Measuring Greater Manchester’s economic performance through the lens of inclusive growth

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Introduction

Conventional economic statistics are an increasingly poor measure of economic welfare. The headline figure for growth in real GDP does record improvements in living standards over the long run; there is no doubt that living standards are higher now than they were thirty or fifty years ago. But the conventional metric omits many important aspects of economic progress. It excludes sustainability, whether environmental or financial. It ignores questions of distribution, and the role of unpaid work outside the market economy. It is also now failing to record well the structural economic change that is under way, affecting the way people work and the kinds of businesses and networks of businesses that are emerging. An active debate among economists about these shortcomings is under way, encompassing discussion of dashboards, measuring natural capital, looking at the policy implications of well-being or ‘happiness’ measures, and tracking the impact of the digital economy.¹

Meanwhile, as researchers explore these questions, Greater Manchester needs to develop a manageable approach to monitoring economic growth for all its residents. Those responsible for policy need to track the outcomes of their decisions, and voters ultimately need to be able to hold them to account. Addressing the need for good measures is all the more challenging because existing sub-national statistics are inadequate. The word ‘statistics’ is derived from ‘state’; measurement of the economy developed as a tool of governance. It is highly revealing about the centralisation of policy in this country over the course of the past century that the measurement of economic and social outcomes at anything below the national level has atrophied. While this is changing now, not least because of the devolution of the UK’s nations and now the English city devolution process, it adds to the immediate challenge in Greater Manchester.

This note describes the challenge in more detail, discusses what statistics are available and how they might be improved, and suggests an approach to monitoring who is benefiting from GM economic growth.

One key question is whether it is better to look for a single indicator – an improved version of GDP at the city region level, adjusted to take account of the distribution of economic opportunities – or for a small number of indicators. The trade-off is that the latter approach provides more useful information,
because there is more than one dimension to a successful economy; but it is easier for public debate to focus on a single number, if one can be found to overcome sufficiently the shortcomings of the current single number, GDP, or Gross Value Added in the context of the city region.

**Shortcomings of economic growth figures**

The success of the economy at the national level has long been seen in terms of growth in GDP, but the drawbacks of the focus on this number have become clearer. Some of these shortcomings are all the more severe when the lens of inclusive growth is applied to the statistics.

The headlines for a start simply focus on the quarterly or year-on-year growth rate of GDP, adjusted for inflation. They rarely even look at growth per capita, which is lower when the population is increasing. Still less do the figures shine any light on the distribution of growth, either in terms of different groups on the income scale or in terms of different regions, at least until other statistics making the analysis possible become available much later. Until very recently, the distributional questions have not been an issue politically, and so there has been little demand for more timely information. This is changing but the improvements will take time.

Since it was created, critics have pointed out that GDP omits a large amount of valuable but unpaid labour, especially child care and work in the home. The only household service counted in the figures is an estimate of the rent owner-occupiers would have to pay if they did not own their own property, on the grounds that this was a large figure and leaving it out could lead to big swings in GDP if people simply changed their housing tenure. Yet the ONS estimates that the value of childcare provided by family in friends is even larger, and again can lead to swings in GDP if people pay for crèches and nurseries instead. For people on low incomes, unpaid care for children or dependent adults is particularly important. It is not possible to know what public services are needed without better information about the need.

