



BIRMINGHAM CITY UNIVERSITY'S SOCIO-ECONOMIC IMPACT

SUMMARY REPORT
JUNE 2020



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EXECUTIVE SUMMARY

6,700

In the 2017/18 academic year, 6,700 (28%) of all BCU students came from Birmingham. Another 8,000 or 33% came from the rest of the West Midlands region.

69% of the 2017 alumni who were in employment or in further education reside in the West Midlands region six months after graduation.

£532m

In 2017/18, the University supported a £532 million contribution to UK GDP.

65.4% or £286 million of the GDP generated occurred in Birmingham.

Prior to the coronavirus crisis, Birmingham's economy was growing strongly. Over the five years from 2013 to 2018, it expanded by an average of 2.9% a year in real terms—well above the national rate of 1.8%. In 2018, the Birmingham local authority area produced 1.5% of the UK's total GDP and was home to 582,000 jobs (1.7% of the UK total).

This report looks at one of the factors that has contributed to Birmingham's recent success: Birmingham City University (BCU). Our study quantifies the University's economic contributions to the city, the wider West Midlands region, and the UK as a whole. It does so by looking at all the economic activity that is stimulated by the University's expenditure, and that of the students and visitors it attracts into the area.

The University plays a vital role in boosting the productive potential of local people. In the 2017/18 academic year, the University drew 6,700 (28%) of its students from the city, and a further 8,000 (33%) from the rest of the West Midlands region. Six months after graduating, 69% of BCU students remained within the West Midlands region, adding to the skilled labour pool available to local employers.

BCU also plays a vital role in fostering innovation in Birmingham and the West Midlands region, with its wide-ranging research helping both to generate new ideas and apply them in a business setting. The University's STEAMhouse centre, opened in Digbeth in 2018, has become home to Birmingham's innovation community—and is set to expand into new facilities at the Belmont Works upon completion of the project's £60 million second phase.

BCU'S EXPENDITURE IMPACTS

In the 2017/18 academic year, we calculate that spending by the University, the students it attracted into the area, and their visitors stimulated a £286 million contribution to Birmingham's GDP. This equates to 1.0% of the total economic activity generated in the local authority that year. When BCU supply chain and wage-related consumer spending outside Birmingham is also considered, the University's total GDP impact reached £392 million for the West Midlands region, and £532 million for the UK as a whole that year.

When assessing its total economic impact on the city of Birmingham, BCU is found to have a "GDP multiplier" of 1.4. This means that for every £1 million the University's own activities contribute to the city's economic output, its expenditure supports a further £400,000 contribution to GDP

along its supply chains and through its payment of wages. When we consider BCU's impacts in the West Midlands and the UK as a whole, this multiplier increases to 1.7 and 2.6, respectively.

The expenditure undertaken by the University, the students it attracted into the area, and their visitors is also found to have stimulated a total of 4,810 jobs in Birmingham in 2017/18. This equates to 0.9% of all employment in the city that financial year. Looking more widely, BCU's expenditure supported a total of 7,030 jobs in the West Midlands region that year, and 8,690 jobs in the UK as a whole.

The University is found to have an employment multiplier of 1.5 in Birmingham—in other words, for every 10 people the University directly employs, its expenditure stimulates a further five jobs in the city. For the West Midlands region and the UK as a whole, BCU's employment multipliers are 2.0 and 2.7, respectively.

The University also stimulates significant tax revenues. In 2017/18, we calculate it stimulated some £135 million for the Exchequer—sufficient to pay the average salaries of around 4,500 nurses.

BCU'S PRODUCTIVITY IMPACTS

The skills the University imparts makes its graduates extremely sought after. Six months after their graduation in 2017, 97.4% of its full-time students from the UK were in employment or further study. This places BCU seventh in the rankings of all multi-faculty universities in the UK, with a higher percentage than any other university in Birmingham.

The University delivers extensive business support programmes for firms (particularly small- and medium-sized enterprises, or SMEs) in the local area. Over the three years from 2016/17, BCU delivered 1,103 instances of business support, with SMEs benefiting from 10,215 hours of expert assistance from the University. This support helped bring 16 new products and services to market, while also enabling the expansion of businesses offering existing products.

4,810

Total number of jobs in Birmingham that were supported by BCU in 2017/18.

A further 2,220 jobs were supported elsewhere in the West Midlands region.

97.4%

Proportion of BCU's full-time UK students who were in employment or further study six months after graduating in 2017.

By this metric, BCU ranks seventh among the UK's multi-faculty universities.

513,000

Total number of attendees at cultural events organised by BCU in 2017/18.

BCU fosters entrepreneurship in students through its BSEEN programme, and delivers a very high number of graduate start-ups each year. During 2017/18, 55 businesses were started by BCU graduates through the BSEEN programme, as well as students' own independent ventures. This was far in excess of the UK-wide average of 22, and greater than for any of the 11 other universities in the West Midlands region.

STEAMhouse, BCU's innovation centre, provides entrepreneurs and start-up companies with free access to specialist equipment and expertise, including purpose-built prototyping spaces, materials, and support from skilled technicians. After its first 12 months of operation in 2018, the facility had 249 registered members, received over a thousand visitors a month, and had helped create 45 new products and services.

CULTURAL IMPACTS

BCU contributes to the social and cultural fabric of Birmingham and the wider West Midlands by hosting events and running initiatives which promote the arts. In 2018, events run by, or in collaboration with, the University were attended by more than half a million people.

BCU's Royal Birmingham Conservatoire cultivates musical talent, and plays host to world-renowned performers and instrumentalists, bringing a wide range of musical events to the public. As well as this, the University runs the Inspired festival, and is a partner in the New Art West Midlands initiative.



SUMMARY OF BIRMINGHAM CITY UNIVERSITY'S ECONOMIC IMPACTS

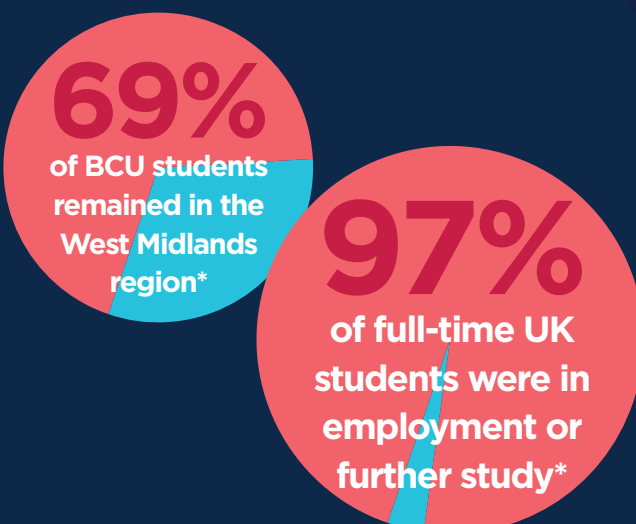
BCU BOOSTS THE PRODUCTIVE POTENTIAL OF LOCAL PEOPLE

WHERE BCU STUDENTS ARE FROM*



*2017/18 academic year

WHAT HAPPENS AFTER THEY GRADUATE:



*six months after they graduated in 2017

BCU ALSO DELIVERED:

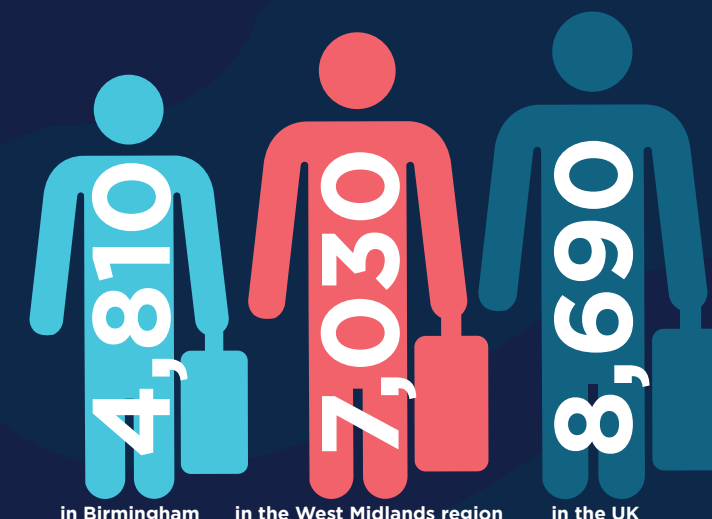


TOTAL ECONOMIC IMPACT OF BCU

GDP
IN THE 2017/18 ACADEMIC YEAR, BCU CONTRIBUTED:



JOBS
IN THE 2017/18 ACADEMIC YEAR, BCU SUPPORTED:



TAX
IN THE 2017/18 ACADEMIC YEAR, BCU STIMULATED:



BUSINESS SUPPORT

OVER THE THREE YEARS FROM 2016/17, BCU DELIVERED:



DURING 2017/18:



(vs UK-wide average of 22)
More than for any of the 11 other universities in the West Midlands region

AFTER 12 MONTHS OF OPERATION, STEAMHOUSE (BCU'S INNOVATION CENTRE) HAD :



1. INTRODUCTION

1.1 REGIONAL CONTEXT

Birmingham City University is a civic university. It seeks to respond to the needs of the local people and businesses within the city of Birmingham and the wider West Midlands region. This section begins by discussing the economic backdrop in which the University works.

Birmingham and the wider West Midlands region make a significant contribution to the UK economy. In 2018, 1.5% of the UK's gross value added¹ was produced in the Birmingham local authority area by the 582,000 people employed in jobs there—which equates to 1.7% of the UK job total that year (see Fig. 1). The West Midlands region accounted for 7.3% of the UK's gross value added that year, from its 8.4% share of UK jobs.

Between 2013 and 2018, both Birmingham and the West Midlands region outperformed the rest of the UK economy, growing on average by 2.9% and 1.9% per year respectively—compared with the national average of 1.8%.² In Birmingham, high value added sectors such as ICT and professional services have grown particularly rapidly, at average annual rates of 7.1% and 5.8% respectively.

But despite these substantial contributions, both Birmingham and the West Midlands trail the national average in terms of labour productivity—with their workers respectively producing 93% and 87% of the value added generated by the average UK worker. This lowers local workers' incomes, and makes goods produced in the region less price competitive.

Moreover, the West Midlands Combined Authority's Strategic Economic Plan predicts the region's poor productivity performance will worsen: "Forecasts suggest that on current trends, the output gap between the West Midlands and the rest of the UK will widen between now and 2030."³ The plan attributes this to region's "large number of low-value companies in low-growth sectors, the low business birth and survival rates in some areas, and the comparatively high number and proportion of residents with low skills and, in many cases, no formal qualifications." This economic context highlights the importance of the growth- and innovation-promoting activities of higher education institutions in the West Midlands.

