Social Study 2016

The Economic Impact of BT & EE in the East Midlands

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ECONOMICS · RESEARCH · ANALYSIS

A report prepared by
Regeneris for BT Group

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Regeneris Consulting is an independent economics consultancy that provides research-based advice to major corporates, developers, national government bodies and local government. Regeneris specialises in preparing robust assessments of economic impact, focusing on the impact of new technology, physical developments, policy changes, investment programmes and corporate economic footprint. Regeneris work across the UK from their offices in London and Manchester.
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2 Introduction

The past few years have seen the UK race ahead to become the world's leading digital economy with a greater proportion of economic activity driven by the internet than any other nation including "digital exemplars" such as Sweden, Japan, the US and South Korea. It is vital to the future of the UK's socio-economic prosperity, that we not only maintain, but extend this success with every part of Britain, continuing to move forward together; more connected, capable and competitive.

As the UK's leading communications services company, the work BT does is key to the country's continued economic and social prosperity. The acquisition of EE at the start of 2016 brought together the best UK mobile network with the largest superfast broadband network. Across the East Midlands region we continue to make more connections and create new possibilities helping businesses grow, communities to flourish and individuals to get more out of life. Connectivity is at the heart of how people work and live their lives, and as we continue to develop our services we also look for ways of using these vital services to deliver wider societal benefits.

A Nottinghamshire community hall has been given a new lease of life thanks to fibre broadband. Edingley Parish Council plans to make the most of it by kitting out the former village school building with computers and free wi-fi. Councillor Diana Poole, Chairman of Edingley Parish Council, said: "I'm delighted that people and businesses in Edingley have now got access to fibre broadband – I know it will make a big difference to local people who need to do things like work from home, buy and sell items online or stay in touch with friends and relatives. We've recently re-opened the old school house in the village as a community resource, where we host events and functions. The availability of fibre broadband will mean we can provide wi-fi for users of the centre and put on more events like computer training so that it continues to develop as a real hub for the local community."

This has been a landmark year for BT. We have completed the acquisition of EE and helped take superfast broadband to 92 per cent of the country. We've passed a number of other landmarks. Over 26 million premises can now get superfast broadband and we are on track to help take coverage to 95 per cent and beyond. Rollout has been on budget and ahead of schedule. It has been a

real success story for the UK. Openreach's investment in its fibre broadband network, which is open to all providers on an equal basis, has been key to this progress investing more than £1.4 billion last year alone. And BT will continue to invest in the future. We have plans to go further, delivering the minimum broadband speeds, expanding the reach of fibre broadband beyond the Government's 95 per cent target and converting the UK's leadership from a superfast nation to an ultrafast one. We have already announced trials of G.fast, our ultrafast technology in Derby.

EE runs the UK's biggest and fastest mobile network. It pioneered the UK's first superfast 4G mobile service, with coverage today reaching more than 95 per cent of the UK population. EE's 2G coverage reaches 99 per cent of the population while 3G reaches 98 per cent. A commitment to reach 95 per cent of UK geography with 4G by 2020 will ensure 'near-complete' 4G coverage no matter where people live or travel. At the end of 2015, EE won the contract to deliver a brand new 4G voice and data network for Britain's Emergency Services, giving 300,000 critical emergency workers access to 4G voice and data for the first time. The Emergency Services Network will transform these roles, giving them the same type of data and applications that have benefited consumers and private businesses. And BT/EE has committed to being first with 5G in the UK to deliver ultra-high speeds and capacity.

This report looks at the direct economic contribution of BT and EE combined, it shows that BT is a key player in the East Midlands, making a very significant impact on the region's economy. We support employment across every part of the region through our direct workforce and, indirectly, through our extensive supply chain, with our procurement and expenditure within the local economy. For the period 2015/16 the total Gross Value Add (GVA) to the East Midlands economy, combining the direct, indirect and induced impacts of our activities and spending, is estimated to be £770 million.

We are committed to using the power of communications to make a better world and make a positive impact on the communities and environment in which we operate. We understand the importance of connectivity to economic growth and social well-being and recognise that this is critical to how we work, rest and play. We continue to invest in our people, networks and products. We are one of the largest investors in research and development in the UK and this has underpinned a history of innovation. Our strategy of innovation and investment has helped, and will continue to help us, lead and shape the digital future in the years to come.