Another key omission from GDP is the cost of economic growth in terms of its impact on the environment, either short-term effects such as pollution, or longer term damage to natural assets, such as reduced biodiversity, the loss of green spaces in cities, the depletion of water tables or the removal of natural flood defences such as marshy flood plains. All of these forms of natural capital are vulnerable to the demands of development, which boost short term growth at the expense of the future. Again, this information is only just starting to be recorded – at the GM level with the recent launch of the first natural capital urban pioneer. And again, it is important for people on low incomes. Air quality is likely to be lower, green space rarer, in areas where there is greater poverty. Natural capital is one of the only forms of capital to which those with nothing else have access; at least we should know whether they are breathing more polluted air and have next to no access to nature. Public infrastructure capital is also important, for the same reason, and again the distribution of access to these assets for lower income households.
Finally, GDP was a measure of the aggregate economy devised for the age of mass production manufacturing. The character of the economy has changed greatly. It is now largely based on services. New types of business are being enabled by digital technologies. The nature of work has been changing. One problem is that the categorisation of occupations and industrial sectors dates from a time when manufacturing was far more important. There is fine detail for different occupations or sub-sectors in manufacturing, but broad-brush categories for services. We do not know how many people are working in the ‘sharing economy’ businesses, or on zero hours contracts. People working on software development or video games or social media marketing could select various high-level categories to describe their job. The GDP total is itself affected by difficulty in accounting for the value people get from free digital services, and by changes in business models such as the bundling of services, which makes it tricky to calculate the price index and therefore real growth.\textsuperscript{iv}
Box 1: Definitions of GDP and GVA

**Gross domestic product (GDP)** captures the value of goods and services that the UK produces during a given period. GDP can be expressed in nominal or real terms. Nominal GDP reflects the value of all the goods and services which are produced in the UK during a given period, using their price at the time of production. Real GDP also reflects the value of produced goods and services, but it uses constant consumer and producer price indices to remove the effects of rising price levels (inflation). Periods of real GDP growth are thought to enhance the welfare of individuals as economic growth allows average incomes to rise, supporting a higher level of consumption. Periods of negative real GDP growth are associated with lower incomes, lower consumption and consequently a lower standard of living.

GDP can be estimated using three different methods:

1. The production estimate is based on the value of final output in the economy less the inputs used up in the production process.
2. The expenditure estimate is based on the value of total expenditure on goods and services, excluding intermediate goods and services, produced in the domestic economy during a given period.
3. The income estimate measures the incomes earned by individuals (for example, wages) and corporations (for example, profits) directly from the production of outputs (goods and services).

Using the three different methods avoids sole reliance on one source and allows greater confidence in the overall estimation process. If perfect data were available, the three approaches would generate equal estimates. However, as the data collected and processed by ONS are based on a variety of sources, the three estimates can be different. In order to obtain the best estimate of GDP (the published figure), the estimates from all three approaches are reconciled.

**Gross Value Added (GVA)** measures the contribution to the economy of each individual producer, industry or sector.

The link between GVA and GDP can be defined as: $\text{GVA + taxes on products - subsidies on products} = \text{GDP}$
Regional data

This list of shortcomings applies to the general concept of GDP growth as an economic thermometer. When it comes to statistics for sub-national regions, the practical problems are worse because there has been too little gathering of the necessary data, and the figures needed are published with long delays. As statistics are the information the state needs for its own purposes, it is all too obvious that the distribution of economic success around the country has not – until now – been at all important to central government. This situation is improving, and there are prospects for much better information when the Office for National Statistics gains access to ‘administrative data’ – that is, information held by other government departments such as HMRC. Other advanced countries have long had such joined-up provision of statistics, but it is only just on its way in the UK.

Meanwhile, there are sources of information that can be put together to get a picture of the local GM economy.

The headline measure is regional Gross Value Added, calculated by starting with the national figure for the total and dividing it up by applying a regional growth indicator (calculated from various sources as a guide to how the regions is doing). This is rather arbitrary. The figures also only start to become available with a year’s delay compared to the national ones. It has not previously been possible to adjust the regional GVA for inflation either. The ONS is planning to introduce this measure, and has piloted an experimental version, however.

Box 2: Methods of calculating GVA

At present, ONS calculates regional GVA using the income approach, which involves adding up all the income earned by resident individuals or corporations in the production of goods and services. This excludes transfer payments such as state benefits which represent a redistribution of incomes previously earned and therefore do not add anything to current economic activity. These are measured in current prices. They therefore combine the effects of changes in both prices and quantities and do not allow for inflation or different regional price levels. Some income components (for example, profits) cannot easily be split into prices and volume. ONS is intending to introduce Gross Value Added compiled using the production approach (GVA(P)), i.e. the sum of all output less costs of intermediate inputs, or in National Accounts terms, intermediate consumption. This will be able to be adjusted for inflation.
The North West was the fastest-growing region in terms of GVA in 2015.

