worthwhile lives for today's population without compromising the ability of future generations to also live at least equally worthwhile lives.

Our current model encourages unsustainability. The focus on GDP involves maximising a present-day flow measure (the monetary value of all the goods and services produced in an economy in a single year), implying that we value everything that adds to that turnover and are happy to ignore everything that does not. Future harm stored up in the system simply does not register, while money spent creating problems for the future (such as profit made from polluting rivers) counts purely as a good – as does, rather perversely, any money spent on addressing those problems (such as costs of river clean up). In other words, a GDP-focused system has an inbuilt bias towards today, and not tomorrow.

In part, this is because neoclassical theory assumes the value of a resource will be reflected in its market price and that if demand exceeds supply, the price of the resource will rise. But, in many instances, prices do not necessarily reflect the actual value of a resource; for example, when the resource's value is poorly understood. Prices also fail to reflect a resource's real value when there are externality issues: the costs of using a resource are not faced by those using it. The most prominent example of this is when the cost in CO2 emissions of burning fossil fuels, which are borne not just by those burning the fuels but by the whole population.

It is not that growth per se is incompatible with sustainability – in the right form it can be hugely important in addressing some resource constraints. Innovation is the best driver of growth: it expands the range of opportunities and sources of wellbeing that human beings can derive from any set of resources. And innovation can also resolve resource constraints by finding alternative ways of doing things. Growth in GDP is necessary if governments and companies are to invest the huge sums required to design and deploy costly clean energy technologies. Only through innovation will the costs of these technologies come down, more people be able to use them and better products become available. Without cheap and viable alternatives to fossil-based energy, carbon emissions will not be sufficiently decoupled from GDP growth to prevent disastrous climate change. Growth derived from innovation therefore is an active contributor to improving lives in the present and can help us to address concerns about sustainability over the longer term (Defra 2011).

It should be clear that sustainability is not just about the environment. It is also important to maintain and sustain stocks of physical, economic, social and human capital. From an economic perspective, sustainability encompasses stocks of physical capital left to future generations, and the level of investment put into human capital including education and research. And it is not just the quantity of the stock of capital that matters but also the quality of the institutions that are passed onto future generations.

Sustainability and policymaking

In order to understand whether there is a risk that current activities are potentially impinging on the wellbeing and choices of future generations, policymakers need to keep tabs on indicators of sustainability as well as indicators of today's wellbeing and

opportunity. This could involve (following the recommendations of the Stiglitz/Sen commission) the use of balance sheets, which capture flows (such as current measures like GDP, or time spent on different activities in a year) and also the stocks of natural and other resources – including physical, social and human – that are passed on to future generations. In this way, increasing or decreasing stocks can be identified and scientific knowledge used, alongside more typical economic indicators such as price rises, to identify when critical threshold levels might be being approached (Stiglitz et al 2009).

This is not a trivial task. It requires the key stocks to be identified, inventories made, an understanding developed as to how they fluctuate, and – most difficult of all – predictions to be made about how they might be expected to evolve. Ideally, this needs to be done across the entire global economy, which as international climate negotiations have shown, requires a level of global cooperation and coordination that will be hard to achieve.

In one step in this direction, the World Bank has already created 'genuine savings' measures (also called 'adjusted net savings') for many countries. These contain some of the core elements that a sustainability balance sheet would need to examine, measuring traditional net savings and calculating (Bolt et al 2002):

- The value of the depletion of natural resources
- The costs associated with pollution damage, including economic and health effects
- Expenditures on education (which are treated as investment in human capital rather than consumption, as has traditionally been the case)
- Net foreign borrowing
- Net official transfers
- Capital depreciation (the consumption of capital)

Calculations of each of the above are either added to or deducted from the traditional net savings measure. This is a partial approach because it relies on turning everything into a monetary value and not all stocks can be translated reliably into income equivalents. But it is nonetheless an important initiative because it demonstrates that it is possible to estimate many of the components of a balance sheet of sustainability.

Despite the practical difficulties, it is clear there is a case for monitoring how much our current actions affect possibilities for future generations. There are few who would argue that it is right or proper for us to have a total disregard for the possibilities we leave behind for our children and for their children. A change of focus from GDP to the wellbeing and choices of current generations has to be augmented by consideration of the sustainability of current actions and their effect on future wellbeing and choices.

Conclusion

It is time to reassess our economic objectives. We have focused on GDP growth as the central goal of economic policy for too long. It may once have been useful as an intermediate indicator of rising incomes and the things that we should really care about: the ability to live more worthwhile lives, with greater wellbeing and more choice. But this is no longer the case.

The causal links between GDP growth and increases in median income and between incomes and enhanced wellbeing and opportunity have broken down. As a result, policy should now focus directly on the wellbeing and choice of current and future generations. Rather than being directed at maximising GDP, policy should seek the highest level of

wellbeing and choice for the current population that is compatible with offering at least the same level of wellbeing and choice to future generations.

Dethroning growth from the central role in policymaking is not the same as arguing for no growth. Increased GDP and income can play an important role in laying the foundations of wellbeing: infrastructure, health and education, for example. It can also help to ensure sustainability through the generation of funds for investment in green technologies.

But achieving more worthwhile lives - where people have greater wellbeing and choice - should now be the main aim of economic and social policy. GDP would be measured, not as the ultimate arbiter of success or failure, but rather to understand better the effects it has on wellbeing and choice. GDP growth would become one of many indicators that might contribute to sustainable worthwhile lives - in the right form, under the right circumstances.

Much more attention should also be paid to how the benefits of growth are distributed. Growth that does not benefit median earners, as the UK has experienced recently, is unlikely to increase wellbeing and choice for the majority of the population.

Other indicators would also be prioritised. These would range from alternative economic indicators, such as innovation, to social measures, such as cohesion within communities.

What is needed now is a clear political consensus around wellbeing, choice and sustainability as the primary goals of the economy and society and the creation of a system of governance that promotes them. This is the route to more worthwhile lives in the 21st century.

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