Owen Moody
Chair of the BT East Midlands Regional Board
November 2016

3 Our Report

The Economic Impact Report 2016 has been prepared independently by Regeneris Consulting, working closely with BT Regions to draw upon their data and information.

Impact calculations are in accordance with Government guidelines and the HM Treasury's Green Book Guidance for appraisal and evaluation, and are consistent with the Office for National Statistics' national accounts. Details of our approach are shown in Appendix A.

Estimates in this report relate to BT and EE's activities in the UK during the financial year 2015/16. They do not take into account any post-merger restructurings or efficiencies that are taking place, but provide a snapshot of the impact of the two companies in this financial year. Note that the economic impact figures presented throughout this report are expressed to three significant figures. This means they have been rounded up or down as appropriate and, as a result, may not sum exactly to the totals presented.

Economic Impact Report 2016
This study shows BT and EE's economic contribution to the UK national economy and to regional economies in terms of jobs, output and Gross Value Added (GVA) supported. The report covers several effects of the two companies' activities:

Direct impact: people employed directly by BT and EE (including contractor employees) who receive wages and salaries.

Indirect impact: income and employment created within suppliers as a result of BT and EE's spending on goods and services.

Induced impact: further income and employment generated as wages created directly and indirectly are spent within the economy.

4 The Economic Impact of BT and EE in the UK

The figures below show the number of employees working in each English region, Scotland, Wales and Northern Ireland.
Note: Figures are rounded to 3 significant figures.

	Working	Living	Total direct GVA £m
East of England	10,300	10,700	1,330
East Midlands	4,120	4,540	396
London	14,000	12,300	1,960
North East	8,520	8,430	928
North West	9,360	9,320	899
Northern Ireland	3,170	3,180	300
Scotland	7,390	7,430	727
South East	10,500	11,300	1,180
South West	7,920	7,800	1,020
Wales	3,890	4,400	385
West Midlands	6,290	6,110	667
Yorkshire and The Humber	6,570	6,510	655

Source: Regeneris Consulting

4 UK Key Points

81,400 employees directly working for BT and EE, and 10,600 contractors (Full Time Equivalent – FTE)

259,000 total FTE jobs supported (including indirect and induced effects)

£3.2 billion total income of BT and EE employees (including contractors)

£9.3 billion spend with suppliers based in the UK

£23.1 billion total GVA impact associated with BT and EE activities (including indirect and induced effects)

Across the UK in 2015/16

- BT and EE together directly employed 1 in every 210 employees in the private sector across the UK, and 1 in every 10 in the IT and Communications sector
- BT and EE directly created £1 in every £170 of GVA in the UK
- As a result of the full economic impact of BT and EE, the firms supported £1 in every £70 of GVA in the UK economy and 1 in every 95 employees working in the UK economy

4

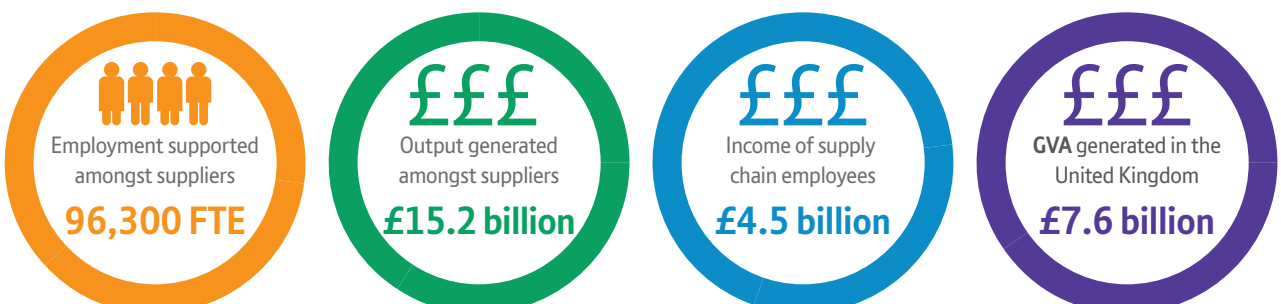
Economic Impacts

Direct Impact

BT and EE together directly employed a total of 81,400 people in the UK in 2015/16, with a further 10,600 employed as contractors. These employees earned an associated £3.2 billion in wages and salaries.

Procurement Impact (Indirect)

BT and EE together spent a total of £9.3 billion with UK based suppliers in 2015/16. This results in significant benefits for the UK economy, including knock-on benefits further down the supply chain, which results in additional employment and output. This is summarised below.