**Table 1: NUTS1 Regional GVA, 2015**

<table>
<thead>
<tr>
<th>NUTS1 regions</th>
<th>GVA per head (£)²</th>
<th>GVA per head growth on 2014 (%)</th>
<th>GVA per head index (UK=100)</th>
<th>Total GVA (£m)³</th>
<th>Total GVA growth on 2014 (%)</th>
<th>Share of UK total GVA (%)³</th>
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<td>United Kingdom²</td>
<td>25,351</td>
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<td>100.0</td>
<td>1,666,342</td>
<td>2.5</td>
<td>100.0</td>
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<td>18,927</td>
<td>2.8</td>
<td>74.7</td>
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<td>21,867</td>
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<td>86.3</td>
<td>156,872</td>
<td>3.6</td>
<td>9.4</td>
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<td>Yorkshire and The Humber</td>
<td>20,351</td>
<td>2.4</td>
<td>80.3</td>
<td>109,704</td>
<td>3.0</td>
<td>6.6</td>
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<td>East Midlands</td>
<td>20,929</td>
<td>1.0</td>
<td>82.6</td>
<td>97,887</td>
<td>1.8</td>
<td>5.9</td>
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<td>West Midlands</td>
<td>20,825</td>
<td>1.6</td>
<td>82.1</td>
<td>119,769</td>
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<td>East of England</td>
<td>23,979</td>
<td>1.7</td>
<td>94.6</td>
<td>145,651</td>
<td>2.7</td>
<td>8.7</td>
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<td>43,629</td>
<td>1.6</td>
<td>172.1</td>
<td>378,424</td>
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<td>22.7</td>
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<td>27,847</td>
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<td>169.8</td>
<td>249,174</td>
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<td>14.9</td>
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<td>South West</td>
<td>23,031</td>
<td>2.0</td>
<td>90.8</td>
<td>126,007</td>
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<td>7.6</td>
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<td>England</td>
<td>26,159</td>
<td>2.1</td>
<td>103.2</td>
<td>1,433,164</td>
<td>3.0</td>
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<td>Wales</td>
<td>18,002</td>
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<td>71.0</td>
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<td>3.0</td>
<td>3.3</td>
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<td>Scotland</td>
<td>23,685</td>
<td>1.8</td>
<td>93.4</td>
<td>127,260</td>
<td>2.3</td>
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<td>Northern Ireland</td>
<td>18,584</td>
<td>1.4</td>
<td>73.3</td>
<td>34,410</td>
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<tr>
<td>Extra-Regio</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>16,342</td>
<td>-19.3</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Source: Office for National Statistics

Notes:
1. GVA at current basic prices on workplace basis.
2. Figures may not sum due to rounding in totals; per head (4) figures are rounded to the nearest pound.
3. 2015 estimates are provisional.
4. Shares have been calculated as the regions’ proportions of the UK total excluding statistical discrepancy.
5. Per head and per head index figures exclude the statistical discrepancy and Extra-Regio: the off-shore contribution to GVA that cannot be assigned to any region. These are included in the total GVA figure.
However, growth of the GVA total by itself is not very informative. Policymakers need to have a sense of how well the economy is doing in terms of its productivity, which determines both the continuing capacity to grow and the potential scope for improved living standards.

As noted earlier, the inclusion of imputed rent distorts the regional comparison somewhat and is hardly relevant to productive potential. Ideally, for a truer measure of a regional economy’s economic strength, there would be statistics for the core ‘market’ economy, taking out imputed rent, government and also oil and gas. Chart 1 compares regions (in late 2014 – the most recent figures available) including and excluding the imputed rent component. Excluding it brings all the figures down, but with a greater reduction for London and SE England.

