

Why GDP Doesn't Adequately Measure Prosperity

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Last December, following the announcement early in the month of the Japanese GDP statistics for quarter ending September, the market promptly fell in response by 3% in a day. For what it was worth, quarterly real annualised GDP growth was down 1.6% against expectations of growth of 2%. Similar heightened reactions occur in all markets when quarterly GDP statistics turn out to be materially different from anticipated figures. This seems irrational to us at various levels. First, these figures describe the past whereas markets should be looking to the future. Next, the data is preliminary and usually subject to much revision - often over extended periods of time, which means that the message delivered by the statistics at the time of release may be very different to the final result. For instance Japanese nominal GDP for March 2009 was originally announced as ¥480T but following multiple revisions since it is now as much as 2.6% lower, at ¥468T. The data is compromised further as in calculating real GDP it is subject to forecasts about price changes which make the resulting figures even more dependent on debatable assumptions - at least nominal GDP is tangible. But even aside from these criticisms we have a philosophical reservation with the message conveyed by this data and for that matter much of the other macroeconomic data upon which many commentators and investors rely.

Our question is: in a modern economy, does GDP actually do what it is meant to do, i.e. measure the output of a nation? Erik Brynjolfsson and Andrew McAfee in their recently published book 'The Second Machine Age' reckon that today's statistics fail because what matters today are 'ideas not things - mind, not matter; bits, not atoms; and interactions not transactions'. They continue with the observation that ironically in this age of ever expanding information, 'in many ways we know less about the sources of value in the economy than we did fifty years ago'. How, for example, does GDP account for the utility of free digital goods, intangibles and the sharing economy? Indeed, the proliferation of free goods such as 'Wikipedia', free texting through 'WhatsApp' or free telephony through 'Skype' pushes GDP downwards (as the alternatives cost money and were counted in GDP) but arguably access to these services actually improves our personal well being or economic welfare. Thus even though journalists - and the public in general - think of GDP growth as the best proxy for economic growth it is no longer necessarily the case.

To address this disconnect Brynjolfsson and McAfee introduce the concept of 'bounty' as a measure of unmeasured benefits that arise from technological innovation. At the same time they introduce the concept of 'spread' that argues that these same basic forces are driving large and growing differences in income, wealth and circumstances of people. For instance they argue that in the USA wealth and income has become increasingly polarised, with today half of total income accounted for by the top 10% of Americans. Spread of course, has always existed and unless a socialist Utopia miraculously materialises it will always be there. But is Brynjolfsson and McAfee's claim that spread has become more pronounced in recent years really correct? In the context of the USA in recent years the statistics seem to say so but do these measurements, like GDP above, fully capture important qualitative improvements in living standards for those at the lower end of the wealth spectrum? Also, at the higher end was the concentration of wealth amongst aristocratic landowners and railway barons of yesteryear not relatively greater than it is with modern day internet entrepreneurs? And if one broadens the sample away from the USA to think globally, has there not been a vast and ongoing improvement in living standards for the worst off as global poverty has reduced, helping to reduce spread globally? Of course, we have no statistics to substantiate our doubts but we nonetheless contest the notion that spread has actually widened in all but the narrowest of time frames and samples.

Brynjolfsson and McAfee correctly point out in support of their claim - that spread is increasing - that technological advances are increasingly doing away with the need for manual repetitive jobs in not just the industrial but now also the service sector. This means that the rewards accrue to a few owners of innovative businesses that benefit from exponentiality of digitalisation as characterised by Moore's Law and in the sense that bits can be replicated perfectly and delivered instantaneously and costlessly. We see this firsthand in one of our portfolio companies, Intuit. One of its products is 'Turbo Tax', an online tax preparation software product used by 66 million Americans to file their annual tax returns. This has made the jobs of hundreds

of thousands human tax preparers obsolete and is an example of technology automating a routine information processing job. At the margin, bounty has increased for the myriad of tax filers who benefit from the lower cost and the improved utility of the online product. But the financial rewards of this innovation accrue to the relatively small universe of shareholders of the company - most particularly Scott Cook, the founder, who is a billionaire - thereby increasing spread. It begs the question: is the bounty bigger than the spread? The question is, of course, unanswerable because neither concept is measurable and can only really be judged subjectively in the eyes of the beholder. Looking back over history, important technological innovations in the past, such as the invention of the automobile which rendered horse drawn transport and its attendant services obsolete, gave birth to new industries that ultimately employed many more people and created lasting bounty for all.