Fig. 1: Overview of the performance of the Birmingham local authority, West Midlands region, and UK economies in 2018

	Birmingham	West Midlands region	UK
Levels in 2018			
Total GVA (workplace-base), £ billion	29.7	140.6	1,919.0
Workforce jobs (workplace-base), thousands	582	2,959	35,081
People employed (workplace-base), thousands	551	2,846	32,853
Employed residents, thousands	505	2,854	32,959
Unemployed residents, thousands	41	144	1,380
Total population, thousands	1,141	5,901	66,436
GVA per job (workplace-based), £	51,000	47,500	54,700
Unemployment rate, % of labour force ^a	7.4%	4.8%	4.0%
Births of new enterprises	9,410	31,300	380,580
3-year business survival rate ^b	49.2%	55.9%	55.3%
Share of UK in 2018			
GVA	1.5%	7.3%	100.0%
Workplace jobs	1.7%	8.4%	100.0%
Employed residents	1.5%	8.7%	100.0%
Total population	1.7%	8.9%	100.0%
Births of new enterprises	2.5%	8.2%	100.0%

^a Employed plus unemployed residents

^b 2018 data, relates to businesses created in 2015

1.2 STRUCTURE OF THIS REPORT

This report is organised as follows:

Chapter 2 quantifies BCU's own economic contribution in 2017/18, and the economic activity the University stimulated as a purchaser of locally-made products and payer of wages to staff living in the local community. It shows how the scale of BCU's contribution has grown since the previous study, which used data for 2006/7.

It then goes on to investigate the contribution made by the expenditure of (i) BCU students from outside the local area, and (ii) visitors to the University, including attendees of Open Days and Graduation Ceremonies.

Chapter 3 looks at the skill levels and productivity of workers in Birmingham. It investigates how the University seeks to upskill students so they are "work and practice-ready" when they graduate, and to support students in gaining access to their chosen

career destinations. It looks at the University's business support activities, and how it fosters entrepreneurship. Lastly, it examines BCU's cultural contribution to Birmingham.

Finally, **Chapter 4** presents our key conclusions from the study.

¹ Gross value added is easiest thought of as the value that a firm's or sector's output is sold for minus the cost of the bought in inputs of goods and services used up in its production. The sum of gross value added across the economy plus taxes (less subsidies) on products is equivalent to gross domestic product (GDP)

² Oxford Economics forecasts based on ONS, (2018), 'Regional gross value added (balanced) local authority by NUTS 1 region: UKG West Midlands', 12 December.

³ West Midlands Combined Authority, (2016), 'Strategic economic plan'. Page 7.



2. THE UNIVERSITY'S ECONOMIC CONTRIBUTION

2.1 THE UNIVERSITY'S DIRECT IMPACT

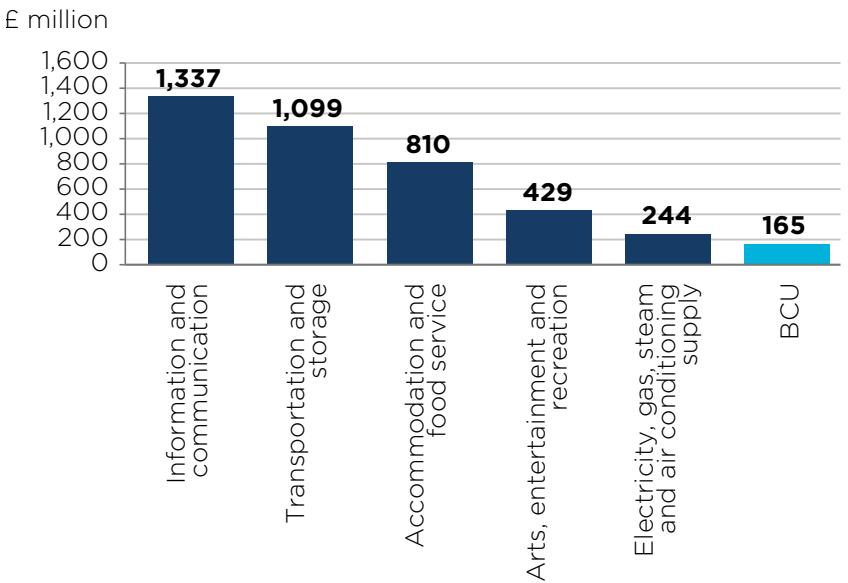
2.1.1 Gross value added contribution to GDP

Birmingham City University's UK operations—through its teaching of students, engagement in research, and engagement with local and international businesses, charities and governments—generates economic activity in Birmingham, the West Midlands region and the wider UK.

In 2017/18, the University made a gross value added contribution to GDP of £165.3 million⁴. To give a sense of scale, this is 0.6% of all the economic output produced in the Birmingham local authority district.

An alternative way of trying to gauge the size of the University's contribution to GDP is to compare it to that made by different industrial sectors in Birmingham. For example, it is equivalent to 39% of the economic output produced by Birmingham's arts, entertainment and recreation sector, or 68% of output in the electricity and gas supply industry (Fig. 2).

Fig. 2: Birmingham City University's gross value added contribution compared to other industrial sectors in Birmingham local authority district, 2017/18



Source: Oxford Economics. Totals may not sum due to rounding

⁴ As the direct impact occurs at the BCU site, the University's direct impact is the same across Birmingham, the West Midlands Region, and the UK.

AN INTRODUCTION TO ECONOMIC IMPACT ANALYSIS

This study quantifies the economic contribution the UK-resident parts of Birmingham City University makes to the local, regional, and national economy, using an analytical method called an Economic Impact Assessment.⁵ The results presented are for the academic year 2017/18. To assess the University's contribution, this report examines three channels of expenditure which stimulate economic activity in the local area (Fig. 3):

- The University's **direct impact** is the economic activity generated by the University itself, and in the businesses supplying goods and services where students and their visitors spend their money.
- The **indirect impact** of the University is the economic activity generated through supplier purchases made in order to fulfil university, student and their visitors' orders.
- The **induced impact** arises as the University, its suppliers and those serving students and visitors pay wages to their staff, which are onward spent in the consumer economy.

The total economic impact of Birmingham City University is the sum of these three channels. The scale of the University's impact is measured using three metrics:

- **Gross value added** is the contribution an institution or company makes to Gross Domestic Product (GDP). It is most simply viewed as the value of its output minus the cost of the inputs of goods and services used up in its production. It is the measure the Office for National Statistics (ONS) use to quantify the contribution to the economy of each individual producer, industry or sector.⁶
- **Employment**, measured on a headcount basis to facilitate comparison with ONS employment data.
- **Tax revenue**, including all income taxes, National Insurance Contributions (NICs), corporation taxes, and other indirect taxes (such as VAT) attributable to the economic activity stimulated by the University.

The results are presented on a gross rather than net basis.⁷ This means the study measures the economic 'footprint' of Birmingham City University as it stood in during the year. It does not subtract the foregone activity that the University displaced from other institutions or sectors. Nor it does not attempt to estimate what economic benefits could arise if the labour and capital resources employed by the University were put to alternative uses, as it is impossible to know what they would have produced if they were employed in their next most productive use.

Our results are presented for three geographies:

Birmingham local authority district as defined by the Nomenclature of Territorial Units for Statistics (NUTS) area 3 called Birmingham.⁸ It is the area for which Birmingham City Council has administrative jurisdiction.

The West Midlands region as defined by the NUTS area 1 called the West Midlands region since 1 April 2011. It was formerly called the West Midlands Government Office Region (GOR) until the GORs were closed at the end of March 2011.

The United Kingdom including England, Northern Ireland, Scotland, and Wales.

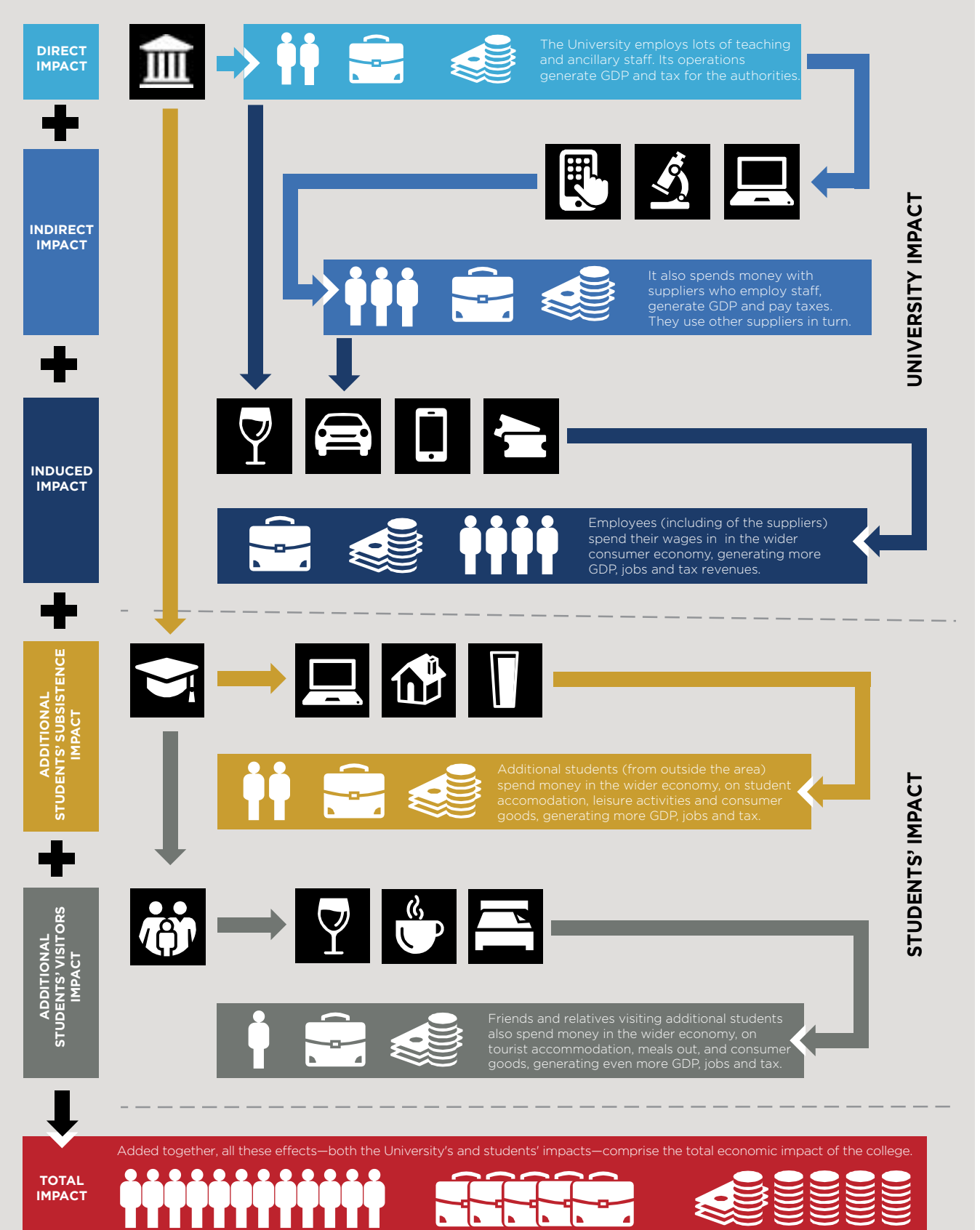


Fig. 3: Schematic of the University's expenditure impacts

⁵ It does not include BCU's overseas campuses.