To understand productivity, regional GVA needs to be looked at on a per worker, or per hour worked, basis. The GVA figures for selected city regions compared to the UK average are shown below, although it should be noted that the UK is unique in European and the G7 being so skewed towards its capital. Only London and Aberdeen lie significantly above the UK average, the latter due to the oil contribution in 2014.
The overall picture in terms of understanding the economy at the regional or city region level is of a paucity of regional up-to-date statistics in general. Within that, there is less information on distribution. The annual publication gives a figure for average GVA per capita. Yet this is not a meaningful indicator of how growth is being shared for two reasons.

The first is that many people commute into and out of cities. GVA per capita mixes together workers and residents; many city centres have high GVA per capita because of the work done by commuters but can also also many people on low incomes living in them. The GVA per hour worked figures used above are a good indicator for thinking about productivity but not about living standards. One alternative for the latter is to look at the evolution of income per household. At the regional level, London and the South East again top the chart, and London has been accelerating away from other regions for most of the past 20 years.
However, this is a broad brush picture showing regional averages. For inclusive growth, it is necessary to know about the distribution of income and opportunities for different groups of people. One indicator of how averages can mislead is simply to look at the difference between the average income and the median (which is the mid-point of the income distribution). The average is always higher because it is pulled up by the fact that some people have very high incomes. Over time the average has also been rising faster than the median, reflecting rising inequality. Chart 4 shows this pattern for the UK as a whole.

**Chart 4: Mean and median household incomes before housing costs (GB)**

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**Note:** Incomes have been measured before housing costs have been deducted and are expressed in 2014-15 prices. All incomes have been equivalised using the modified OECD equivalence scale and are expressed in terms of equivalent amounts for a childless couple. Years refer to calendar years up to and including 1992 and to financial years from 1993-94 onwards.

Source: Authors’ calculations using the Family Resources Survey and Family Expenditure Survey, various years, and Muriel and Sibilla (2009).
To understand the inclusiveness or otherwise of growth in GM, it will be necessary to go beyond mean and median to looking at different portions of the distributional ladder, particularly in the lower half. The annual ASHE survey of earnings includes some regional that could be used to explore the distribution. ONS is beginning to use administrative data (including Census data but also data from HMRC) to produce indicators of income distribution at the local authority level, but this will not be available for two years.

There is beginning to be useful research looking at economic opportunities and incomes. The Inclusive Growth Analysis Unit at the University of Manchester led by Professor Ruth Lupton has produced a monitor including a range of indicators for city regions, with a focus on GM. These include indicators relevant to inclusion, such as skills and employment in low wage sectors, although they are not distributional. UoM researchers led by Professor Cecelia Wong have developed a mapping of commuting flows using census data. Researchers are looking at other aspects of urban inclusion using ‘big data’ techniques.

The pressing question is what indicator(s) are needed for policy makers and residents to be able to monitor progress on an everyday basis. The distribution of income and economic opportunities is not an abstraction: it refers to the characteristics of individuals living and working in specific places. The distribution of income and economic welfare, and economic geography, are different facets of the same issue. What information is needed to take inclusive growth seriously?

The types of indicators below divide into two categories: how well is the GM economy doing in terms of creating future opportunities for inclusive growth? Secondly, what is the distribution of the current outcomes for GM residents? Much of the discussion about inclusive growth focuses on tracking outcomes, but it is essential to track capabilities as well. In economic development terms, equipping people with the capabilities they need to improve outcomes for themselves is at the heart of the policy challenge.

**Sector monitoring**

GM has the particular issue of having many low value jobs in its high value sectors such as professional services, combined with faster growth in low-productivity sectors such as distribution. Low paying sectors’ (defined as sectors in which at least 30% of jobs pay below the low pay threshold) are also accounting for an increasing share of jobs in Greater Manchester: in 2000 they accounted for 35% of jobs rising to 40% in 2014.

There also appears to be limited upward mobility opportunities. In 2014, just over 23% of jobs paid less than a living wage in GM and median pay remains significantly below pre-recession levels. Circumstances should improve with the introduction of the living wage, but low wages currently contribute to high spend of over £1.5bn a year on tax credits. In 2012/13, some 219,000 GM residents received tax credits, 70% of whom were in work. This level of
dependence on the tax credit system is higher than all other major city regions except Birmingham and the West Midlands.