Indeed, today's improved bounty, driven by technological change, provides enhancements in quality, a proliferation in quantity and a reduced cost. Take digital versus analogue photographs as an example – better quality, massively increased quantity and no developing cost. For consumers this frees up cash to be spent on other goods and services so whilst nominal incomes may not be increasing, disposable income may be. Donald Boudreaux and Mark Perry in an article in the Wall Street Journal entitled 'The Myth of a Stagnant Middle Class' pointed to figures from the Bureau of Economic Analysis confirming that 'spending by households on many of modern life's "basics" – food at home, automobiles, clothing and footwear, household furnishings and equipment, and housing and utilities - fell from 53% of disposable income in 1950 to 44% in 1970 to 32% today' and in consequence 'the quantities and qualities of what ordinary Americans consume are closer to that of rich Americans than they were in decades past'. They give the example of electronic gadgets that 'every middle-class teenager can now afford' – smart phones, tablets etc. - which are hardly different in quality than those used by the top 1% of American income earners. So should it matter at all whether bounty or spread is larger, provided that people at the lower end of the wealth spectrum are seeing at least some improvement to their circumstances thanks to technological advances?

Perhaps not but, unlike in the past when automation and other forms of technological progress in aggregate created more jobs than they destroyed, the nature of technological advance today - digitalisation - is creating 'winner-take-all' markets and businesses. This is because digital goods have negligible capacity constraints. Like Intuit has demonstrated with Turbo Tax (or indeed Facebook with social media), a single website can in principle fill the demand from millions or even billions of customers. This trend is further reinforced by technological improvements in telecommunications and transportation which lead to much expanded markets. For instance Intuit's other business, software for small enterprises, has traditionally been a locally dominant industry. Intuit led in the USA, Sage in Europe, OBC in Japan, Xero in Australasia. But now, with the introduction of new Cloud based products distributed over the internet rather than from stores, Intuit is rolling out its new products in 190 countries. Those geographic barriers will probably prove more permeable in the future benefiting the company with the largest scale. Another feature of today is the way that companies benefit from 'demand side economies of scale' to further enhance the winner-takes-all business model. This is when users prefer products and services to which other people are flocking. Accountants who are instrumental in recommending Intuit's products to customers do so on account of familiarity and lower complexity. Marketplaces, such as eBay or the London Stock Exchange, payment platforms such as PayPal or Visa, or platforms such as Hargreaves Lansdown or Nintendo, offer more utility with scale. And finally, as a further competitive advantage, greater scale offers these businesses feedback effects such as a rich supply of data that is exclusive to them and unavailable to competitors.

Brynjolfsson and McAfee deduce that these unique features of technological advance today mean that the distribution of incomes in the US economy in the future will not be along a bell curve as in the recent past, when the median income would equal the average income. Instead in the future income will be distributed disproportionately, with a rising differential between average and median incomes as was probably the case before the 1940's and is the case globally today. In much the same way we think corporate success will tend to mirror this trend, with a small minority of globally positioned 'winner-takes-all' businesses destined to reap the lion's share of the rewards from the global economy. In a sense our focus on the narrow range of companies that we believe can endure and prosper over a 20 year time horizon is our attempt to identify those winners today. Aside from some of our consumer franchises that benefit from the globalisation of traditional consumer loyalties underwritten by well recognised brands, most other companies we own have 'winner-takes-all' characteristics through their exploitation of digital technology. Pearson, Disney, Reed Elsevier, eBay, Intuit and Nintendo are all examples. All still have much work to do to fulfil that potential. But just like today where the most successful individuals reap rewards that

reflect the extent of that global success, the most successful companies will probably in the future account for a bigger chunk of global market capitalisation than ever before.

So to return to our opening observation, GDP figures (and much other macro stuff besides) are in our view of questionable value in today's increasingly digital world. If anything, such measures provide a big distraction which is why we pay precious little attention to them and instead try predominantly to fathom which companies or business models will endure and prosper in the fast changing future. And finally, we should embrace technological advances for the bounty it brings as a primary driver of growth, economic value-added and, most important, improved quality of life for humanity.

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Sources: 'The Second Machine Age' by Erik Brynjolfsson and Andrew McAfee, W. W. Norton & Company Inc. 2014; 'The Myth of a Stagnant Middle Class' by Donald Boudreaux and Mark Perry, Wall Street Journal, 23 January 2013.

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