BT and EE Supply Chain Spend in the United Kingdom = **£9.3 billion**

Figure 4-1: Indirect (supply chain impacts) in the UK

Source: Regeneris Consulting

Impact of BT and Supplier Employee Expenditure (Induced)

BT and EE employees and their contractors based in the UK earned around £3.2 billion in 2015/16 before tax. In turn, the expenditure of these employees, contractors and the employees working for firms within BT and EE's supply chain supported further employment and output in consumer industries. Through these knock-on effects, BT and EE supported further jobs and turnover as shown below.

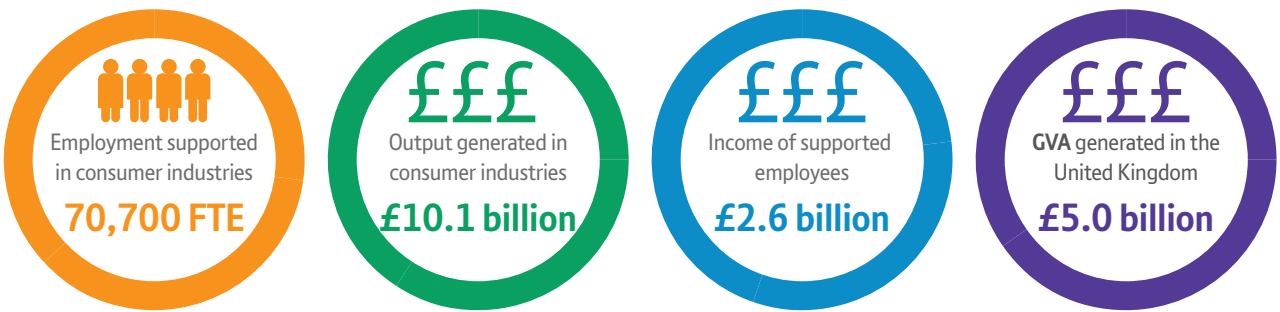


Figure 4-2: Induced (wage expenditure) impacts in the UK

Source: Regeneris Consulting

Total Impact in the UK

Combining BT and EE's direct impact and employment with the indirect supply chain impact and induced wage expenditure impact gives the total impact of the two firms' operations in the UK in 2015/16. This is summarised in the table below.