It is difficult tracking high value sectors not least because of the outdated classifications mentioned earlier. There is a need for finer-grained information for GM on the supply of and demand for high level skills, who has the skills, and where they live and work. Future research led by AMBS will be looking at the question of creating good (well paid and satisfying) jobs in GM, emphasising both the supply of skills and importantly ensuring there are growing businesses demanding those skills.

**Access to housing, infrastructure and natural capital**

Although again there is a lack of enough information, these kinds of assets are known to be especially important for people with low incomes. Housing quality and location is strongly linked to a number of indicators of poverty. Analysis of specific neighbourhoods is important. This was one of the pieces of work informing the 2009 MIER and it would be interesting to see it updated. Access to infrastructure and natural capital, the only capital those on low incomes can use, is often ignored. They are linked to economic and social opportunities and to health and well-being. They also interact with each other.

For example, transport infrastructure is important for linking people to jobs, and ensuring neighbourhoods are not socially isolated from other kinds of area. It is also a contributor to air pollution; children living in poor families are more likely to live in areas of poor air quality and are more vulnerable to asthma. Everybody needs to be able to get easily to green space for their health and well-being – the government target is that no-one lives more than 15 minutes' walk away from a park or open, accessible land. Low-income neighbourhoods are least likely to have this access.

Distributional questions are rarely explicitly incorporated in planning or infrastructure decisions, although always affected by those decisions. For example, debates about protecting the green belt from development rarely consider that the main impact of a green 'belt' around a city is to keep access to the green belt confined to those who live in nearby, usually affluent, suburbs, and detracts from the preservation or creation of green spaces within the city. This is a self-reinforcing process, as proximity to the green belt will boost house prices compared to elsewhere. The GM spatial framework will be a distributional framework too.

Housing is also important for distributional reasons as the major non-pension asset owned by many people. Wealth is highly unequally distributed (10% of people in the UK as a whole own 45% of total wealth) and those people on the lowest incomes have no wealth, including no liquid savings. Housing tenure is therefore a useful indicator of some asset ownership, and an asset against which people can secure loans.
Chart 5a: Wealth Distribution in the UK

Chart 5b: Wealth Distribution in the UK (bottom three deciles)
Not surprisingly, regionally, wealth in the UK is concentrated in the south (but not London, where there are areas with many poor households).

**Skills**

Improving skills is well understood to be a vital, if long term, element of prospects for growth. The economic evidence that the creation of skills of all kinds, not just cognitive skills, starts early, and so policy is more powerful if it begins with pre-school interventions. The monitoring of skills needs to incorporate a distributional aspect, so resources can be tilted towards children and young people whose home environment and location mean they are unlikely to achieve their potential. Underperforming schools need particular focus, and additional funding. The FE sector is an important means of improving skills among those from poorer neighbourhoods who have not done well at school; it has been badly underfunded, however. In the absence of relevant powers to affect school and college resourcing at the GM level, the available data (such as school results and progress scores) could be assembled with an eye to the distribution of skills, and also looking at any mismatch between residents’ skills and those required by employers.

The conundrum that GM is creating low value jobs even in high value sectors points to the existence of a classic economic development Catch 22 with regard to skills. This is that the incentive for individuals to invest in their own human capital is low when the available jobs are low value; and employers create low value jobs because of the low level of human capital prevailing in the available workforce. Breaking out of this may require quite active policy intervention in the encouragement of certain kinds of investment, matched with the provision of a potential workforce with suitable skills.

**New data sources**

It is important to consider developing new ‘big data’ sources, given the limitations of other statistics and the fact that some are still in development. There may be potential to explore new ‘big data’ sources for some of the dimensions discussed here. For example, air quality monitoring could potentially be mapped if there are enough sensors. Web scraped data may be a source of business or employment information not available from other sources, while consumer data (e.g. Tesco Clubcard use) can provide indicators of the types of consumers – and hence those excluded from, or with limited access to market interactions.

There are several ongoing projects and programmes within Greater Manchester that aim to address many of these issues individually. Across Greater Manchester, GM Connect is supporting the use and sharing of multiple data sources. The health sector in particular provides a vast array of data that is largely inaccessible outside of the health sector. Providing opportunities to better utilise this data – without harming patient confidentiality
could support better understanding of ill health, need and inclusion across the city region.

Additionally, smart city programmes such as CityVerve and Triangulum aim to capture, monitor, share and use new information on topics as varied as health in the home and air quality. Both projects aim to capture more information to be used more widely – for example, in analysing air quality and passing this information to people with COPD.

Tools have also been developed around the UK and within GM that access, visualise and analyse a range of open data. In particular, data.gov.uk provides multiple data sources for a variety of public sector information, while the Consumer Data Research Centre provides access to a range of consumer data to provide an overview of an area. Within GM, the development of MappingGM has helped to visualise information on land availability and to support planning processes. This could easily be expanded to map and visualise other socio-economic and socio-demographic data.

**Inclusive growth outcomes**

There is no shortage of potential indicators of whether or not GM’s growth is inclusive. These begin with the headline figures for GVA growth and productivity, because without some growth there will not be any inclusive growth. Table 2 gives the indicator set proposed by the Inclusive Growth Analysis Unit.\(^\text{x}\)

<table>
<thead>
<tr>
<th>Table 2: Building blocks of the IGAU’s inclusive growth monitor</th>
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<tr>
<td><strong>Table 1: Building blocks of the inclusive growth monitor</strong></td>
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<tr>
<td><strong>Theme</strong></td>
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<td>Inclusion</td>
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These are all important indicators, and all ones that decision-makers will want to track, but there are two drawbacks. The immediate one is that a distributional dimension to monitoring is needed, which could be spatial – looking at neighbourhoods or postcodes – or could be in terms of incomes. A second is that there are many indicators in the table, and one could think of adding others, including those described above covering the creation of the capacity for future growth to become more inclusive. For public debate and accountability, even if one single number is too few, 20 is too many, especially when some would ideally have distributions attached.

This explains the appeal of finding a single number, an index of inclusive GVA that would summarise the state of play, at least as it moved over time. It is always possible to combine different indicators in an index. This has the obvious drawback that if you want to understand why it has changed over time, you need to unpick it and go back to the components to analyse it.

It also has a far less obvious drawback, which is that combining different indicators involves giving them an implied weighting against each other.xii So for example, creating an index combining GVA/hour worked and an inequality index (say the ratio of the mean to the median household income) embeds in the index a judgement that there is a trade-off between the two, and a judgment about how much inequality you will accept for an increase in productivity. There might or might not be a trade-off in reality, certainly over the medium term; and even if there is, any choice about how much of one to sacrifice for the other ought to be an explicit matter for public debate. In contrast to GDP and measures like GVA derived from it, which has its origins in economic welfare theory and is constructed according to accounting principles so that items which ought to add up do add up and are consistent with each other, an ‘inclusive GVA’ index would be ad hoc.

An inclusive growth dashboard

Weighing up these considerations, my preference is for an inclusive growth headline dashboard with just a small number of indicators; backed of course by all the detailed indicators discussed above.

It would need to continue to measure the growth in aggregate output – and therefore include GVA – but also cover the two other main dimensions of inclusive growth – earnings and employment. A core basket of indicators would therefore be:

- GVA per hour worked down to a local level;
- A measure of earnings, including a distributional measure (comparing the mean and median, the Gini coefficient or fixed percentiles);
- A measure of employment.
These should be produced in the same release and at the same time – or even ahead of – national GDP releases, so that they are clearly seen to be the appropriate measure of the state of the UK’s economies.

References


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ii Coyle (2014); Bean (2016)
iii https://www.greatermanchesterca.gov.uk/download/.../item_4_annex_gm_pathfinder
iv Coyle (2015); (also 2017 forthcoming)
v IFS (2016)
vii http://www.commute-flow.net/
viii http://ubdc.ac.uk/research/research-projects/urban-research/
ix Sen (1999)
See Heckman (2006) for summary of the economic evidence
xii See Ravallion (2010)