⁶ Gross value added (plus net taxes on products) is aggregated to form the basis of GDP, the main measure of the total level of economic activity in a country.

⁷ This is a standard procedure in the analysis of the economic impact of individual industries or businesses.

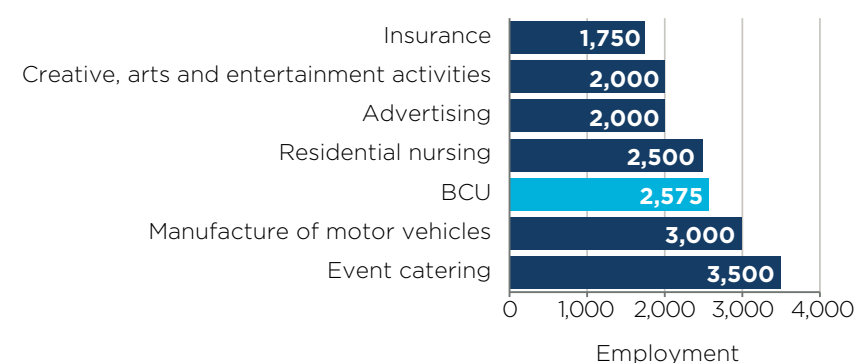
⁸ The Nomenclature of Territorial Units for Statistics is a hierarchical classification of administrative areas, used across the European Union for statistical purposes. NUTS areas are stable and are only be amended periodically.

2.1.1 EMPLOYMENT

In 2017/18, Birmingham City University employed an average of 2,575 members of staff each month on a headcount basis.⁹ This is more people than work in the residential nursing industry and the creative, arts and entertainment sector in Birmingham (Fig. 4).¹⁰ When compared to important local institutions, BCU employed the equivalent of just over half the number of staff working within the large Birmingham Community Healthcare NHS Trust (Fig. 5).

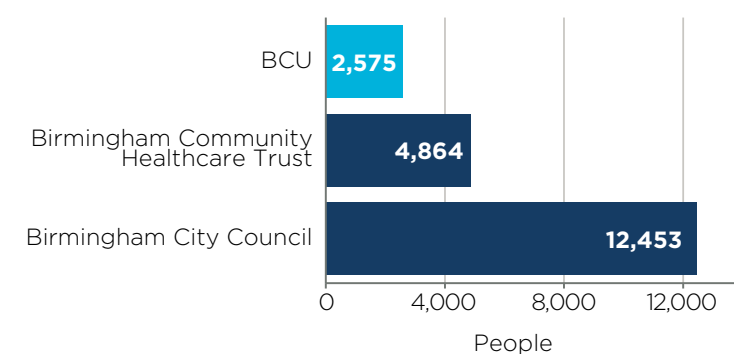
Birmingham City University employs staff with a diverse range of skills. In addition to the 1,183 academics, BCU employ 869 professional and administrative staff, as well as 347 managers. This is important for the local labour market, as administration and managerial staff are more likely to be drawn from the local area, meaning that the University also provides employment for people who already live in the West Midlands.

Fig. 4: Birmingham City University's direct employment relative to sub-sectors within Birmingham in 2017/18



Source: BCU, ONS, Oxford Economics

Fig. 5: Comparing Birmingham City University's direct employment to that of local institutions in 2017/18



Source: BCU, BCC & BCH trust annual reports

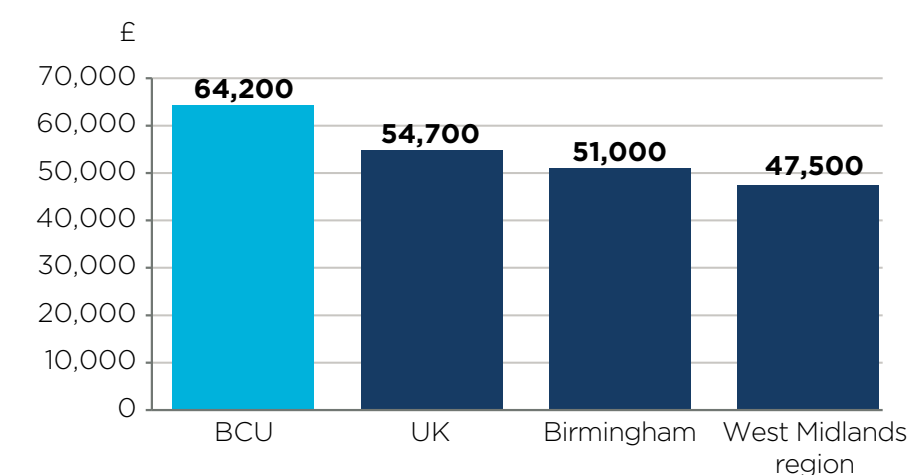
2.1.2 PRODUCTIVITY

By dividing the University's gross value added contribution by its number of employees it is possible to create a simple measure of labour productivity. This suggests each worker produces an average of £64,200 per year (see Fig. 6). This is greater than the average worker in Birmingham local authority district, the West Midlands region, and the national average (albeit these are measured using jobs as the measure of labour input). This comparatively high gross value added per employee measure displays the high-skilled nature of employment at BCU.

2.1.3 TAX CONTRIBUTIONS

In 2017/18, the University and its employees paid £41 million in tax, the majority of which was paid as labour taxes and business rates. To give a sense of scale, this is sufficient to pay the average salaries of 1,470 nurses or 1,190 teachers."

Fig. 6: Birmingham City University's staff labour productivity versus local, regional and national averages in 2017/18



Source: BCU; ONS; Oxford Economics

529

Number of Birmingham-based suppliers used by BCU in 2017/18.

More than £40 million (32% of its total procurement spend) was with suppliers in Birmingham that year.

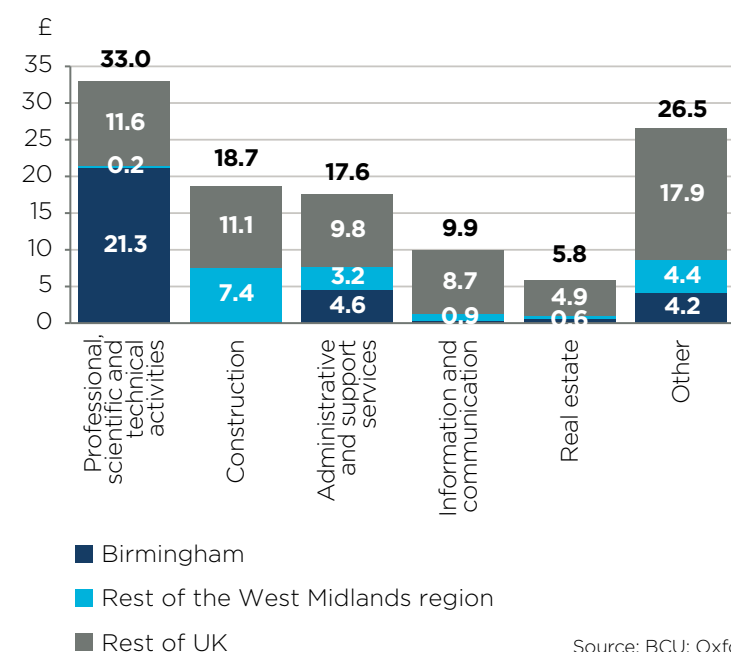
2.2 INDIRECT IMPACT: PROCUREMENT FROM LOCAL SUPPLIERS

Birmingham City University procures a substantial proportion of its goods and services from local businesses. In 2017/18, the University spent £40.9 million, or 32.3% of its total procurement expenditure, with 529 businesses based in the Birmingham local authority. An additional £20.2 million or 15.9% of the total was spent with 540 suppliers in the wider West Midlands region and £62 million with 883 suppliers in the rest of the UK.

The University's procurement stimulates economic activity at its suppliers as they

produce output to satisfy its orders. As such, the University's expenditure on inputs of goods and services underpins a proportion of each firm's gross value added contribution to GDP, employment, and tax along its local supply chain. Quantifying this 'indirect impact' in 2017/18, we estimate that the University's procurement supported a £31.2 million gross value added contribution to GDP, 865 jobs, and raised £9.5 million in tax revenues in the Birmingham economy.

Fig. 7: Birmingham City University's supply chain impact on gross value added by industry and geography in 2017/18



Source: BCU; Oxford Economics

2.2.1 SUPPLY CHAIN GROSS VALUE ADDED

The University's procurement supported an estimated £111.5 million gross value added along its UK supply chain. Of this £47.6 million was generated in the West Midlands region and £31.2 in the Birmingham local authority area.

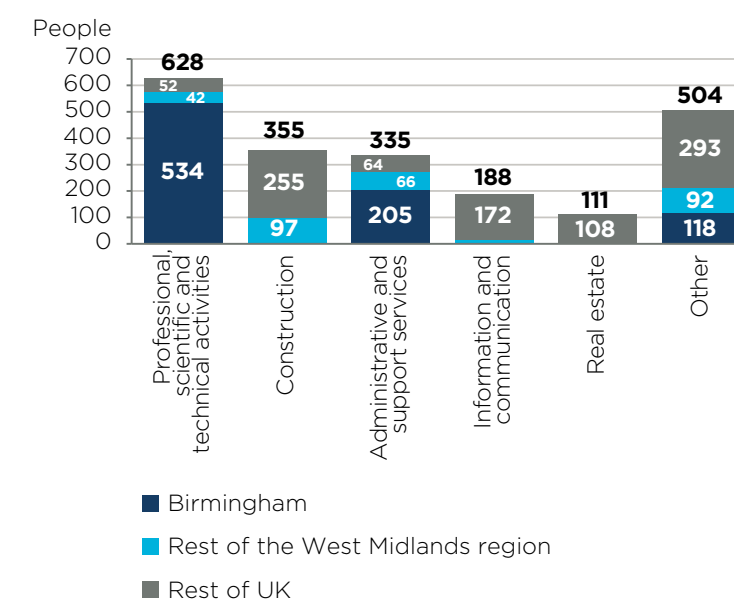
In 2017/18, £33.0 million (or 30%) of the gross value added stimulated by the University's procurement along its UK supply chain was produced by the professional services sector (which includes accountancy, legal, consultancy, architecture, testing services, etc). Most of this economic activity occurred in the Birmingham local authority district. The construction industry and administrative and support services sector were the second and third-largest beneficiaries in gross value added terms, with over a quarter of the latter occurring in Birmingham (Fig. 7).¹²

2.2.2 SUPPLY CHAIN EMPLOYMENT

The University's procurement stimulates jobs across the UK economy. In 2017/18, BCU's supply chain spending is estimated to have supported 2,120 jobs in the UK economy. Of these, 1,175 jobs were located in the West Midlands region and 865 jobs in the Birmingham local authority district.

The sectors with the most jobs supported by BCU activity and spending were the professional services (628 jobs), construction (355 jobs) and administrative and support services (335 jobs). Most of the jobs in professional services and administrative and support services were located in Birmingham local authority (see Fig. 8).

Fig. 8: The University's supply chain employment impact by industry and geography in 2017/18



Source: BCU; Oxford Economics

£55.2m

Employee compensation paid by BCU to staff who live in the Birmingham local authority district.

2.3 INDUCED IMPACT: PAYMENT OF WAGES BY BCU AND ITS SUPPLIERS

The University and the firms in its direct supply chain pay their staff wages. The recipients are likely to spend a proportion of this income in the consumer economy. This expenditure in local retailers, leisure and other outlets stimulates further economic activity, which can be measured in terms of GDP, employment and tax revenues

The University spent £128 million on employee compensation in 2017/18—of which, £55.2 million (43%) was paid to staff living in the

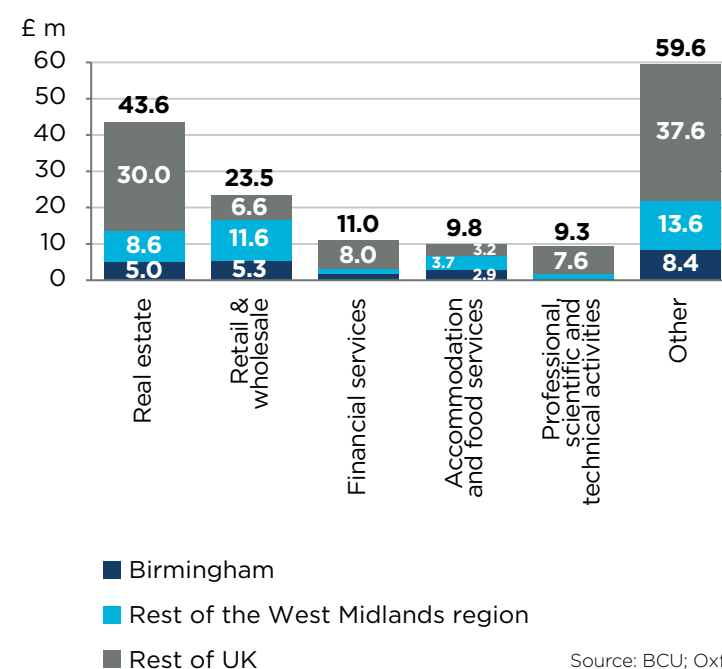
Birmingham local authority area. This is equivalent to 0.6% of all the wages paid to Birmingham's inhabitants that year. A further £58.2 million (45% of the total) was paid to staff residing elsewhere in the West Midlands region, meaning that 88% of BCU's employee compensation was paid to staff living in the West Midlands region

The 865 staff estimated to be employed in the University's supply chain in Birmingham are also paid wages. Based on the average for their industry, we estimate that this amounted to some £15.7 million in 2017/18. An additional £13.9 million and £31.4 million was paid to staff in the University's supply chain elsewhere in the West Midlands region and rest of the UK.

2.3.1 Induced impact on gross value added

The wage-financed consumption spending or 'induced impact' is estimated to support a £23.9 million gross value added contribution to GDP in Birmingham in 2017/18. Elsewhere in the rest of the West Midlands and wider UK, the spending is estimated to have stimulated an additional £39.9 million and £93.0 million in gross value added, respectively.

Fig. 9: The impact of Birmingham City University and supplier's payment of wages to staff to gross value added by industry and geography in 2017/18



Source: BCU; Oxford Economics

The industry that benefited the most from the wage-financed consumer spending across the whole UK was the real estate sector. Some £43.6 million of its gross value added was stimulated by the payment of wages by BCU and the firms in its supply chain. This reflects the large share of income spent renting or the margin on purchasing or selling property (Fig. 9).

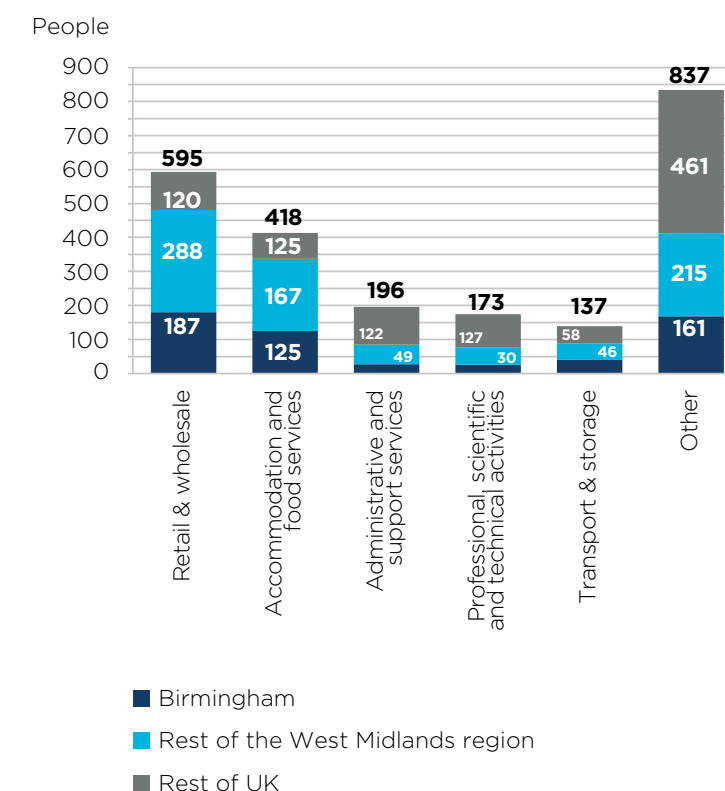
At the national level, the retail and wholesale sector was the second largest beneficiary. Some £23.5 million of its gross value added was attributable to BCU and the firms in its supply chain. At the Birmingham local authority level, it was the largest beneficiary, with £5.3 million of the gross value added stimulated occurring there.

2.3.2 INDUCED IMPACT ON EMPLOYMENT

The induced impact on employment is estimated to have supported an additional 2,360 jobs in the UK. Of these, 1,340 were in the West Midlands region and 550 were in Birmingham local authority area.

The jobs created were concentrated in those sectors which supply consumer and leisure goods and services: namely retail and wholesale (595 jobs) and hospitality (418). There were smaller impacts in administrative and support services (196), and professional, scientific and technical (173) sectors (Fig. 10).

Fig. 10: Induced impact of the payment of wages by the University and firms in its supply chain on employment by industry and geography in 2017/18



Source: BCU; Oxford Economics

2.3.3 Induced impact of tax receipts

The induced impact also supported £46.0 million of revenues for the Exchequer across the whole UK. Of this, £15.2 million was stimulated in the West Midlands region and £6.0 million in Birmingham local authority district.

2.4 THE UNIVERSITY'S TOTAL EXPENDITURE IMPACTS

The direct, indirect and induced impacts outlined in this section can be summed to quantify the total gross contribution Birmingham City University makes to Birmingham local authority area, the West Midlands region and the UK, through its expenditure.

2.4.1 Overall impact of BCU's expenditure on gross value added

In 2017/18, BCU's expenditure stimulated a £433.6 million gross value added contribution to UK GDP. Some 38% was generated at the University itself, 26% through its procurement from its domestic supply chain, and 36% through wage consumption impacts (see Fig. 11). At the national level, the University's gross value added multiplier was 2.6. Therefore, for every £10 million in gross value added generated by the University itself, it supports a further £16 million around the rest of the UK economy through its expenditure.

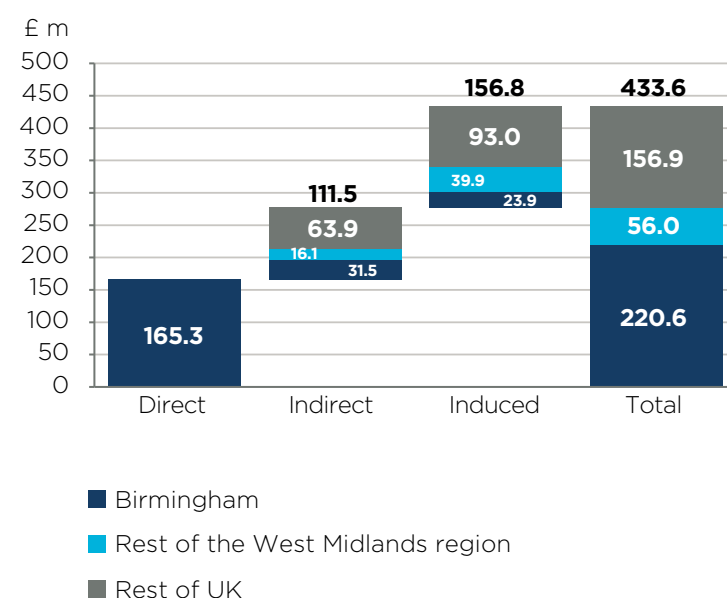
Looking at the entire West Midlands region, BCU supported a £276.7 million contribution to the region's GDP in 2017/18. It comprised 0.2% of all the economic output produced in the region in that year.¹³ This was 43% higher than an earlier study's estimate for 2006/7 (when

translated into 2017/18 prices (Fig. 12)).^{14,15}

Some 63% of the latest year's gross value added was produced by the University itself, 17% by its supply chain and 23% through wage consumption impacts. The latter two percentages are smaller than at the national level as the smaller geography includes less of the firms

in the supply chains of the University and the outlets where its staff spend their wages. For the West Midlands region, the University had a gross value added multiplier of 1.7. So for every £10 million of gross value added generated by the University itself, a further £7 million is supported across the region through its expenditure.

Fig. 11: Total contribution to gross value added supported by the University in 2017/18, by expenditure channel and geography



Source: BCU; Oxford Economics

In 2017/18, the University supported a £220.6 million gross value added contribution to Birmingham's GDP. This is equivalent to 0.8% of all the economic output produced in the local authority during that year. It is 86% higher than the estimate for 2006/7 after allowing for inflation.¹⁶ Some 75% of the gross value added in 2017/18 was generated by the University itself. It stimulated a further 14% and 11% in its supply chain and through wage consumption impacts, respectively. The University can be said to have a gross value added multiplier

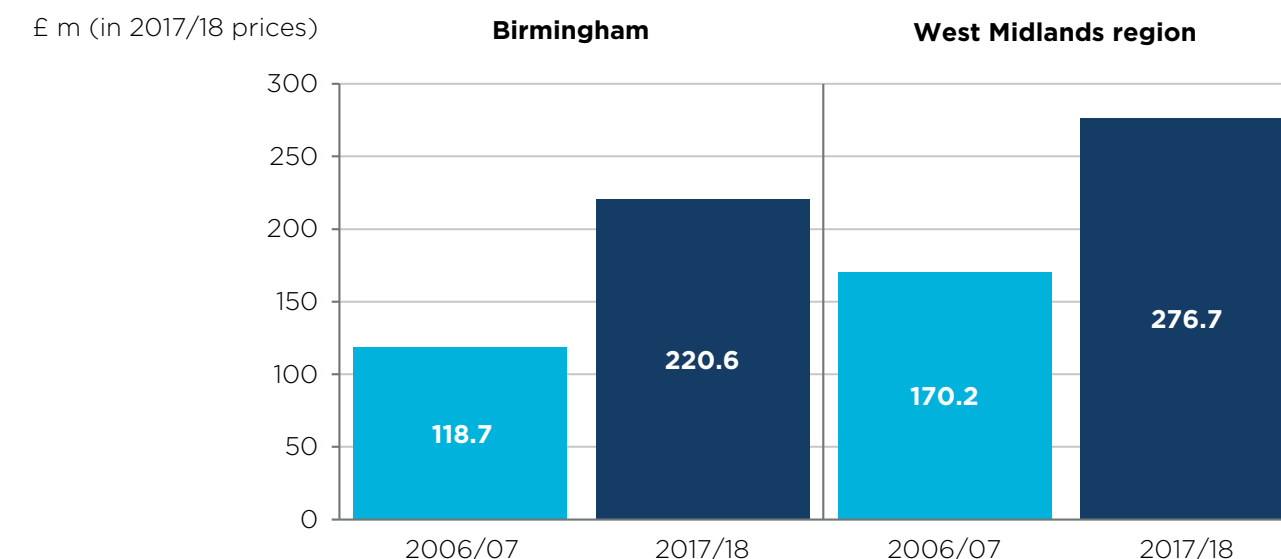
of 1.4 in the Birmingham local authority area. This means that for every £10 million of gross value added generated by the University itself, a further £4 million is supported elsewhere in the local authority.

£433.6m

In 2017/18, BCU's expenditure stimulated a £433.6 million gross value added contribution to UK GDP.

51% or £220.6 million of the gross value added was generated in Birmingham.

Fig. 12: Gross value added supported by the University's expenditure in 2006/7 and 2017/18



Source: ECOTEC (2008), Oxford Economics

¹³ ONS, (2018), 'Nominal and real regional gross value added (balanced) by industry', 12 December.

¹⁴ ECOTEC, (2008), 'Birmingham City University impact study; A final report to Birmingham City University', December.

¹⁵ The gross value added estimates for 2006/7 have been updated for inflation using the ONS' Gross Domestic Product deflator.

¹⁶ ECOTEC, (2008), 'Birmingham City University impact study; A final report to Birmingham City University', December.

2.4.2 Overall impact of BCU's expenditure on employment

In 2017/18, BCU supported 7,060 jobs around the UK. Of these, 37% were at the University itself, 30% were in its supply chain, and the remaining 33% due to wage consumption impacts (see Fig. 13). The employment multiplier at the national level was 2.7, so for every 10 jobs at the University itself, it supports another 17 around the rest of the UK.

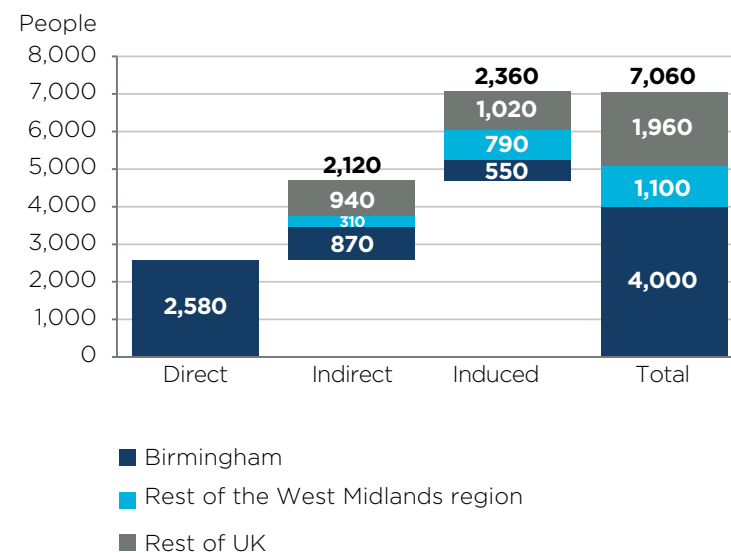
BCU is estimated to have supported 5,100 jobs in the West Midlands region in 2017/18 (Fig. 19). This is 910 jobs or 22% higher than an earlier study's estimate for the year 2006/7¹⁷ (Fig. 14). Looking at the jobs supported in 2017/18, 51% of these occurred at the University itself, therefore BCU is estimated to have a regional employment multiplier of 2.0. So for every 10 jobs at the University, it supports the same number around the rest of the West Midlands region through the additional local income and local supplier purchases it generates.

The University's expenditure is also found to have supported a total of 4,000 jobs in the Birmingham local authority area in 2017/18 (Fig. 19)—0.8% of the area's total that year.¹⁸ This estimate is 860 jobs or 27% higher than a previous estimate for 2007/8. Some 65% of the jobs in 2017/18 were at the University itself, with

the majority of the remainder located in its local supply chain. At the local authority level, Birmingham City University is therefore estimated to have an employment multiplier

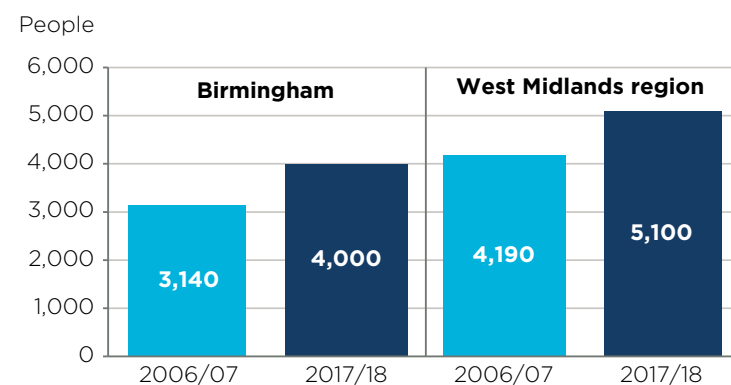
of 1.5. For every 10 people employed at the University, its expenditure supports another five around Birmingham through its procurement and payment of wages.

Fig. 13: The employment estimated to be supported by Birmingham City University in 2017/18, by expenditure channel and geographical area



Source: BCU; Oxford Economics

Fig. 14 Number of jobs supported by the University's expenditure in 2006/7 and 2017/18



Source: ECOTEC (2008), Oxford Economics

2.4.3 Overall impact of BCU expenditure on tax receipts

The University's expenditure, as well as the resultant supply chain and wage spending impacts, are estimated to have supported a total tax contribution to HM Exchequer of £112.0 million (Fig. 15). Of this, £56.3 million (or 50%) was generated in the Birmingham local authority area and another £13.3 million (or 12%) in the rest of the West Midlands.

2.5 'ADDITIONAL' STUDENTS' EXPENDITURE IMPACTS

Birmingham City University's economic footprint extends beyond the operational and demand-led impacts

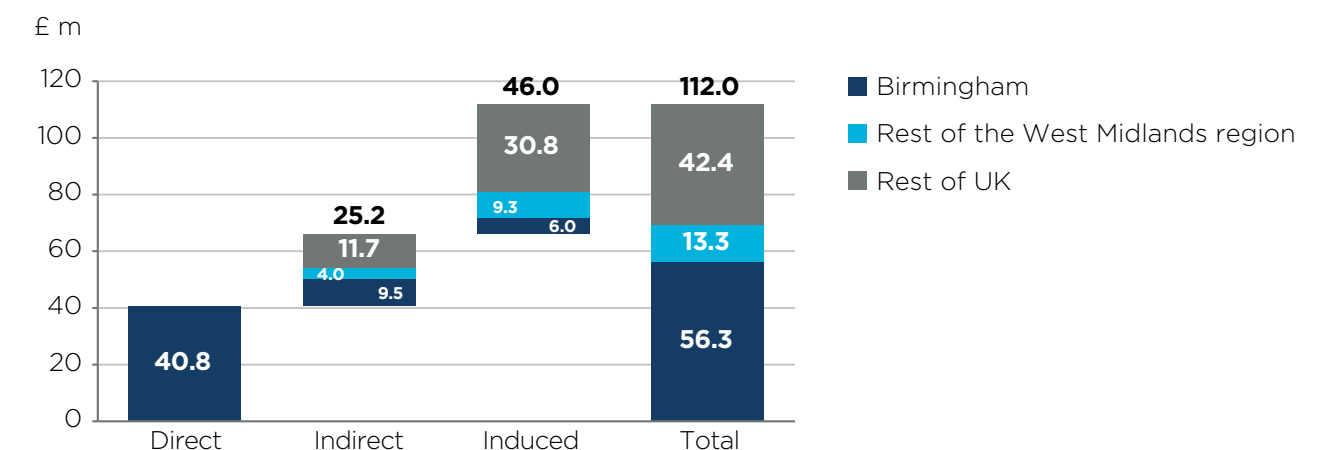
outlined in Sections 2.2 to 2.4. The high quality of its educational and practice-oriented programmes, links with industry, and strong employment record attract students from across the UK and internationally.

These students spend money in the local economy on housing, food, transport, leisure and educational supplies. Given that in the absence of the University, this localised spending would not have taken place, we refer to it as 'additional expenditure'. The number of additional students varies depending on which of the three geographies we are considering. For the UK, it is all the international students.¹⁹

For the West Midlands region, those whose home postcodes are outside the region. For Birmingham local authority it is those whose home postcodes are outside the district.

Each of these students has a subtly different spending profile, however, the average subsistence expenditure per student, excluding tuition fees, attending the University was £11,970 per annum in 2017/18.²⁰ This is primarily made up of housing costs which make up 31% or £3,756 of their expenditure. This was followed by 16% spent on travel and personal items.

Fig. 15: Tax receipts estimated to be supported by Birmingham City University in 2017/18, by expenditure channel and geographical area



Source: BCU; Oxford Economics

¹⁷ ECOTEC, (2008), 'Birmingham City University impact study; A final report to Birmingham City University', December.

¹⁸ <https://www.nomisweb.co.uk>

¹⁹ We also factor in country of domicile. A student whose nationality is non-UK, but is domiciled here is not counted as additional.

²⁰ See Appendix 2 for the method used to calculate the average student's subsistence spending.

2.5.1 Gross value added

Additional students are estimated to have spent £80 million at retail, leisure and other outlets in the Birmingham local authority area. This stimulated output at local businesses, supporting an estimated total contribution to GDP of £62.9 million within Birmingham. The equivalent figures for the West Midlands region rose to £112 million whilst the GDP contribution for the whole UK was £95 million. The estimates reflect not only the number of the additional students brought to the area, but the share of the supply chains located in each geography.

The industry in Birmingham that benefited the most from additional students' subsistence spending was real estate, which is estimated to have produced £35.3 million in gross value added in satisfying students demand for accommodation. The manufacturing industries' (in particular, food manufacturing) value added was £6.5 million larger. The transport and storage industry was the third largest beneficiary of the additional student spend. The industrial breakdown of the growth in gross value added changes as the geographies considered get larger, as more of the supply chain and wage consumption impacts are captured.

2.5.2 Employment

Student subsistence spending supported an estimated 740 jobs in the Birmingham local authority area. This grows to 1,840 jobs in the West Midlands region, before falling to 1,570 for the whole UK. The change in size of the estimates as the geographies get larger reflects the offsetting effects of capturing more of the supply chain and wage consumption impacts, versus a smaller number of additional students.

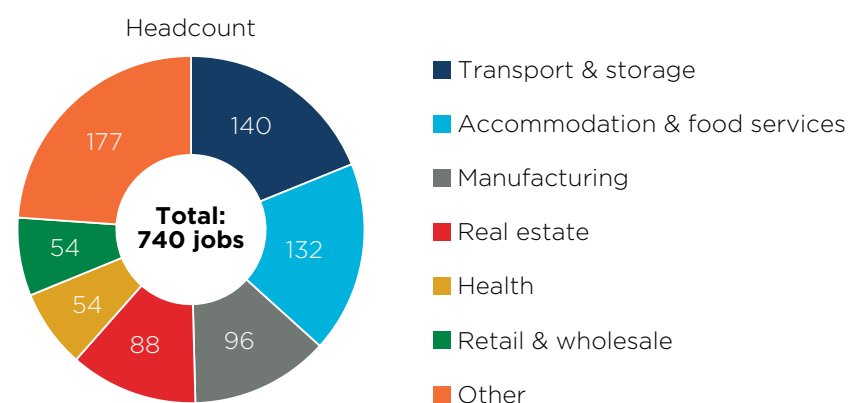
At the Birmingham local authority level, the pattern of employment tends to reflect the additional students spending pattern and the labour intensity of those

industrial sectors. Transport and storage and hospitality are the two largest employers (Fig. 16). At the West Midlands region and UK levels, it is more reflective of the location of the supply chains and the location of staff who work in them and the import intensity of each industrial sector.

2.5.3 Tax receipts

Student subsistence spending also generated £22.1 million in tax revenues at the UK level. Of these, some £21.9 and £8.8 million were stimulated in the West Midlands region and Birmingham local authority district, respectively.

Fig. 16: Employment supported by student subsistence spending by industry and Birmingham LAD in 2017/18



Source: BCU; Oxford Economics

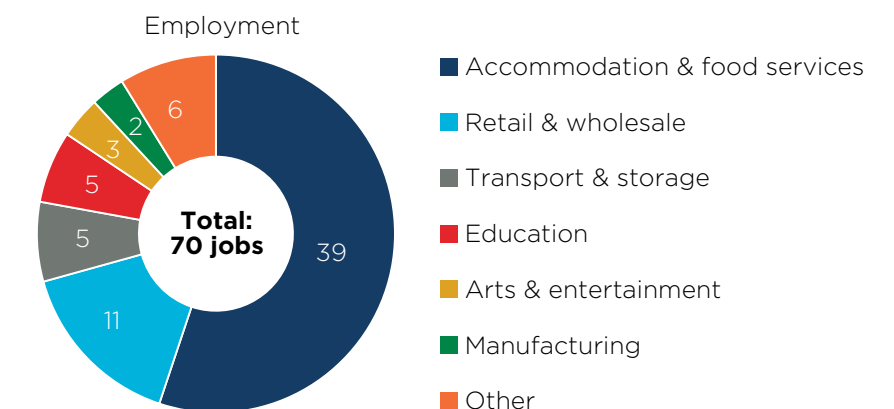
2.6 ATTRACTING VISITOR SPENDING

The additional students attending Birmingham City University attract family and friends to visit them. These visitors are likely to undertake expenditure travelling to visit the students, in the city's hospitality industry or at cultural attractions. By comparing students' home and term time postcodes, and assuming friends come from home we are able to calculate the number of additional friends or family visiting each area.

In January 2018, the University hosted Open Days for prospective students. These attracted 10,200 people. Similarly, the University hosted Graduation Ceremonies which attracted nearly 5,600 people in the 2018/19 academic year. Again, we use postcodes and country of domicile to calculate how many will bring 'additional' expenditure into each of the geographies. In total, visitors to students from outside the city, or travelling to Open Days and Graduation Ceremonies are estimated to have spent £3.0 million in the Birmingham local authority district during their stay. By combining data on the expenditure on items purchased on visits, to data on the industrial sectors that supply the goods and services it is possible to estimate visitor expenditure contributed £2.3 million in gross value added in

Birmingham and generated £0.7 million in tax revenues. Visitor spend also supported an estimated 70 jobs in the Birmingham local authority area. The majority of jobs are supported in the service sectors such as retail and hospitality reflecting the typical consumption patterns of a visitor to the area.

Fig. 17: Visitor spending jobs impact in Birmingham local authority district in 2017/18



Source: BCU; Oxford Economics

£531.7m

Gross value added contribution to UK GDP supported by BCU, its additional students and visitors across the UK in 2017/18.

£285.8 mn or 54% of this economic activity occurred in the Birmingham local authority district.

2.7 SUMMARY OF TOTAL ECONOMIC IMPACT

Summing the expenditure impacts of the University (Sections 2.2 to 2.4), its students (section 2.5) and visitors (Section 2.6), we can estimate the total demand side impacts the University creates in the Birmingham local authority area, the West Midlands region, and UK.

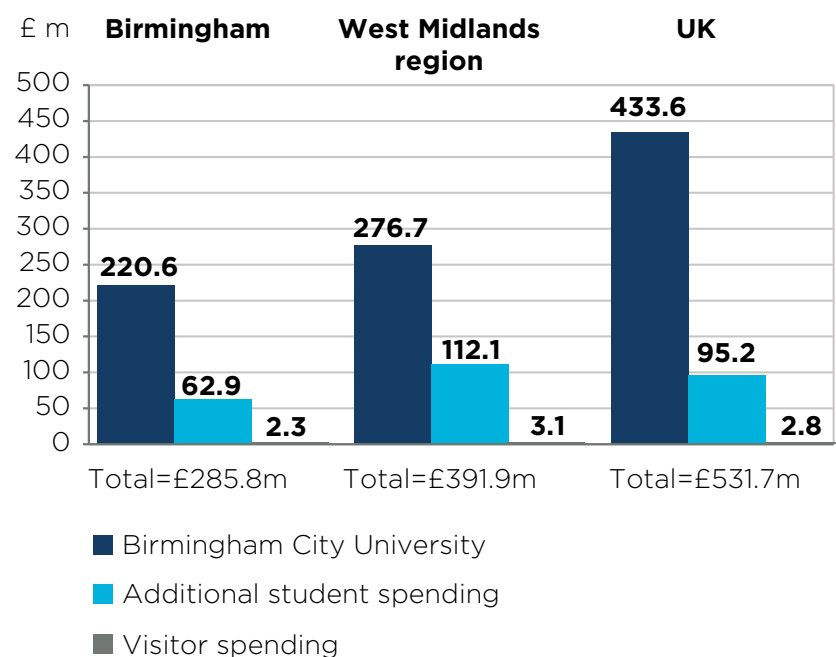
2.7.1 Gross value added contribution to GDP

In 2017/18, spending by the University, its additional students and their visitors is estimated to have stimulated a £531.7 million gross value added contribution to UK GDP (Fig. 18). Some 74%

or £391.9 million of this activity occurred in the West Midlands region. This was 0.3% of the economic activity that occurred within the region. Firms in Birmingham local authority district benefitted by producing £285.8 million in gross value added. This was 1.0% of all of the economic activity that occurred in the district in that year.²¹

At the national level, £433.6 million (82% of the gross value added stimulated) resulted from the University's expenditure. Additional students' expenditure stimulated £95.2 million or 18% of gross value added. Visitors spending had a far smaller impact, stimulating an additional £2.8 million of gross value added. These proportions are similarly applicable for the University's GDP contributions to Birmingham and the West Midlands.

Fig. 18: Contribution to Birmingham's GDP supported by the spending of the University, its additional students and visitors, 2017/18



Source: BCU; Oxford Economics
Note: Totals may not sum due to rounding

2.7.2 Employment

The expenditure undertaken by the University, its additional students and visitors is estimated to stimulate 8,690 jobs across the UK (Fig. 19). Of these, 7,030 are in the West Midlands region. They comprise 0.3% of total employment in the region. Some 4,800 of these jobs are in Birmingham. This is 0.9% of total employment in the local authority.²²

BCU's own expenditure is the dominant source of the employment created across all three geographies. At the national level, 7,060 of the 8,690 jobs or 81% were stimulated by the University's own expenditure.

2.7.3 Taxation

The three sources of expenditure stimulated activity which generated £134.8 million in tax receipts for HM Exchequer. To give an indication of scale, this could pay for operating expenses of the Birmingham Healthcare NHS Foundation Trust which serves 1.2 million residents across Birmingham, as well as some services in the Black Country and the wider West Midlands for just over half the year in 2017/18.²³

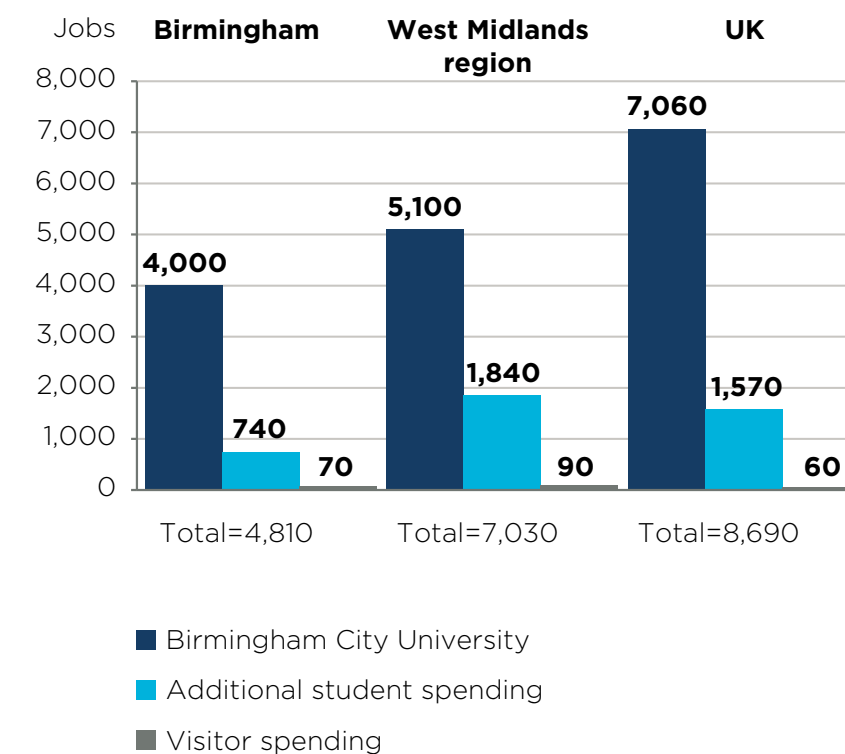
Of this the tax revenues BCU supported in 2017/18, 69% and 49% were generated within the West Midlands region and Birmingham local authority district, respectively. Split by type of expenditure, 83% of the tax receipts were stimulated by the University's spending, with 16% by the subsistence spending of additional students.

8,690

Total number of jobs supported by BCU, its additional students and visitors across the UK in 2017/18.

4,810 jobs or 55% of these were in the Birmingham local authority district.

Fig. 19: Jobs supported by the spending of the University, its additional students and visitors in 2017/18, by expenditure channel and geography



Source: BCU; Oxford Economics





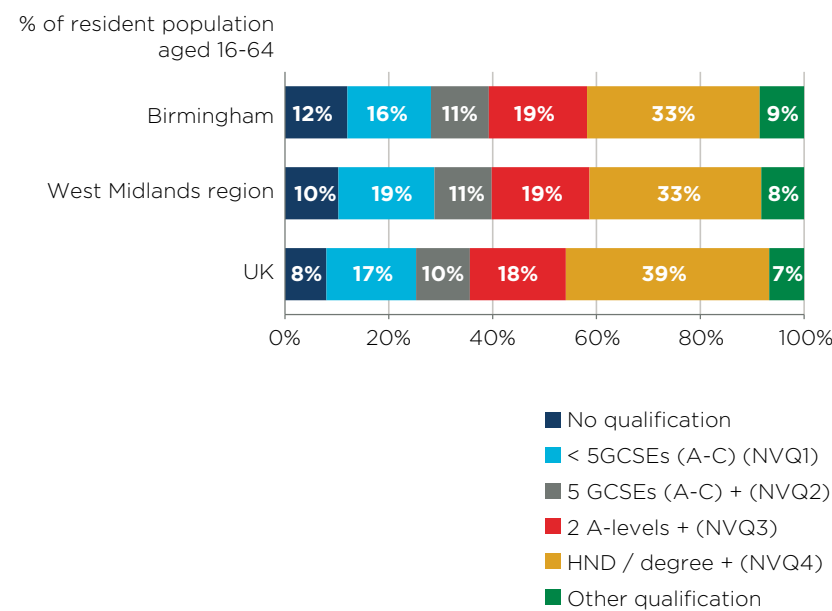
3. BOOSTING THE PRODUCTIVE POTENTIAL OF BIRMINGHAM AND THE WEST MIDLANDS

One of the challenges the Birmingham and wider West Midlands economy faces is low skill levels, relative to the UK average. Some 12% of Birmingham residents in the 16-64 age group, and 10% of the equivalent population of the wider West Midlands region, have no formal educational qualifications at all. This is higher than the 8% across the UK as a whole (see Fig. 20).

At the upper end of the educational spectrum, 33% of residents of Birmingham and the West Midlands region of working age have been educated to the 'NVQ4' level (i.e. they hold a Higher National Diploma or degree), this is six percentage points below the national average at 39%.

The West Midlands Combined Authority's Strategic Economic Plan identifies "improving [the] skills base and ensuring that businesses have access to the skills they require" as one of the challenges it faces.²⁴

Fig. 20: Working-age resident population by educational qualification in 2018



Source:ONS Annual Population Survey

²⁴ West Midlands Combined Authority, (2017), "Strategic Economic Plan". Page 8

3.1 PROVIDING SKILLS REQUIRED BY THE LABOUR MARKET

Birmingham City University works to boost the productive potential of the local economy. It does so by boosting the skill levels of its students, both through formal education, helping them to obtain work experience, and encouraging them to participate in other activities that enhance their knowledge set. As the majority of graduates are retained within the area, this improves the quality of the labour pool available for local firms to hire.

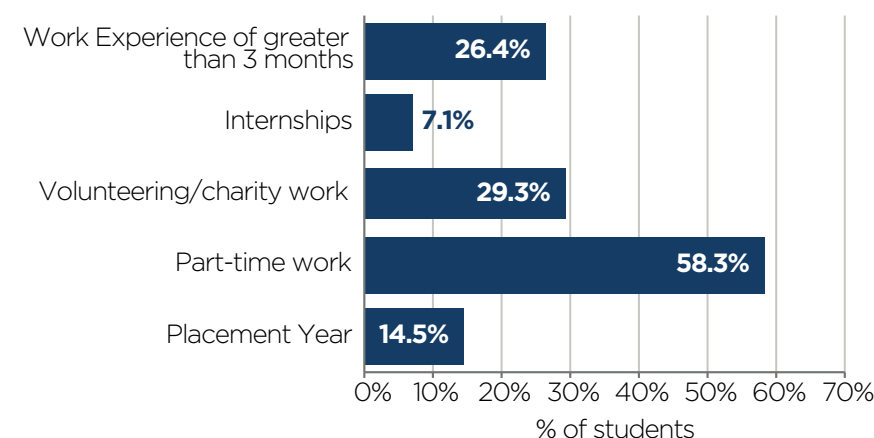
The University tries to maximise the relevance of its tuition and the experiences it

delivers to its students to the needs of prospective future employers. This is to ensure that the continually evolving skills needs of businesses are met, a central priority in the WMCA strategic economic plan. It does this through a variety of measures: degree apprenticeships; business input into course design; getting students to work on live briefs for companies; using industrial mentors and encouraging them to go on work-based placements (see Fig. 21).

The University Careers+ service that facilitates interactions with business are co-located in each Faculty to foster discipline

specific links. In addition, its Graduate+ programme seeks to enhance the employability of undergraduate students by providing them with a personalised range of extra-curricular activities, experiences and events to build their professional profile. This includes activities like part-time work experience, volunteering and community action.

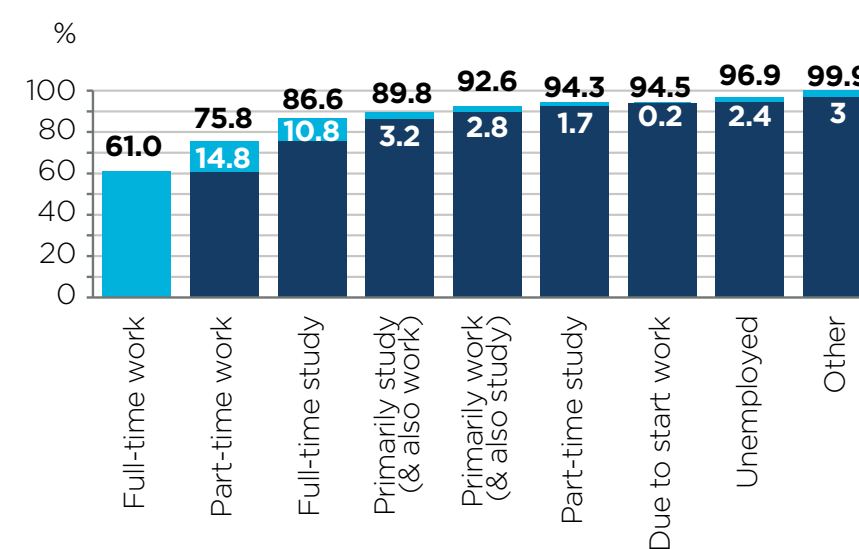
Fig. 21: Percentage of BCU graduates who had work experience, by type of experience (2018)



Source: BCUCU survey, UK Trendence Research (725 students sampled)

The combined education, work, and life experiences of BCU graduates make them highly employable. Of all those that graduated in 2017, 94.3% were in employment or further study six months after receiving their degrees (Fig. 22).²⁵ Among UK full time students graduating with a first degree only, the figure is higher still at 97.4% placing **Birmingham City University seventh across all the multi-Faculty universities in the UK.** This compares to 94.6% across the university sector as a whole and is a higher percentage than any of the other universities in Birmingham, which had an average of 93.1%.²⁶

Fig. 22: Destination of all the University's graduates in 2017



Source: HESA; Oxford Economics

²⁵ Higher Education Statistics Agency, (2018), 'Destinations of Leavers from Higher Education 2016/17', 19 July.

²⁶ Higher Education Statistics Agency, (2018), 'Employment of Leavers 2016/17'.

69%

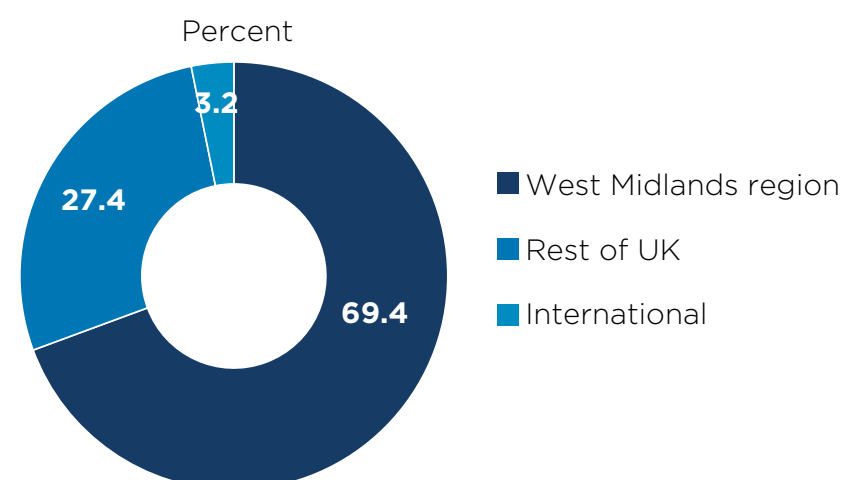
Percentage of BCU graduates who were in jobs or undertaking further study in the West Midlands region

Of all those graduating, 80.9% went into graduate level employment. If the focus is on full time students from the UK doing a first degree, the figure is slightly lower at 80.7%.

A high proportion of BCU graduates continue to work and study in the West Midlands region, thereby boosting the talent pool in the local economy and raising productivity. Six months after graduating, some 69% of the alumni who were in employment or in further education were based in the West Midlands region (Fig. 23). This high percentage partly reflects the fact that 60% of BCU graduates originated from the region.

Analysis of which industries in the West Midlands region, the University's 2017 graduates were working in six months after they left education shows that many had gone into industries that are expected to expand, both in terms of gross value added and employment (Fig. 24). Some 22% had gone into human health and social work activities. Another 17% worked in pre-primary, primary, secondary, higher and other education. The West Midlands region's wholesale and retail industry and professional service sector benefitted from 7% and 5% of the 2017 cohort of graduates, respectively.

Fig. 23: Work location of the University's 2017 graduates by region, six months after graduating



Source: BCU; Oxford Economics

Fig. 24: Share of BCU's 2017 graduates working in fast growing industries in the West Midlands region (2018 to 2023 forecast)

Sector	GVA growth forecast 2018-2023	Forecasted growth in jobs* by 2023	% of 2017 BCU graduates working in sector (4,189 tot)
Information and communication	21.5%	6,600	2.9%
Human health and social work	10.2%	27,400	22.0%
Professional, scientific and technology	11.1%	8,100	5.0%
Wholesale and retail	10.6%	10,700	7.1%
Transportation and storage	9.1%	19,800	0.8%
Real estate	9.8%	4,700	.8%
Construction	7.7%	14,600	1.8%

*Forecast refers specifically to jobs in the West Midlands

Source: HESA, Oxford Economics

3.2 ENTREPRENEURSHIP EDUCATION

BCU also seeks to support its students and graduates who want to develop their enterprise skills and start their own business. The University's courses leave graduates well placed to work in industries where career paths follow less traditional models (for example, some Arts, Design and Media routes).

As opposed to joining a company full-time after graduation and progressing in a linear fashion, an increasing number of graduates find themselves in what are termed "portfolio careers", whereby they work on a series of temporary

projects with a variety of organisations, or undertake freelance work.

In partnership with Aston and Newman universities and University College Birmingham, BCU delivers the BSEEN project. It aims to create additional jobs in the Greater Birmingham & Solihull Local Enterprise Partnership (GBSLEP) area by equipping students and graduates with the skills, knowledge and confidence required to start a business.

Delivery of the project is in two phases. First applicants participate in introductory enterprise/entrepreneurship workshops. Those selected to continue to the second phase go through five

day bootcamps; receive ongoing support provided by enterprise teams at BCU; obtain business grants of between £500 and £2,000; and are offered free office/incubation space; and mentoring support.

Across the three years (2016/17 to 2018/19) for which the project has run, 133 BCU students and recent graduates have participated. Of these, 92 (or 62%) registered a business at Companies House.

55

Number of BCU Graduate start-ups in 2017/18, more than any other university in the West Midlands region.

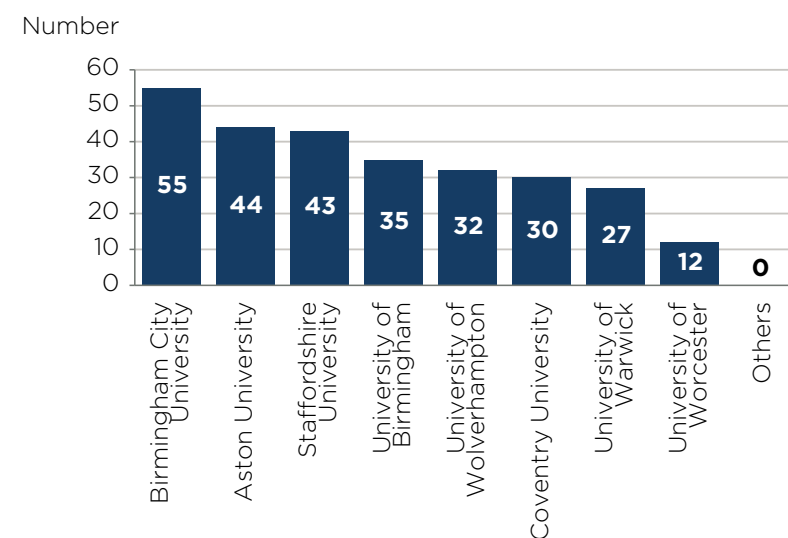
BCU has a high number of graduate start-ups relative to the sector. In 2017/18, students and graduates owned 147 active firms. Of these, 58 had survived for at least three years. Some 55 were started within the last year (2017/18). This exceeds the number of start-ups in all 11 other universities in the West Midlands region (Fig. 25), and the average for all UK universities: 22.

3.3 UPSKILLING THE LABOUR FORCE THROUGH CONTINUOUS PROFESSIONAL DEVELOPMENT

BCU offers a range of accredited and non-accredited continuous professional development (CPD) courses, aimed at

keeping firms and other employers staff's skills up to date. In 2017/18, the University delivered 66,152 days of CPD training. Some, 57% of this was purchased by non-commercial organisations. This mostly reflects its Faculty of Health, Education and Life Sciences provision of 'Professional Practice Courses' to healthcare professionals (such as its district nursing training, midwifery, and wound management courses). A further 27% was paid for by commercial firms, as diverse as large construction contractors, automotive manufacturers, architectural practices, legal and accounting firms. The remaining 16% was purchased by individuals.

Fig 25: Number of graduate start-ups registered by universities in the West Midlands in 2017/18



Source: HESA

3.4 DRIVING BUSINESS GROWTH AND ENTREPRENEURSHIP

The University provides a range of other services to help drive business growth across the city and wider West Midlands. These are largely promoted through its BCU Advantage business services website.²⁷ This serves as a first point of call for businesses seeking to access support services operated by the University.

The extent of the University's business support programmes is significant for the local area. Over the 3 years from 2016/17-2018/19, the University delivered 10 business support projects with a combined value of £9.0 million to the region. From these initiatives over the same time period, companies received 1,081 instances of business support, with SMEs benefiting from 10,215 hours of expert assistance. This support aided in the creation of 16 new products or services to market, as well as allowing for the expansion of the participant business offerings with existing products.

In partnership with GBSLEP, BCU forms part of the local Growth Hub providing business, support or guidance to local SMEs. The University's SME Growth Service gives small firms access to its business specialists, analysts and advisers. It aims to enhance their business

strategy by offering advice on topics such as access to finance and the available support network.

The University also offers Knowledge Transfer Partnerships (KTP). Through which a recently qualified BCU graduate, known as a KTP Associate, works within the firm to deliver the desired knowledge, research and expertise, under the mentorship of one of the University's academics. In 2017/18, BCU successfully delivered 9 KTP projects, and has won funding to undertake an additional 10 KTPs between 2018 and 2020. The University is continually engaging with business in order to expand their portfolio of KTPs in order to maximise the impact of the University's knowledge and research.

BCU also operates a business improvement programme called Knowledge Exchange and Enterprise Network (KEEN), through which SMEs in the West Midlands can gain access to a skilled graduate to work on a project with the business for a period of between 6 and 24 months. The SME and graduate are supported by a designated university liaison officer, mentorship for the graduate from university experts, and access to BCU's facilities and expertise to ensure that the programme can meet the needs of the business. Between 2018 and 2019, the University delivered 10

1,081

Total Instances of business support between 2016/17 and 2018/19 given by BCU to local firms.

This was delivered using £9 million of funding.

successful KEEN projects for local SMEs, which have ranged from helping an engineering firm to fully utilise their data, to developing a self-sustaining business model for a social enterprise involved in mental health.

3.5 STEAMHOUSE - STEAM INNOVATION FACILITY

The typical STEM designation covers Science, Technology, Engineering, and Mathematics. The concept behind STEAM is that the skills associated with the arts can combine with those of traditional STEM disciplines to spur innovation. STEAM-thinking can lead to new and innovative ways to generate solutions.

STEAMhouse, a facility provided in collaboration with Eastside Projects, is the University's pioneering centre for creative innovation. The University helps SME's to build their businesses, develop new products and services and collaborate. It does so by providing creative entrepreneurs and start-up companies with free access to specialist equipment and expertise including purpose-built prototyping spaces, materials, and support from skilled technicians. The STEAMhouse also provides a venue for workshops, networking events, and other business support services.

The STEAMhouse project aims to boost local growth, achieving this by removing cost and equipment access barriers to the development of new products and services, and encouraging experimentation. STEAMhouse has helped SMEs to bring new products to market, achieving this

by supplying over 6,500 hours of support, £50,000 in grants to SMEs in 2019, and has entered into 24 research collaborations.

3.5.1 Future developments

Since opening in May 2018, Phase 1 of the STEAMhouse project has delivered a valuable and well-utilised service to local innovation and product development, but given the demonstration of its value, there was scope to expand its offering. In 2019, STEAMhouse Phase 1.5 created a greater focus on digital enabling technologies by adding a virtual reality space and Computer Aided Design (CAD) suite to the facility, increasing its capability to accelerate product design.

Following this, Phase 2 of the project will see the STEAMhouse move to its permanent home, at Belmont Works. This investment of around £60 million, including £15 million in grant funding, will see the renovation of the disused Belmont Works in Eastside. Shared with the BCU school of Computer Science, this building will provide a larger-scale collaborative centre with better facilities and additional space. This will allow STEAMhouse to facilitate a greater number and variety of SMEs, all whilst being located closer to the expertise represented by BCU academics and researchers. This expanded offering will also allow a wider range of

local SMEs to take advantage of the facilities, with the potential to encourage investment in an area that has previously been limited by access to the types of services now offered by STEAMhouse.

Whilst many of the benefits of this type of facility will become increasingly apparent over time as more SMEs take advantage of the services offered, STEAMhouse is already building a reputation for its research and innovation work. Since inception, 10 new projects worth £11 million in grants have been secured for the delivery of STEAM innovation. In addition, a further 7 projects are planned for the future, featuring a combined grant value in excess of £12 million.

3.6 BCU'S CULTURAL IMPACT

In addition to its economic impacts, **Birmingham City University makes a significant contribution to the city's cultural fabric.** The Conservatoire's five performance spaces have recently featured world superstars including the soprano Danielle de Niese, flutist James Galway, cellist Sheku Kanneh-Mason, and saxophonist Jess Gillam. The University's Vittoria Street Gallery hosts exhibitions and events spanning the breadth of the jewellery discipline, plus other art and design practices; whilst the University also partners with Eastside Projects, an artist-run space



BUSINESSES THAT HAVE BENEFITTED FROM STEAMHOUSE



Balfour Beatty Vinci (BBV)

An example of how more established businesses can use STEAMhouse to stimulate innovation, can be seen in the case of Balfour Beatty Vinci (BBV). In order to meet the scale and complexity demands of their proposed role in the UK HS2 high-speed rail project, BBV looked to BCU for help. STEAMhouse hosted a collaborative event, referred to as a “STEAMlab”, where individuals with expertise from a wide range of backgrounds come together to generate potential solutions. This event produced the beginnings of a new intelligent traffic congestion management system which could model the flow of traffic and its impact in real time, allowing for the potential minimisation of the project impacts on the communities surrounding HS2 development. It is complex technological solutions like this, that the STEAMlab events can be most effective at facilitating, further

boosting innovation and the international competitiveness of local firms.

Hausbots

Hausbots (pictured), a company that has created robotic systems for painting large vertical surfaces, is an effective example of how STEAMhouse can enable product development. Using the resources and facilities provided by STEAMhouse, Hausbots was able to take their product from garage prototype, to developing an effective robotic solution that allows for the easy painting or coating of large exterior walls, or areas that are traditionally difficult for humans to access, such as areas in proximity to hazardous materials. Their products could also allow for insulating coatings to be applied to less modern buildings with exposed brickwork, improving energy efficiency.

that is open to the public as an art and sculpture gallery.

The University promotes culture and learning to a wider audience through public events, including public lectures, exhibitions, and artistic performances. **In 2017/18, BCU held cultural events with 513,000 attendees.** Of these, 451,000 people attended free exhibitions, which include galleries and museums. In the same year, the University presented free public lectures to around 17,300 people. These events provide the opportunity for new experiences to anyone who wishes to attend, without the addition of monetary barriers to entry. The events are made possible, in part, by the University's staff, who contributed a total of 2,198 days of their time towards providing these opportunities over the last four years (2014/15 to 2017/18).

The Royal Birmingham Conservatoire is a fine example of the cultural work undertaken by BCU. **In 2017/18, the Conservatoire hosted 414 events** of a wide-ranging nature, which were attended by 31,710 people. The Conservatoire's outreach events included the Eighty Eight Pianists project, where primary school students designed mechanisms to allow 88 people to play one piano at once, achieving a world record in the process. Indeed, 26.5% of the Conservatoire's

outreach event attendees were young people, with the Junior Conservatoire's learning and participation programme reaching in excess of 4,500 young musicians and countless numbers of audience members through a variety of musical activities. The running of these events also highlights the importance of volunteering to the cultural engagement activities at BCU, with staff volunteering 192 days of their time towards hosting Conservatoire events in 2017/18.

Birmingham City University is the lead partner and host of New Art West Midlands²⁸ (NAWM), a contemporary visual arts network for artists and creators. This aims to “strengthen and develop the contemporary visual arts sector in the West Midlands”. Established in 2010, NAWM is a collaborative initiative between BCU, