

Economic Forecasts for Greater Manchester

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Executive Summary

Background

- This report provides the headline analysis of the Greater Manchester Forecasting Model (GMFM-2018). It also provides the results of the Accelerated Growth Scenario (AGS) for Greater Manchester (GM). The AGS is modelled to replicate the growth rates that reflect the ambitions set out in the Greater Manchester Strategy, and it is designed to represent GM's role in the potential of the Northern Powerhouse.
- The GMFM is provided by an independent forecasting firm Oxford Economics, and uses assumptions from their world and UK economic models, including the latest views on productivity, employment growth, and major risks – as far as they are understood up to the end of 2018 – such as Brexit. These are detailed in the main report, including a reasoned justification for the growth rates used throughout the analysis.
- The analysis focuses on the main GMFM variables, which includes: total economic output (and GVA by sector); total employment; productivity (GVA per employment – full-time equivalents), resident employment rates (the proportion of residents working), and population demographics.
- **The main timeframe for forecasts is 2016 to 2036.** This is consistent with the 20 year horizon provided in all previous GMFM reports, and includes - as its starting point - the latest 'actual' ONS data inputs (not provisional data) for GVA, employment, and population at the time of writing.

GMFM-2018 Main findings

- GMFM-2018 shows GVA growing at 1.7 % per year up to 2036, the same headline rate of growth shown in the previous GMFM-2017 model.
- Productivity is forecast to grow at 1.3% per annum, (0.1% per year more than the previous forecast model, GMFM-2017), reflecting slightly better outturn in productivity data from ONS during the period 2017-2018.
- Total employment is forecast to grow at 0.5% per year in GM, equating to a net increase of 140,100 employees 2016 to 2036, compared to 141,000 in the previous GMFM-2017 published model.
- Employment growth is largely driven by Business, Financial, and Professional Services - accounting for over half of the net increase in the total number of jobs based in GM, up to 2036.
- Sectors are broadly similar in their employment prospects compared to the previous published results, with stronger jobs growth in logistics, and professional services; and slightly slower growth in wholesale and retail.
- The baseline forecast suggests that total population will grow by 189,800 from 2016 to 2036, down 17,500 compared to GMFM-2017, due to slower rates of natural increase (slightly higher mortality rates).
- Resident employment, adjusting for residents that may hold more than one job (and commuting), GMFM-2018 forecasts a net increase of 165,000 residents in employment, living within GM.

Accelerated Growth Scenario (AGS)

- GVA is forecast to grow at an average annual rate of 2.3% between 2016 and 2036 (the UK at 1.7%). Under the AGS, GM would grow faster than the UK – reflecting the city-region's ambitions to help narrow the 'growth gap'. This is equivalent to an additional £36.8 billion of economic activity in GM by 2036.
- Stronger GVA growth is supported by a strong shift towards higher value sectors. This means productivity growth in GM is stronger in the AGS scenario than the baseline forecast, averaging productivity growth of 1.6% per year from 2016 to 2036.
- Total employment in GM is forecast to rise by 208,000 between 2016 and 2036 in the AGS-2018 scenario, (190,000 in AGS-2017), equivalent to 68,000 more jobs than the GMFM-2018 baseline; and 19,000 more than last year's AGS.
- Population growth is stronger in the AGS scenario than in the baseline forecast. Total population is projected to rise by 240,000 from 2016 to 2036. This is 50,000 people more than the GMFM-2018 baseline.
- The AGS assumes that a majority of new jobs will be taken by GM residents. Adjusting for residents that may hold more than one job, this equates to an additional 67,000 GM residents in employment compared with the baseline.

Key tables

A) Headline growth, GMFM-2018 and AGS-2018, 2016 to 2036

Model:		GMFM-2018		AGS-2018	
Measure:	Net increase/ decrease	% Compound Annual Growth	Net increase/ decrease	% Compound Annual Growth	
Period:	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	2016 to 2036	
GM	GVA	£25,800 million	1.7%	£36,800 million	2.3%
	Productivity	£12,600	1.3%	£16,900	1.6%
	Employment	140,100	0.5%	208,000	0.7%
	Population	189,800	0.3%	240,000	0.4%

Source: Oxford Economics GMFM-2018. AGS-2018

B) Baseline GMFM-2018 forecast by main sectors in GM, net increase 2016 to 2036

Main GMCA defined sectors		GVA (rounded)		Employment (rounded)	
Measure	Net increase/ decrease (millions)	% Compound Annual Growth	Net increase/ decrease	% Compound Annual Growth	
Period	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	2016 to 2036	
Construction	£910m	1.1%	16,400	0.9%	
Manufacturing ¹	£2,710m	1.5%	-21,300	-0.9%	
Logistics (transport and storage)	£765m	1.2%	5,200	0.3%	
Wholesale and retail	£2,960m	1.7%	18,900	0.4%	
Other personal services	£30m	0.2%	500	0.1%	
Business, financial, professional services	£9,450m	2.2%	75,000	1.1%	
Creative and digital industries	£2,960m	2.6%	11,600	0.7%	
Hospitality, tourism and sport	£950m	1.4%	24,100	0.9%	
Education	£190m	0.2%	-2,900	-0.1%	
Health and social care	£2,120m	1.6%	21,000	0.6%	
Public administration ²	-£200m	-0.3%	-6,500	-0.6%	

Source: Oxford Economics GMFM-2018. Main sectors defined by GMCA, excludes agriculture and utilities

C) AGS-2018 forecast for GVA and employment by main sectors in GM, 2016 to 2036

Main GMCA defined sectors		GVA (rounded)		Employment (rounded)	
Measure	Net increase/ decrease (millions)	% Compound Annual Growth	Net increase/ decrease	% Compound Annual Growth	
Period	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	2016 to 2036	
Construction	£1,100m	1.3%	19,100	1.1%	
Manufacturing	£3,410m	1.8%	-17,200	-0.8%	
Logistics (transport and storage)	£1,350m	1.9%	11,600	0.7%	
Wholesale and retail	£4,520m	2.4%	31,200	0.7%	
Personal services	£170m	0.9%	1,800	0.4%	
Business, financial, professional services	£11,210m	2.5%	86,100	1.2%	
Creative and digital industries	£5,000m	3.9%	16,300	0.9%	
Hospitality, tourism and sport	£1,490m	2.1%	33,000	1.2%	
Education	£1,220m	1.3%	270	0.0%	
Health and social care	£3,640m	2.5%	29,400	0.8%	
Public administration ²	£570m	0.9%	-2,600	-0.3%	

Source: Oxford Economics GMFM-2018. Main sectors defined by GMCA, excludes agriculture and utilities

¹ GMCA definition, includes manufacturing – engineering consultancy

² Excludes: Education, Health and Social Care

1. Introduction

Background

- 1.1. Greater Manchester (GM) has consistently invested in developing a robust evidence base to inform strategy and policy development. Since 2005, a central part of this evidence base has been the Greater Manchester Forecasting Model (GMFM).
- 1.2. Updated annually, the GMFM provides economic and demographic forecasts for GM local authorities and benchmark UK cities, regions, and nations. The GMFM has been produced by Oxford Economics (OE) since 2005, and is part of, and fully consistent with, their suite of global, national, and regional models.
- 1.3. The main model outputs are a set of 'baseline case' forecasts (GMFM2018) representing 'business as usual' - which take into account risks such as the UK's long-term productivity challenge - and the modelled risks from Brexit.³
- 1.4. The GMFM includes the following main variables:
 - Total economic output, referred to as real-Gross Value Added (GVA)⁴, which includes the profits and wages (less costs) of goods produced by firms in GM;
 - Total employment within GM's firms, including self-employment and employees, broken down by industry sector;
 - Productivity, of employees in GM workplaces, calculated by dividing total GVA by total employment;
 - Resident employment and unemployment totals and rates, and the main occupational groups and headline qualifications held by the workforce;
 - Demographics and migration rates, including total population by broad age group, and migration assumptions both internal to the UK and international migration.
- 1.5. The GMFM is the starting point for looking at scenarios or alternate futures. OE were commissioned to update the Accelerated Growth Scenario (AGS-2018) for GM. The AGS sets out the growth rates (GVA, jobs, population) that reflect the ambitions set out in the Greater Manchester Strategy, and it is also designed to represent GM playing a significant role in the ambitions of the Northern Powerhouse.
- 1.6. This report is accompanied by a detailed data release providing historic and forecast data for all Gross Value Added (GVA), employment, and population variables for both the GMFM-2017 and AGS-2017. These can be downloaded from the GMCA website.

Report structure

- 1.7. The remainder of this report is set out as follows:
 - **Section 2**, provides the main assumptions headlines from the GMFM-2018 forecast;
 - **Section 3**, provides the main assumption and headlines from the AGS-2018 scenario;
 - **Annex 1**, shows a list of the main data sources input to the GMFM and AGS; and
 - **Annex 2**, shows a comparison of the GMFM/Oxford forecasts with other forecasts.

³ More detail on Brexit is included in the main body of the report. The assumptions are based on Oxford Economics in late 2018, and represent their central view on the risks of Brexit. More detailed comparison of different leading forecasters is included in Institute for Government (2018): Understanding the economic impact of Brexit (<https://www.instituteforgovernment.org.uk/sites/default/files/publications/2018%20IfG%20%20Brexit%20impact%20%5Bfinal%20for%20web%5D.pdf>) – see Annex 1, and is broadly consistent with Government's own impact analysis published in December 2018, see: HMG ("018): EU Exit: Long-term economic analysis (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/759763/28_November_EU_Exit_Long-Term_Economic_Analysis_Technical_Reference_Paper.PDF)

⁴ Real GVA – figures expressed as constant prices, removing the effects of inflation, and using regional deflators

2. GMFM-2018 baseline forecast

Introduction

- 1.1 This section presents the latest forecasts produced in the GMFM-2018. It includes a summary of the key assumptions underpinning the baseline forecasts; a comparison of the projected level of growth for the UK by OE and other leading forecasters, and headline forecasts for GVA, employment, industry sector, population, and unemployment.

Key messages

- **GMFM-2018** shows **GVA** growing at 1.7 % per year up to 2036, the same headline rate of growth shown in the previous GMFM-2017 model.
- **Productivity** is forecast to grow at 1.3% per annum, (0.1% per year more than in the GMFM-2017), reflecting slightly better outturn in productivity data from ONS reported during 2017/18.
- **Total employment** is forecast to grow at 0.5% per year in GM, equating to a net increase of 140,100 employees 2016 to 2036, compared to 141,000 in the previous model.
- Employment growth in GMFM-2018 is largely driven by **Business, Financial, and Professional Services** – accounting for over half (75,000) of the net increase in jobs by 2036 compared with the level in 2016.
- **Job losses in Manufacturing** are forecast (a decrease of 21,000 on the level in 2016, however productivity improvements (particularly in Advanced Manufacturing) continue to drive GVA growth in the industry.
- **Sectors are broadly similar in their employment prospects compared to last year's model**, with similar growth in construction; **slightly stronger jobs growth in logistics, and professional services**; but **slower growth in wholesale and retail employment**.
- **The baseline forecast suggests that total population will grow by 189,800 from 2016 to 2036, down 17,500 compared to GMFM-2017.** This is influenced by slightly slower rates of natural increase (i.e. lower birth rates and also higher mortality rates, compared to the previous GMFM-2017 model).
- **Resident employment**, adjusting for new assumptions for residents that may hold more than one job (and commuting), GMFM-2018 forecasts a net increase of 165,000 residents in employment, 48,000 higher than level reported in the GMFM-2017 model.

Forecast modelling assumptions

Macro economy

- 1.2 **Oxford Economics (OE) remain cautious about the forecast pace of growth in the UK in the medium term to 2020.** In the Government's 'Consensus Report' of different forecasting organisations (detailed in Annex 2), OE suggests growth of 1.5% in 2018, 1.7% in 2019, and 1.9% in 2020. This ranks OE in the mid to upper growth rate in the short to medium term, and is broadly similar to their view published in the GMFM-2017 report. In comparison, the Office for Budget Responsibility (OBR) forecast stands at 1.5% for 2018.⁵ OE forecast employment to rise on average in the UK by 0.5% per year in 2018, compared with around 2% per year in the build-up to the referendum, and this is likely to lead to a modest increase in unemployment.

The productivity puzzle

- 1.3 In the period since the global financial crises, productivity growth has consistently fallen short of expectations. **It is increasingly unrealistic to forecast that productivity will consistently regain pre-crisis growth rates, when the reality continues to suggest otherwise.** Furthermore, the persistence of low interest rates, and little prospect for impactful increases over the next few years, means corporate insolvencies have stayed low. This means that weak firms have been more likely to keep going, rather than being wound up and replaced by more dynamic organisations.⁶
- 1.4 Evidence from the BoE points to a permanent, structural rather than cyclical, slow-down in UK productivity.⁷ **OE expect labour productivity growth to average 1.3% per year, from 2016 to 2036 – slightly higher than GMFM-2017** and includes the small improvement in ONS's national productivity data during 2018. In the immediate short term, there are heightened risks that productivity may slow as investment in capital could be withheld until the full implications of Brexit are clear. In the longer term, **slower (than pre-recession 20 year trends) productivity growth is likely to be the main constraint on growth.**

⁵ Office for Budget Responsibility (2018): Near term forecast

<http://obr.uk/forecasts-in-depth/the-economy-forecast/real-gdp-growth>

⁶ Source: BoE (2018): The UK's Productivity Problem – Speech by Andrew Haldane; <https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/the-uks-productivity-problem-hub-no-spokes-speech-by-andy-haldane.pdf> Further analysis is presented in the Greater Manchester Productivity and Prosperity Review – Audit of Productivity (Forthcoming)

⁷ Ibid

Brexit risks

1.5 Virtually all assessments of the regional economic impacts of Brexit agree that those impacts are negative.⁸ However, **there is some disagreement about whether GM and the wider North are likely to be hit harder, or less hard, than other parts of the UK. The Government's own economic analysis forecast that UK GDP would be 1.4 % lower over 15 years if the UK remains in the European Economic Area, 4.9 % lower if a free trade deal is agreed, and 7.6 % lower if the UK leaves the EU without a deal and reverts to World Trade Organisation (WTO) terms.**⁹

1.6 **The baseline GMFM forecast incorporates Oxford Economics' assessment of Brexit's impact on economic growth, both for Greater Manchester and across the UK.** The forecast assumes a successful completion of the withdrawal agreement, meaning that after the UK formally leaves the EU in March 2019, there is then a 21-month transition period during which trading arrangements remain unchanged, followed by a form of free trade agreement (FTA). However, given the difficulty in finding a solution to the issue of the Irish border, there remains a risk that negotiations break down, and that the UK is forced to trade with the EU according to WTO rules from March 2019 – which would potentially be the most economically-damaging outcome. The UK's impending departure from the EU will weigh on productivity growth, with negative effects building over time. Reasons for this include:

- **Trade destruction:** While empirical research points to a positive relationship between the degree of trade openness and productivity, the UK is likely to see some trade destruction post-Brexit for the following reasons:
 1. **Friction in trade and supply chains:** Whilst the forecast assumes the UK will be able to agree tariff-free trade across a range of goods sectors, non-tariff barriers (such as enforcement of different market standards and regulations) are likely to build over time as the UK develops its own standards, moving away from EU regulations.
 2. **Other non-tariff barriers and border checks:** Though the UK government hopes to agree a deal which allows "frictionless trade", it is likely that some form of customs checks will be introduced, in particular to demonstrate regulatory compliance and "rules of origin". The extra administrative costs and delays will add to the cost of trade.
 3. **Loss of trade agreements:** As the UK leaves the EU, it will cease to be part of free trade agreements that it previously accessed through its membership of the EU. And finally, changes in the UK's relationship with the EU will bring about shifts in the UK's comparative advantage, and is likely to have a negative impact on productivity.
- **Reduction in FDI:** Foreign direct investment (FDI) is generally thought to enhance economy-wide productivity. If firms perceive that Brexit will dampen the UK's long-term growth prospects and, therefore, potential rates of return, the UK will be a less attractive destination for FDI. In addition, some firms currently see the UK as a good place to invest because membership of the EU has offered these firms a gateway to EU markets. The departure from the EU might encourage them to look to other markets to act as such a gateway.
- **Weaker business investment:** Brexit uncertainty also weighs on business investment which has been weak in the UK for a number of years. While corporate profitability remains firm, investment intentions are subdued, with Brexit-related uncertainty a key factor. This will persist until the UK's future trading relationship with the EU becomes clearer. Therefore, investment growth is likely to remain constrained in the short term.
- **Lower immigration:** It is likely that a more restrictive immigration policy will be introduced once the UK leaves the EU. As well as the negative on quantity of labour discussed above, this may also lead to a deterioration in the quality of the labour force, if Brexit discourages skilled workers from working in the UK. Migration statistics already show a significant net fall in EU8 workers coming to work in the UK.

⁸ Institute for Government (2018): Understanding the economic impact of Brexit

⁹ The Government's publication *EU Exit: Long-term Analysis Technical Reference Paper* includes analysis of the regional impacts of different scenarios for the UK's future relationship with the EU, compared with today's arrangements, including:

- The policy position set out by the Government in the July 2018 White Paper on *The future relationship between the United Kingdom and the European Union* ("modelled White Paper");
- A hypothetical Free Trade Agreement (FTA), with zero tariffs, reflecting average FTA non-tariff costs such as being outside the Customs Union and standard customs arrangements with the EU, regulatory barriers and other costs ("modelled average FTA");
- An EEA-type scenario, which reflects being outside of the Customs Union and as such primarily reflects the costs of standard customs arrangements with the EU, but with lower non-tariff costs and regulatory barriers than the FTA scenario because the UK would remain within the EU Single Market. Zero tariffs are applied ("modelled EEA-type");
- A 'no deal scenario' based on an assessment of average non-tariff barriers (NTBs) between countries trading on non-preferential World Trade Organization (WTO) terms and applying EU applied Most Favoured Nation (MFN) tariffs ("modelled no deal").

The equivalent North West of England figures in the above report are: -1.4% (EU single market), -5.8% (Free Trade Agreement), and -9.4% (WTO terms)

Headline economic indicators

- 1.7 **Total GVA** in GM stood at £62.7 billion in 2016 (latest actuals in the GMFM-2018). In the baseline forecast, GVA is forecast to grow at an average annual rate of 1.7% per year up to 2036, in line with the UK average. This is equivalent to an additional £25.8 billion of economic activity in GM's economy in 2036.¹⁰
- 1.8 **Labour productivity** (expressed as GVA per employment) in GM stood at £44,100 in 2016 (latest actual).¹¹ It is forecast to grow at 1.3% per annum, (0.1% per year more than GMFM-2017), reflecting slightly better outturn in productivity data from ONS during 2017/18.
- 1.9 **Total employment** in GM stood at 1.4 million in 2016, and is forecast to rise by 140,100 by 2036 (1,200 lower than the previous GMFM-2017 - rounded). Employment will grow at an annual average of 0.5 % per year compared to the UK average of 0.4 % per annum up to 2036.

Figure 3: GMFM-2017 baseline forecasts for GM and UK (latest vs previous model)

Model:		GMFM-2018		Previous GMFM-2017	
Measure:		Net increase/ decrease	% Compound Annual Growth	Net increase/ decrease	% Compound Annual Growth
Period:		Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	2016 to 2036
GM	GVA	+£25,800 million	1.7%	+£23,900 million	1.7%
	Productivity	+£12,600	1.3%	+£11,800	1.2%
	Employment	+140,100	0.5%	+141,200	0.5%
	Population	+189,800	0.3%	+207,500	0.4%
UK average	GVA	+£689,000 million	1.7%	+£674,800 million	1.8%
	Productivity	+£14,900	1.3%	+£14,400	1.3%
	Employment	+2,736,000	0.4%	+3,024,800	0.4%
	Population	+4,888,000	0.4%	+6,748,600	0.5%

Source: Oxford Economics GMFM2018 vs GMFM-2017 (GMFM-2018 in 2015 constant prices, GMFM-2017 in 2013 prices)

Growth by industry sector

- 1.10 Employment growth in the UK is expected to continue to be driven by the service sector, with continued job losses in manufacturing – but rising GVA through productivity growth. Within GM, GVA growth will be heavily dependent on private services driving overall growth. The main sectors in terms of **GVA growth** (difference in levels from 2016 to 2036 for GMCA defined sectors) are:
- **Business, Financial, and Professional Services:** +£9,447m (2.2% per annum growth);
 - **Wholesale and Retail:** +£2,963m (1.7% per annum growth);
 - **Creative and Digital Industries:** +£2,958m (2.6% per annum growth); and
 - **Manufacturing:** +£2,711m (1.5% per annum growth).
- 1.11 The latest forecast shows that long-term trends for **employment growth** by key sector in GM remain largely unchanged. The main sectors in terms of employment growth, are:
- **Business, Financial and Professional services:** +75,000 (1.1% per annum);
 - **Hospitality, Tourism, Sport:** +24,100 (0.9% per annum)¹²
 - **Wholesale and Retail:** +18,900 (0.4% per annum)¹³
 - **Construction:** +16,400 (0.9% per annum).¹⁴
- 1.12 Further job losses are forecast in GM's Manufacturing as productivity improvements result in labour being substituted by technology; and despite uncertainty still remaining over the scale of austerity measures, the baseline suggests that 6,500 jobs will be lost in GM's Public Administration (excluding education and health) up to 2036.

¹⁰ GMFM-2018 GVA is expressed in 2015 constant prices

¹¹ GMFM estimates labour productivity (GVA per employment) to be £45,000 in 2018

¹² Hospitality, Tourism and Sport up from +18,800 in GMFM-2017

¹³ Wholesale and Retail forecast down from +27,200 in GMFM-2017

¹⁴ Construction forecast similar to GMFM-2017

Figure 5: Baseline GMFM-2018 forecast by main sectors in GM, net increase 2016 to 2036

GMCA defined sectors	GVA (rounded)		Employment (rounded)		
	Measure	Net increase/ decrease (millions)	% Compound Annual Growth	Net increase/ decrease	% Compound Annual Growth
	Period	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	2016 to 2036
	Construction	£910m	1.1%	16,400	0.9%
Manufacturing¹⁵	£2,710m	1.5%	-21,300	-0.9%	
Logistics (transport and storage)	£770m	1.2%	5,200	0.3%	
Wholesale and retail	£2,960m	1.7%	18,900	0.4%	
Other personal services	£30m	0.2%	500	0.1%	
Business, financial, professional services	£9,450m	2.2%	75,000	1.1%	
Creative and digital industries	£2,960m	2.6%	11,600	0.7%	
Hospitality, tourism and sport	£950m	1.4%	24,100	0.9%	
Education	£190m	0.2%	-2,900	-0.1%	
Health and social care	£2,120m	1.6%	21,000	0.6%	
Public administration¹⁶	-£200m	-0.3%	-6,500	-0.6%	

Source: Oxford Economics GMFM-2018. Main industry sectors defined by GMCA

Resident employment rate and unemployment

- 1.13 In terms of **resident employment** (jobs taken by people also living in GM), the long-term view – encompassing 2016 to 2036 – highlights an additional 165,400 residents in employment (up from 117,000 in GMFM-2017), growing at 0.6% per year, similar to the average for the UK (0.4% per year).
- 1.14 The GM **resident employment rate** is forecast to increase from 70.5% in 2016 to 75.3% by 2036, compared with 77.4% in the UK. Greater Manchester's economic performance will be sufficient to narrow, but not close, the gap with the UK on this measure, under the baseline forecast.
- 1.15 A similar trend is forecast for **unemployment**. The proportion of people aged 16-to-64 living in Greater Manchester who are unemployed is projected to be 2.4% in 2036, lower than 2016's figure of 2.6%. The comparable claimant unemployment rate for the UK in 2036 is 2.0%.

Figure 6: Baseline GMFM-2017 forecast resident employment 2016 to 2036

Measure	Resident employment		(ILO) Unemployment	
	Net increase/ decrease	% Compound Annual Growth	Net increase/ decrease	% Compound Annual Growth
	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	2016 to 2036
GM	165,400	0.6%	-3,300	-0.4%
UK	2,612,000	0.4%	68,000	0.4%

Source: Oxford Economics GMFM-2018

¹⁵ GMCA definition, includes manufacturing – engineering consultancy

¹⁶ Excludes: Education, Health and Social Care

Population and migration

- 1.16 **The baseline forecast suggests that total population will grow by 189,800 from 2016 to 2036,¹⁷ down 17,500 compared to GMFM-2017.** This is influenced by slightly slower rates of natural increase (i.e. lower birth rates and higher mortality rates compared to GMFM-2017).
- 1.17 The number of **working age residents**, defined as those aged 16 to 64, is forecast to show a modest rise over the next 10 years, before falling back after 2028, and therefore the working age population of GM is forecast to be just under 1.8 million in 2036, similar to the 2016 level.
- 1.18 **Future population growth in GM is underpinned by positive natural change** (i.e. more births than deaths). In the short term, net migration is also expected to make a positive contribution to the region's population growth. However, this trend is expected to reverse beyond the early-to- mid-2020s, as more stringent immigration policy is introduced, and the UK's economic performance relative to other European countries narrows, meaning the UK becomes a less attractive destination for international migrants.

Figure 7: Baseline GMFM-2018 forecast population, 2016 to 2036

Period	GMFM-2018			Previous GMFM-2017		
	Net increase/ decrease	Population % Compound Annual Growth	Net migration change	Net increase/ decrease	Population % Compound Annual Growth	Net migration change
	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036
GM	189,800	0.3%	-16,800	207,500	0.4%	-9,500
UK	4,888,000	0.4%	-246,000	6,749,000	0.5%	-245,000

Source: Oxford Economics GMFM-2018

Comparison with other forecasts

- 1.19 To ensure that the GMFM is 'stress tested' against other forecasts, GMCA have reviewed HM Treasury monthly compilation of forecasts (included in Annex 2); and further comparison of OE's twenty year forecasts with those produced by Experian¹⁸. Further checks have been made with the latest external independent review of different forecasts (Annex 2).
- 1.20 As shown in figure 8, both baseline forecasts are broadly similar in terms of growth rates with the exception of productivity; and slightly less so, total employment. Experian forecast slower productivity growth than GMFM-2018, with the resulting total GVA growth levels being lower by just over £3.7 billion over the twenty year period.

Figure 8: Comparison of GMFM and Experian baseline forecasts, 2016 to 2036

Measure: Period:	GMFM-2018		Experian-2018	
	Net increase/ decrease	% Compound Annual Growth	Net increase/ decrease	% Compound Annual Growth
	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	2016 to 2036
GVA	£25,800 million	1.7%	£22,100 million	1.5%
Productivity	£12,600	1.3%	£9,500	1.0%
Employment	140,100	0.5%	164,000	0.5%
Population	190,000	0.3%	209,000	0.4%

Source: Oxford Economics GMFM2018 vs EXP-2018 latest (both models in 2015 constant prices)

- 1.21 Annex 2 also includes HM Treasury's comparison of the main UK forecasters, providing **medium-term forecasts covering the period up to 2021**. The data shows that OE have a central to conservative view of growth in the short-term, with slightly stronger growth expected closer to the end of 2021. OE's central UK forecast for 2017 (June 2017) of 1.7% is in line with the median for all forecasters, sitting in a range of 1.2% to 2.1% per annum.¹⁹

¹⁷ Equivalent to just under 10,000 additional residents per year over the 20-year period.

¹⁸ June 2018 release to match the OE assumptions

¹⁹ HMT: Forecasts for the UK economy: <https://www.gov.uk/government/collections/data-forecasts>

3. Accelerated Growth Scenario - 2018

Introduction

1.23 This section presents the results of an Accelerated Growth Scenario (AGS-2018) for GM, including the rationale for the scenario’s development, and impacts on the economy, over and above that forecast by GMFM-2017.

Key messages

- **OE was commissioned by the GMCA to produce a baseline forecast and an ‘Accelerated Growth Scenario’ (AGS-2018) for GM.** This shows a future where improvements to the skills base, innovation, and transport boost GVA, employment, and productivity growth across the North. GM’s economy drives and benefits from this growth.
- In the AGS-2018 scenario, **GVA is forecast to grow at an average annual rate of 2.3% between 2016 and 2036 (the UK at 1.7%).** GM would therefore grow faster than the UK up to 2036 – reflecting GM’s ambitions to help narrow the ‘productivity growth gap’ with the UK average. This is equivalent to an additional £36.8 billion (2015 prices) of economic activity in GM’s economy by 2036.
- **Stronger GVA growth is supported by a strong shift towards higher value sectors.** This means productivity growth in GM is stronger in the AGS scenario than the baseline forecast, **averaging productivity growth of 1.6% per year from 2016 to 2036 – compared with 1.3% per year in the baseline GMFM-2018.**
- **Total employment** in Greater Manchester is forecast to rise by **208,000** between 2016 and 2036 in the AGS-2018 scenario, (190,000 in AGS-2017), equivalent to **68,000 more jobs than the GMFM-2018 baseline**; and 19,000 more than last year’s AGS (a marginal increase of just under 1,000 per year more over the scenario).
- **Population growth** is stronger in the AGS scenario than in the baseline forecast. Total population is projected to rise by 240,000 from 2016 to 2036. This is 50,000 people more than the GMFM-2018 baseline (but 28,600 less than the difference between GMFM-2017 and AGS-2017), reflecting the revisions to the ONS Sub-National Population Projections (SNPP) which suggest slower population growth than previous SNPP (2014) data.²⁰
- **Resident employment**, AGS assumes that a majority of new jobs will be taken by GM residents. Adjusting for residents that may hold more than one job (and commuting), this equates to **an additional 67,000 GM residents in employment compared with the GMFM-2018 baseline.** (The equivalent figure from the GMFM-2017 and AGS-2017 was 46,800 GM residents, a marginal difference of ~ 1,000 per annum more than the previous model).

Accelerated Growth Scenario assumptions

1.24 OE were commissioned to produce an ‘Accelerated Growth Scenario’ (AGS) for GM. The AGS-2018 provides a projection for the GM economy that is stronger than the baseline forecast, and reflects a future where the city plays a lead role in driving forward growth ambitions for the North of England.

1.25 The AGS is consistent with the long-term ambitions for the ‘Northern Powerhouse’ as set out in the Northern Powerhouse Independent Economic Review. The AGS also builds upon the growth sectors in which GM is expected to have a comparative advantage, including evidence from Sector Deep Dives (2016); and Productivity in Greater Manchester (2017).

AGS - Headline impacts

1.26 **In the AGS-2018 scenario, the GM economy is forecast to grow at an average annual rate of 2.3% between 2016 and 2036. This is equivalent to an additional £36.8 billion of economic activity** (measured in constant 2015 prices), and the growth rate is significantly above the baseline forecast of 1.7% per year. GM grows faster than the UK (1.8%) up to 2036.²¹

Figure 9: GMFM baseline forecasts vs Accelerated Growth Scenario for GM

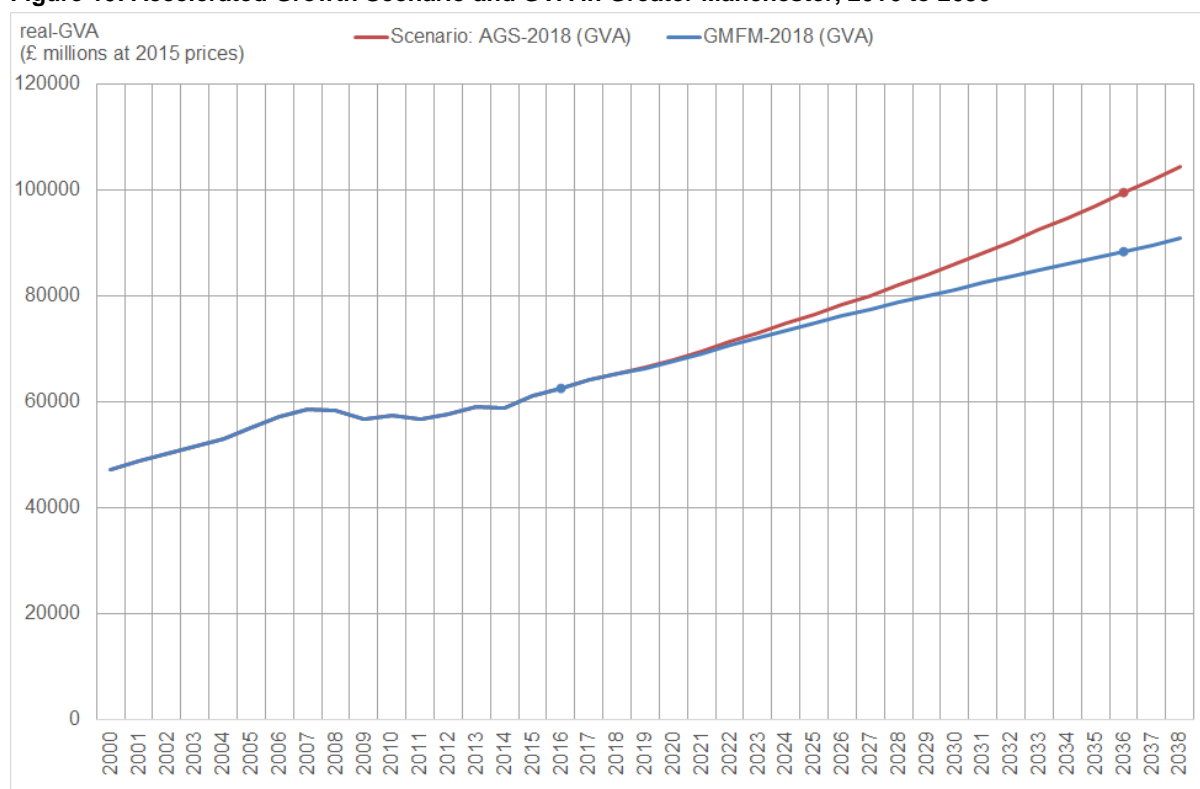
Measure:	Net increase/decrease	% Compound Annual Growth Rate	Difference between GMFM-2018 and AGS-2018
Period:	Level in 2016 vs level in 2036	Level in 2016 vs level in 2036	
GVA	£36,800 million	2.3%	£11,000 million higher in 2036
Productivity	£16,900	1.6%	£4,400 higher
Employment	208,000	0.7%	68,000 higher
Population	240,000	0.4%	50,000 higher

Source: Oxford Economics GMFM-2018. AGS-218.

²⁰ The AGS uses the Sub-National Population Projects as an input to the modelled economic scenario

²¹ Note the UK grows slightly faster in the AGS than the GMFM2017 baseline, due to GM’s faster growth rate

Figure 10: Accelerated Growth Scenario and GVA in Greater Manchester, 2016 to 2036



Source: Oxford Economics GMFM-2018. AGS-218.

- 1.27 Private services are forecast to account for about two-thirds of future GVA growth in Greater Manchester under the AGS 2018 scenario.** The largest contributions are expected to come from the Professional Services (30% of the net increase between the levels in 2016 and 2036), and Wholesale & Retail sub-sectors (12% of the total net increase). Digital Industries are the sub-sector forecast to grow the fastest - by 4.4% per year from 2016 to 2036.
- 1.28 All major sectors provide a positive contribution to growth in the AGS-2018 scenario, and grow faster than in the baseline forecast.** However, they still tend to expand slower than private services. While all other major sectors provide a positive contribution to growth under the AGS-2018 scenario, they tend to expand more slowly than private services. This is true for much of the public sector, as well as construction, and manufacturing in aggregate, so each of these sectors will account for a smaller share of the Greater Manchester economy in 2036 than they do currently. However, there are exceptions: Advanced Manufacturing, for example, is projected to grow at least as fast as the total Greater Manchester economy in the AGS. Within the public sector, Human Health & Social Care is likely to grow a little ahead of the overall economy, as a growing elderly population underpins rising demand for healthcare.
- 1.29 Overall productivity growth in GM is higher under the AGS 2018 scenario than the baseline, partly reflecting a shift towards higher-value sectors, but also because faster growth is assumed to be supported by investments that boost overall productivity.** Average labour productivity would grow at 1.6% per year, compared with 1.3% per year in the GMFM-2018 baseline.
- 1.30 The strongest productivity growth by sector in the AGS – close to 3.5% per year in the period to 2036 – is forecast in activities that are most closely aligned to the digital economy, including computing and telecommunications sub-sectors.** These are followed by the financial services sub-sector, at close to 3% per year, and by other high-value private service activities and manufacturing, where productivity is projected to rise by 2-2.6% per year in the AGS – all exceeding the total economy average of 1.6%. The weakest rates of productivity growth in the AGS are in Public Administration (not including education and healthcare), and Hospitality, Tourism and Sport.

Figure 11: AGS-2018 forecast by main sectors in GM, net increase 2016 to 2036

Broad industry sector (GMCA definition)	GVA (rounded figures)		Employment (rounded)		
	Measure	Net increase/ decrease (millions)	% Compound Annual Growth	Net increase/ decrease	% Compound Annual Growth
	Period	Level in 2016 vs level in 2036	2016 to 2036	Level in 2016 vs level in 2036	2016 to 2036
Construction		£1,100m	1.3%	19,100	1.1%
Manufacturing		£3,400m	1.8%	-17,200	-0.8%
Logistics (transport and storage)		£1,350m	1.9%	11,600	0.7%
Wholesale and retail		£4,500m	2.4%	31,200	0.7%
Personal services		£170m	0.9%	1,800	0.4%
Business, financial, professional services		£11,200m	2.5%	86,100	1.2%
Creative and digital industries		£5,000m	3.9%	16,300	0.9%
Hospitality, tourism and sport		£1,500m	2.1%	33,000	1.2%
Education		£1,200m	1.3%	270	0.0%
Health and social care		£3,600m	2.5%	29,400	0.8%
Public administration		£570m	0.9%	-2,600	-0.3%

Source: Oxford Economics GMFM-2018; AGS-2018. Main sectors defined by GMCA, excludes agriculture and utilities

Figure 12: AGS-2018 vs GMFM-2018 – Additional growth in GVA and employment in GM, by 2036

Note: Figures are rounded so may not exactly match the AGS minus the GMFM2018 figures reported earlier.

Broad industry sector (GMCA definition)	GVA (rounded)		Employment (rounded)	
	Period	Growth per annum in addition to the baseline by 2036	Growth in addition to the baseline by 2036	
Construction		£190m	2,800	
Manufacturing		£700m	4,100 fewer jobs lost	
Logistics (transport and storage)		£590m	6,300	
Wholesale and retail		£1,560m	12,300	
Personal services		£140m	1,300	
Business, financial, professional services		£1,800m	11,100	
Creative and digital industries		£2,000m	4,700	
Hospitality, tourism and sport		£550m	8,900	
Education		£1,000m	3,100 fewer jobs lost	
Health and social care		£1,550m	8,400	
Public administration		£770m	3,900 fewer jobs lost	

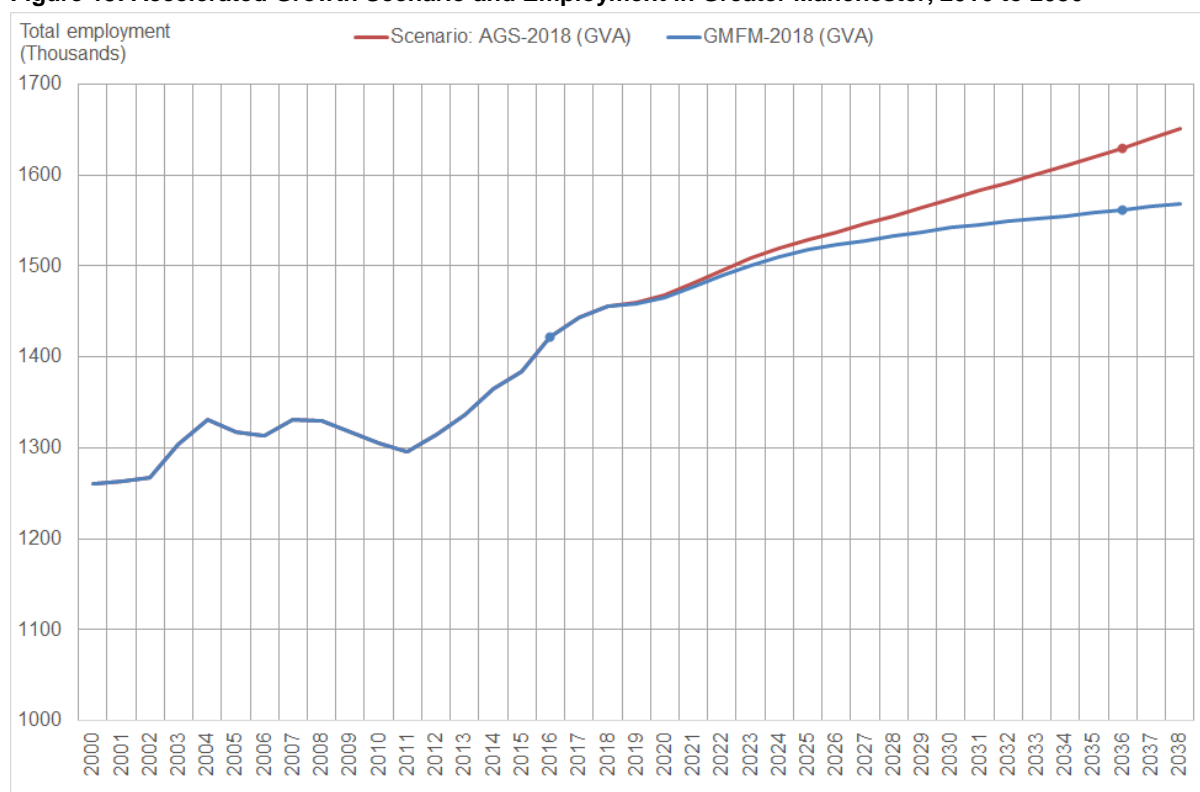
Source: Oxford Economics GMFM-2018; AGS-2018. Main sectors defined by GMCA, excludes agriculture and utilities

Note: GVA show impacts in 2036 vs level recorded in GM in 2016, and additionality during 2036. For total GVA impact over time by sector requires totalling additionality every year to 2036 expressed as a Net Present Value

Accelerated growth in employment

- 1.31 **The number of jobs in GM is forecast to rise by 208,000 between 2016 and 2036 in the AGS-2018, equivalent to 68,000 more jobs than in the baseline forecast.** This represents an average annual growth rate of 0.7%, a higher than the baseline (0.5%); and that for the UK.

Figure 13: Accelerated Growth Scenario and Employment in Greater Manchester, 2016 to 2036



Source: Oxford Economics GMFM-2018. AGS-2018.

- 1.32 **Job creation is concentrated in the private services sector** – in particular within Business, Financial, and Professional Services – forecast in AGS-2018 to account for two-fifths of net additional job creation in GM in the period to 2036 (totalling +86,800).
- 1.33 **Within Business, Financial, and Professional Services** sub-sectors, just under 42,000 of these additional jobs are forecast to be created in Professional Services (Legal & Accounting Services, Building Services, and Architectural and Engineering Services) and 31,000 within Business Services.
- 1.34 **Employment growth is also strong in the AGS within Creative and Digital Industries**, in particular within Creative Industries, growing at 1.1% per annum, a net increase of 9,500 jobs between 2016 and 2036; and in **Digital Industries**, where the number of jobs is forecast to grow by 6,800 up to 2036 (0.8% per year).
- 1.35 **Construction is also forecast to see strong employment growth in the AGS**, increasing by 19,100 from 2016 to 2036, (at 1.1% per year).
- 1.36 The outlook is mixed elsewhere in the private sector. **Wholesale & Retail Trade is currently the largest employer in GM, and this is expected to remain the case**, with an additional 31,200 jobs by 2036. But the pace of job creation in this sector is only in line with the total economy at 0.7% per year under the AGS.
- 1.37 **The employment outlook is weaker for Manufacturing.** The number of jobs in the sector is forecast to fall (but at a slower rate) by 17,200 (-0.8 per year) between 2016 and 2036 in AGS-2018, as the adoption of new technologies means rising activity can be accommodated by fewer workers. Nonetheless, this is 4,100 fewer Manufacturing jobs lost than in the GMFM-2018 baseline.²²
- 1.38 **Public sector employment is forecast to rise in the AGS-2018 scenario, but with job creation slower than the total economy average.** New jobs here will be concentrated in Health & Social Care sector, accounting for over 29,000 more jobs by 2036 – in contrast to almost no job growth in education, and losses in Public Administration.

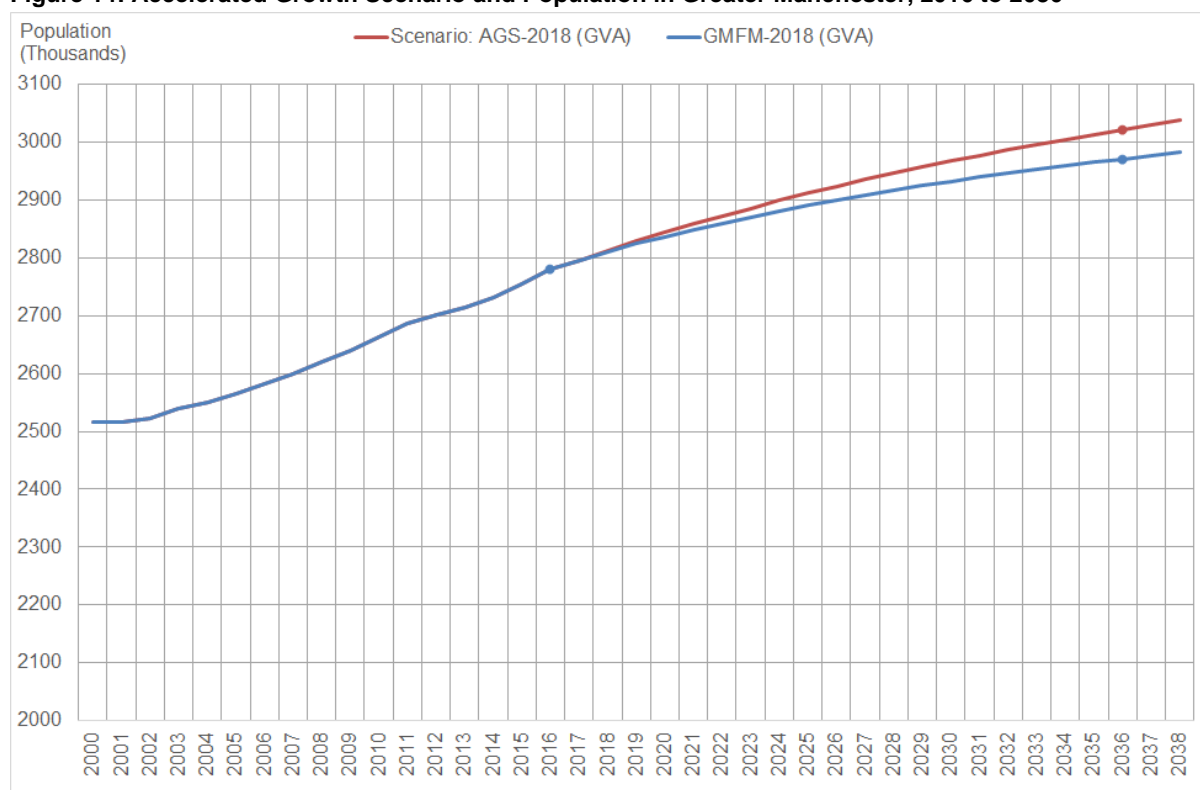
²² (2,800 fewer job losses when the analysis excludes manufacturing related consultancy).

Population and resident employment

Population projections

- 1.39** The AGS-2018 scenario adopts the 2016-based ONS Sub-National Population Projections SNPP-2016), in-line with the previous AGS and the evidence base for the GMSF. The scenario suggests that the total population of GM will rise to over 3 million in 2036, an increase of 240,000 on the 2016 level, and 50,200 more than the baseline GMFM-2018. The rise in the number of working-age residents, defined as those aged 16-to-64, is 53,300 between 2016 and 2036. This compares to a rise of 189,800 in the total population, and a fall of 1,000 in the working-age 16-to-64 year old population - under the GMFM-2018 baseline forecast.
- 1.40** The difference between the GMFM and AGS is largely explained by the migration assumptions used in each model. The baseline forecast is constructed using Oxford Economics' expectations for net migration into Greater Manchester to be positive in the short term, but negative in the medium-to-long term. By comparison, the ONS projections have a similar positive short-term outlook, albeit with a larger inflow than expected by Oxford Economics, followed by net migration being close to zero further out in the forecast horizon.

Figure 14: Accelerated Growth Scenario and Population in Greater Manchester, 2016 to 2036



Resident employment

- 1.41** Employment in Greater Manchester is forecast to rise by 208,000 between 2016 and 2036 under the AGS 2018 scenario - 67,900 more jobs than under the GMFM-2018 baseline forecast. To understand the implications of this scenario on GM's residents, it is necessary to reconcile this additional increase in employment with the ONS population projections by assessing who might fill these additional jobs, and what the associated impact will be on the resident employment rate and unemployment.
- 1.42** The first step is to quantify how many additional workers will be required to fill the extra jobs created in GM. The transformation from jobs to workers is necessary as a relatively small proportion of workers that hold more than one job (referred to as "double-jobbers"). This means the total number of additional people required to work in Greater Manchester will be lower than the number of additional jobs. **Under the AGS 2018 scenario, the additional 67,900 jobs created in GM above the baseline forecast is equivalent to an extra 65,400 workers.**
- 1.43** The majority of the additional people working in GM will also be resident in the area, with the remaining roles filled by people commuting into the city-region. The 2011 Census showed around nine of every 10 jobs in Greater Manchester were held by local residents, **and the AGS 2018 scenario assumes this ratio is maintained.** This is applied to the number of additional workers in the area, to calculate how many will be residents of GM.

- 1.44 Another feature of the AGS 2018 scenario is that the wider northern region achieves faster growth than anticipated under the baseline scenario. Therefore, residents of GM will also benefit from additional employment opportunities in the wider region, and this again is quantified using information on commuting patterns from the 2011 Census.
- 1.45 **Bringing these two strands together results in an additional 66,200 Greater Manchester residents in employment in 2036 under the AGS 2018 scenario, compared with the baseline forecast. This equates to a total of 1,553,300 GM residents in employment by 2036.**
- 1.46 **Non-employed working-age residents will account for the majority of the additional (compared with the baseline) 66,200 Greater Manchester employed residents in 2036.** These people may previously have been registered as unemployed and claiming Jobseekers' Allowance, been economically inactive, or been economically active but not in work or claiming Jobseekers' Allowance.
- 1.47 **The assumptions adopted under the AGS 2018 scenario are that 15% of the additional resident workers will be residents who were previously unemployed, and 75% will be residents aged 16-to-64 who were neither employed or registered unemployed.** These proportions recognise there are significantly more people in the second group than the first, and that job creation benefits the economically inactive as well as the unemployed.
- 1.48 **The final 10% of the additional 66,200 Greater Manchester residents in employment by 2036 are assumed to be people aged over 64.** This reflects the fact that concerns over the sufficiency of pension provision, improved health among older age groups, and increases in the state retirement age have contributed to an increase in the proportion of jobs held by older workers.
- 1.49 **Higher employment in GM under the AGS 2018 scenario supports an increase in the resident employment rate. This is projected to rise from 70.5% in 2016 to 76.5% in 2036, a slightly larger increase than the baseline forecast (up to 75.3% in 2036) but still behind the UK average resident employment rate of 77.4%.**
- 1.50 Under this scenario, **GM's rising employment rate is underpinned by a combination of factors, including economic forces (stronger economic growth, and employment opportunities drawing people into the labour market) and demographic factors (such as weaker growth in the working-age population, and higher participation amongst older age groups).** A rising employment rate is also consistent with local policy interventions aimed at raising participation in the workforce.

Annex 1: Data sources

1.51 This publication is accompanied by a release of the following datasets:

- GVA by: Greater Manchester Combined Authority defined sectors; and detailed sub-sectors within the model build (50 industries)
- Employees and employment by: Greater Manchester Combined Authority defined sectors; and detailed sub-sectors within the model build (50 industries)
- Productivity by: Greater Manchester Combined Authority defined sectors; and detailed sub-sectors within the model build (50 industries)
- Population by 4 categories (working age, 15-74 years, children and over retirement age)
- Expansion demand, replacement demand, and total net demand for jobs per year, by: industry sector, broad occupation group, and by qualification (notional levels).

1.52 New source data included in the report:

- New global, UK, North West outlooks for 2018, including Brexit and UK productivity assumptions (amongst others detailed in the report).
- Business Register and Employment Survey (2015-final and 2016-provisional)
- Census consistent mid-year population estimates (2016)
- Official population projections (including SNPP 2016)
- Earnings (2016)
- Resident employment (2017)
- Unemployment (2017)
- Regional GVA (2016 data, 2015 prices)

Annex 2: Comparison of forecasts and summary of Brexit impact assessments

UK GDP Medium term forecasts from independent forecasters, published in May 2018

Forecaster (non-City) (1=lowest)	2018		2019		2020		2021	
	%	Rank	%	Rank	%	Rank	%	Rank
Beacon Economic Forecasting	1.4	3	1.4	1	1.6	3	1.6	1
CEBR	1.5	6	1.4	1	1.6	3	1.6	1
Experian	1.3	2	1.5	3	1.5	1	1.7	4
IHS Markit Economics	1.1	1	-	-	-	-	-	-
Liverpool Macro research	2.0	10	1.9	9	1.9	7	2.2	8
NIESR	1.4	3	1.7	6	1.8	5	1.7	4
Oxford Economics	1.5	6	1.7	6	1.9	7	2.0	6
PwC	1.5	6	1.6	5	-	-	-	-
ITEM Club	1.4	3	1.7	6	1.8	5	2.0	6
IMF	1.6	9	1.5	3	1.5	1	1.6	1

Source: HMT (May 2018): Forecasts for the UK economy – date consistent with latest actuals in the model

UK GDP Medium term forecasts from independent forecasters, published in June 2017

Forecaster (non-City) (1=lowest)	2018		2019		2020		2021	
	%	Rank	%	Rank	%	Rank	%	Rank
Beacon Economic Forecasting	2.0	8	2.0	7	1.8	3	1.6	1
CEBR	1.3	3	1.9	6	1.7	2	1.7	2
Experian	1.3	3	1.8	5	1.9	4	2.2	6
IHS Global Insight	1.1	2	1.3	1	1.9	4	2.3	7
Liverpool Macro research	2.6	10	2.9	9	3.5	9	3.0	9
NIESR	1.9	7	2.0	7	1.9	4	1.8	3
Oxford Economics	1.4	5	1.6	3	2.1	8	2.3	7
PwC	2.3	9	-	-	-	-	-	-
ITEM Club	0.4	1	1.4	2	1.6	1	1.8	3
IMF	1.5	6	1.6	3	1.9	4	1.9	5

Source: HMT (June 2018): Forecasts for the UK economy – date consistent with latest actuals in the model

UK GDP Medium term forecasts from independent forecasters, published in May 2016

Forecaster (non-City) (1=lowest)	2017		2018		2019		2020	
	%	Rank	%	Rank	%	Rank	%	Rank
Beacon Economic Forecasting	2.6	9	2.1	2	1.9	2	1.8	1
CEBR	1.7	1	1.6	1	1.7	1	-	-
Experian	2.1	2	2.2	3	2.3	7	2.4	6
HIS Global Insight	2.4	7	2.3	6	2.2	5	2.3	4
Liverpool Macro research	2.4	7	2.5	9	2.5	8	2.5	7
NIESR	2.7	10	2.5	9	2.2	5	2.2	3
Oxford Economics	2.3	4	2.2	3	2.0	3	2.3	4
PwC	2.3	4	2.3	6	-	-	-	-
ITEM Club	2.3	4	2.4	8	2.6	9	-	-
IMF	2.2	3	2.2	3	2.1	4	2.1	2

Source: HMT (2017): Forecasts for the UK economy – date consistent with latest actuals in the model

Forecast long-term impact of Brexit on GDP relative to remaining in the EU (Source: Institute for Government)