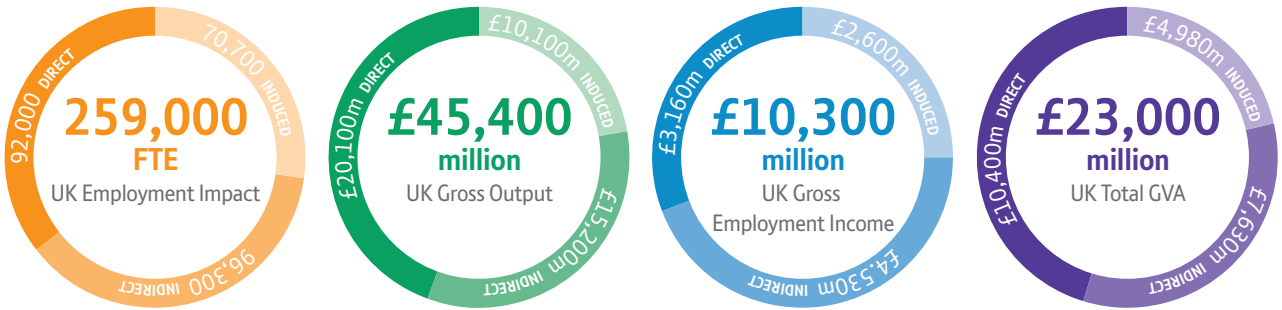


Figure 4-3: Total Impact of BT and EE in the UK

Source: Regeneris Consulting

5 East Midlands

Key Points

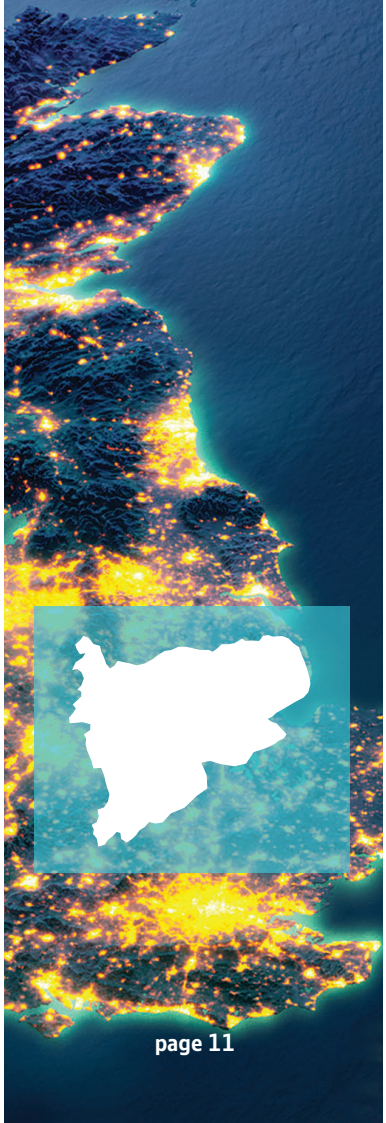
4,540
BT and EE employees live in the region (FTE)

4,120
BT and EE employees work in the region (FTE)

£130 million
Total income of BT and EE employees working in the region

£238 million
Spend with suppliers based in the region

£770 million
Total GVA impact (including indirect and induced effects)



Across the East Midlands in 2015/16...

- BT and EE employed 1 in every 10 employees working in the IT and communications sectors
- £1 in every £260 of GVA was generated directly by BT and EE
- BT and EE supported 1 in every 140 employees working in the private sector and £1 in every £130 of GVA as a result of the firms' full economic impact
- BT and EE's full employment impact is larger than the region's research and development sector

Regional Impact

Direct Impact

BT and EE directly employs a total of 3,650 people in the East Midlands region, with a further 470 employed as contractors. This results in £130 million in wages and salary spend across the region.

Procurement Impact

BT and EE spent £238 million with suppliers based in the East Midlands in 2015/16. The majority was spent on telecommunications, as illustrated in this chart.

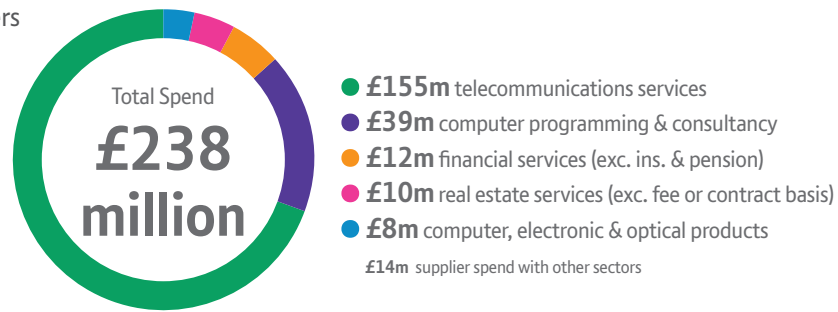
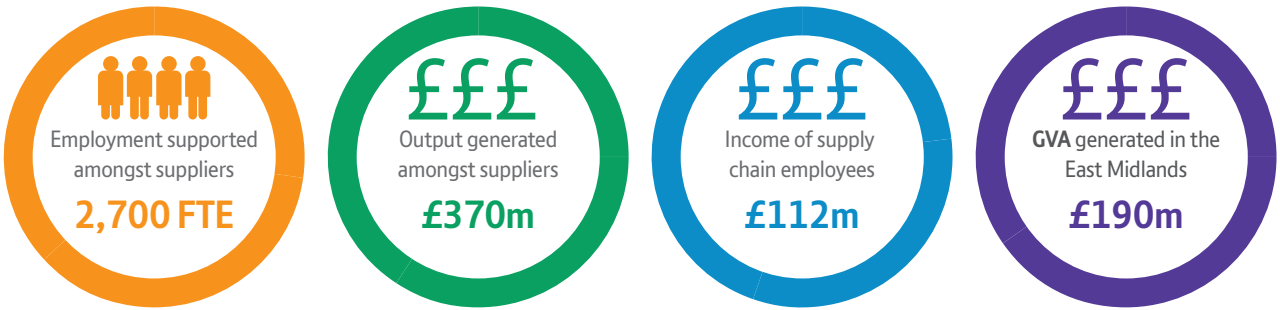


Figure 5-7: Top Five Supplier Sectors in the East Midlands by Value of Expenditure

Source: BT & EE Procurement data

BT's and EE's spend with suppliers results in significant benefits for the East Midlands economy, including knock-on or multiplier benefits as a result of supplier spend. This is summarised below.



BT and EE Supply Chain Spend in the East Midlands = **£238 million**

Figure 5-8: Indirect Supply chain impact in the East Midlands

Source: Regeneris Consulting

Impact of Employee Expenditure

BT and EE employees and contractors living in the East Midlands earned £145 million in 2015/16. In turn, their expenditure supports further employment and output in consumer industries in the region. **Figure 5-9** below illustrates the wider induced employment and output supported through this employee expenditure.

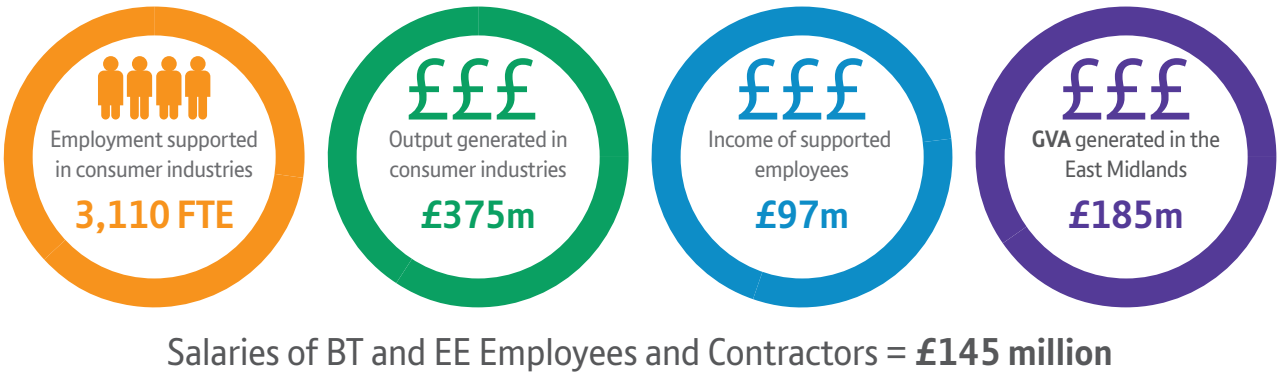


Figure 5-9: Induced (wage expenditure) impacts in the East Midlands

Source: Regeneris Consulting

Total Impact in the East Midlands

Combining BT and EE's direct impact and employment with the indirect supply chain impact and induced wage expenditure impact gives the total impact of the two firms' operations in the East Midlands. This is summarised in **Figure 5-10** below.

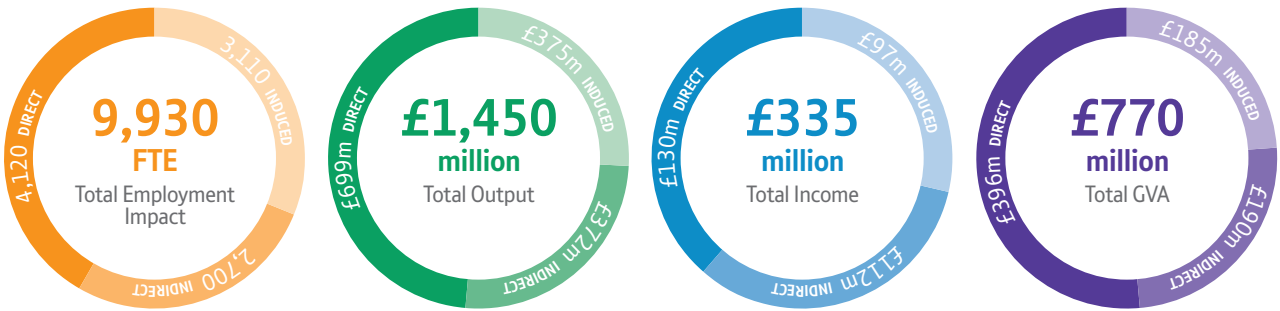


Figure 5-10: Total Impact of BT and EE in the East Midlands

Source: Regeneris Consulting

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Sub-regional Impact

The table below illustrates the economic impact of BT and EE at a County level in the East Midlands.

	BT and EE Employees & Contractors		Total Impact		
	Work in area	Resident in area	Employment	Output £ million	GVA £ million
Derbyshire	1,030	997	2,690	384	204
Derby	187	166	405	64	33
Leicestershire	1,360	1,390	2,350	345	190
Leicester	841	432	1,000	154	89
Lincolnshire	605	718	973	142	79
Northamptonshire	459	581	1,740	253	131
Nottinghamshire	655	832	2,130	314	161
Nottingham	503	184	917	134	72
Rutland	10	23	49	8	4

Table 5-3: County Impact – East Midlands

Source: Regeneris Consulting

Local Enterprise Partnerships (LEPs) are locally-owned partnerships between businesses and local authorities and play a central role in determining local economic priorities and undertaking activities to drive economic growth and the creation of local jobs. A total of seven Local Enterprise Partnerships† fall in full or in part within the East Midlands region and the economic impacts which relate to these areas are shown below.

	BT and EE Employees & Contractors		Total Impact		
	Work in area	Resident in area	Employment	Output £ million	GVA £ million
Greater Cambridge & Greater Peterborough *	1,100	1,300	3,710	591	302
South East Midlands *	2,250	2,910	11,500	1,910	965
Derby, Derbyshire, Nottingham & Nottinghamshire	1,680	1,830	4,820	698	365
Leicester & Leicestershire	1,360	1,390	2,350	345	190
Northamptonshire	459	581	1,741	253	131
Greater Lincolnshire *	783	917	1,270	187	104
Sheffield City Region *	3,650	3,300	5,580	811	453

Table 5-4: LEP Impact – East Midlands

Source: Regeneris Consulting

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† The information provided on LEPs and Enterprise Zones is correct at the time of publication of this report (as at September 2016). We have used information published by the Government which is available at the following location: https://www.gov.uk/government/publications/local-enterprise-partnerships-local-authority-mapping
Note that in some cases part of the LEP areas fall outside of the region. These are marked with an asterisk (*).

- 1 in every 50 employees working in the **South East Midlands LEP** area is supported by BT and EE's full economic impact.
- 1 in every 4 employees working in the IT and communications sector in the **Sheffield City Region LEP** is directly employed by BT and EE.
- 1 in every 23 employees working in the IT and communications sector in the **Greater Cambridge and Greater Peterborough LEP** is directly employed by BT and EE.
- £1 in every £12 of GVA in the IT and communications sector in **Derby, Derbyshire, Nottingham and Nottinghamshire LEP** area is generated directly by BT and EE.
- £1 in every £6 of GVA in the IT and communications sector in the **Leicester and Leicestershire LEP** area is generated directly by BT and EE.
- £1 in every £5 of GVA in the IT and communications sector in **Greater Lincolnshire LEP** area is generated directly by BT and EE.
- £1 in every £10 of GVA in the IT and communications sector in **Northamptonshire LEP** area is generated directly by BT and EE.

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Local Impacts

The map below illustrates the locations of key BT sites in the East Midlands. It demonstrates the importance of Nottingham and Leicester as key employment centres for BT.

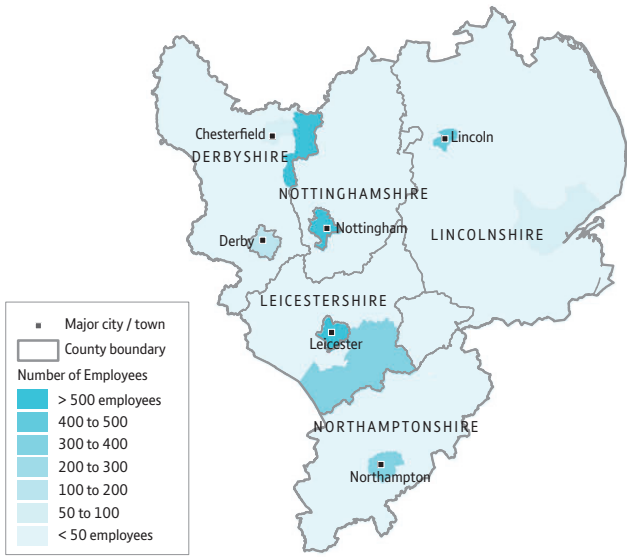

Figure 5-11: BT and EE Employees Place of Work – East Midlands

Source: Regeneris Consulting

Figure 5-12 also demonstrates the broad geographical spread of the workforce, which lives throughout the region.

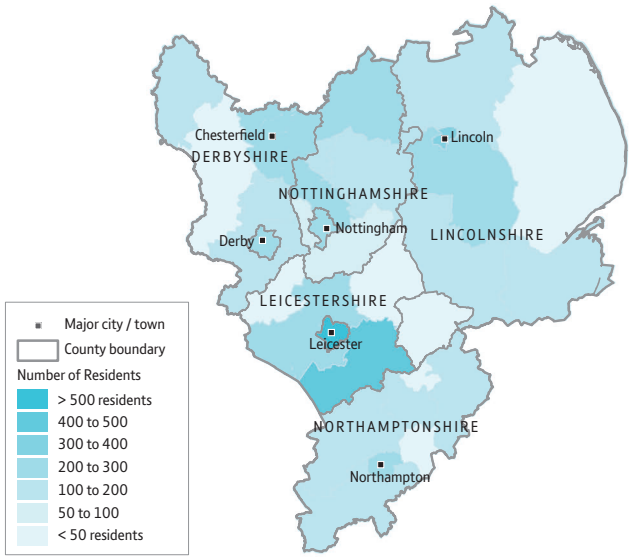

Figure 5-12: BT and EE Employees Place of Residence – East Midlands

Source: Regeneris Consulting

A Technical Appendices

Here we set out the methodology used to estimate the economic impact of BT and EE and the data sources that have been drawn upon.

Definitions

Three sources of economic impact are covered in the report.

Direct impacts
These are the impacts arising as a direct consequence of the company's activities, in the form of output and wealth creation, employment within the firm and associated employment income.

Indirect impacts
Also known as the supply chain impact, this contribution arises from BT and EE's purchasing of goods and services from suppliers in the UK, who in turn make further purchases from their suppliers, and so on. This chain of procurement spending resulting from BT and EE's initial expenditure injection creates further wealth, and supports jobs and income.

Induced impacts
Further economic activity and employment is created as BT and EE employees – and those whose jobs are supported through supply chain effects – spend their wages and salaries on goods and services. The economic effects from this consumer spending are known as the induced effect.

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Throughout the report these impacts are measured using four key indicators:

Output
This refers to the turnover /sales revenue that is generated directly within BT and EE or within other firms in the economy through indirect and induced effects.

Gross Value Added (GVA)
This is the key measure of wealth creation within an economy and is used by the government to monitor economic performance. It refers to the residual value created by firms once non-labour costs have been paid, which is then distributed to owners/shareholders in the form of profits and to employees via wages and salaries. It is measured in two ways:

- **GVA** = turnover minus bought in goods and services (known as the *production* approach)
- **GVA** = operating profit + depreciation and amortisation + taxes less subsidies on production + compensation of employees (i.e. wages plus social security contributions) (known as the *income* approach)

Employment
This is the quantity of jobs supported by BT and EE's activities. Since these jobs are a mix of full time and part time positions, throughout the report we refer to Full Time Equivalent (FTE) posts, in order to express all jobs in a common currency.

Employment Income
These are the gross wages and salaries paid to employees whose jobs are supported by BT and EE, including NI and pension contributions, and PAYE taxes.

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Methodology and Data Sources

The methodology used to estimate BT and EE's economic impacts for 2015/16 has been designed to be consistent with previous economic impact reports for BT. Further information is provided below.

Direct impacts

The two data sources used to estimate this are BT and EE's financial accounts for 2015/16 and extracts from HR databases of the two companies.

Output has been taken directly from the accounts, as revenue from external customers in the UK. This removes both internal revenue resulting from internal transfers between BT Group companies and sales made outside the UK.

GVA has been calculated using the income approach, as the sum of operating profits before tax, interest, depreciation and amortisation, and compensation of employees. We have estimated UK operating profit for BT (excluding EE) using global EBITDA[1] from the accounts, and estimated the UK portion by factoring down by the UK share of total revenues. EE's EBITDA has been estimated using data from BT's financial accounts – which includes EE's contribution to the EBITDA of the combined BT and EE operation post-merger – along with EE's own financial accounts to December 2015. Compensation of employees has been estimated using data on gross wages and salaries, plus social security costs (sourced from BT and EE).

Employment numbers have been sourced from a snapshot of information provided by both BT and EE, with data on the number of people employed directly by BT and EE, and the number of contractors employed through agencies, along with their contracted hours. These have then been converted to FTEs based on the number of hours worked constituting a full time contract at the companies.

* Earnings Before Interest, Tax, Depreciation and Amortisation

The data indicates both the place of residence and place of work of each employee. For direct employment we have used workplace-based figures. The employment numbers are consistent with those in the 2015/16 BT Group annual accounts.

The BT and EE data provided the home and workplace postcode for each employee. These were used to allocate employees to regions and local authorities for the residence- and workplace-based analysis. Home postcodes were not available for agency staff and contractors. The assumption was made that these members of staff were resident in the same Local Authority and Region as their workplace.

Employment income has been estimated using the same data sources, using gross wages and salaries of employees and contractors by place of work.

Indirect Impacts

The data source used to estimate indirect impacts has been provided by BT and EE, by location and by sector. Each supplier to BT and EE was allocated to a region and local authority based on the invoicing address. Suppliers were then allocated to sectors using the following process:

- All suppliers common in BT's procurement data in previous impact assessments were allocated to the same sector as they had been in these economic impact assessments. This provided a sector allocation covering 76% of total spend.
- Suppliers not included in previous procurement data were allocated to sectors based on a brief review of each supplier's business activities using information available on company websites. This manual allocation was completed to ensure that c.90% of procurement spend in each region and all suppliers where invoices totalled £10 million or more were covered.
- The remaining suppliers in BT's procurement data were assumed to be operating in the telecommunications sector.

- All the suppliers in EE's procurement data had already been assigned to sectors defined by BT and EE. This was then matched to the sectors used in the economic impact model.

As expenditure on contract and agency staff is encompassed by the employment element of the direct impact assessment, all identifiable procurement expenditure with employment agencies has been removed from the supplier spend analysis, in order to avoid double counting. We have also removed from the analysis of indirect impact any purchasing between EE and BT, since the economic impacts of this spending are already captured within the direct impact assessment.

Impacts have then been estimated using Regeneris Consulting's input-output tables for the UK and the regions.

Induced Impacts

Data on wages and salaries of BT and EE employees and contractors by place of residence has been used to calculate induced impacts, along with the employment income of indirect employees estimated above.

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The regional and local dimension

Estimating regional and local impacts

The results are presented for the former Government Office Regions as well as Local Enterprise Partnership (LEPs). Wherever possible this has been informed by actual data for these areas, but where this data is not available, we have apportioned results to local areas using suitable apportionment factors, drawn from other BT and EE data. This should therefore be borne in mind when interpreting results at these geographical levels.

The HQ effect

National procurement contracts are often allocated to a location according to the supplier's HQ address. However, it may be that these services are actually provided from a series of locations around the country. This process of allocating the procurement expenditure to the HQ location, rather than the location of the depot where activity is taking place, may skew impacts to the HQ region and consequently under-estimate impacts elsewhere. We have adopted this approach as in previous year's assessment. It does mean that the results pertaining to indirect impacts in particular may be subject to significant margins of error, particularly at the local level.

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Benchmarking the Results

TThe report sets the key results in their wider socio-economic context, in order to illustrate the relative scale of BT and EE's contribution to the local, regional and national economy. To do this we have drawn down nationally published statistics. The data sources used are as follows:

1. Total employees in employment: The total number of people employed by all businesses with operations in the area. This excludes working proprietors and is presented as Full Time Equivalent employees (it excludes the self-employed). (Source: ONS, BRES, 2014).

2. Total IT and Communications sector employees in employment: The total number of people employed by ICT businesses with operations in the area. This excludes working proprietors and is presented as Full Time Equivalent employees (it excludes the self-employed). (Source: ONS, BRES, 2014).

3. Total private sector employees in employment: The total number of people employed by private sector businesses with operations in the area. This excludes working proprietors and is presented as Full Time Equivalent employees (it excludes the self-employed). (Source: ONS, BRES, 2014).

4. Total gross earnings from all residents in employment: This has been derived using the total number of residents in employment (source: Annual Population Survey, 2015) multiplied by the average gross annual pay for all employees in that geographical area (source: Annual Survey of Hours and Earnings, 2015)

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5. Total gross earnings from all employees in employment: This has been derived using the total number of people employed by businesses in the area (source: BRES, 2014) multiplied by the average gross annual pay for all employees in that geographical area (source: Annual Survey of Hours and Earnings, 2015)

6. Total GVA – Total Gross Value Added generated by businesses based in the area: GVA data has been provided for regions and selected LEP areas (Source: ONS, Headline Workplace Based GVA at Current Basic Prices, 2014 and ONS, GVA for Local Enterprise Partnerships, 1997-2014).

Offices Worldwide

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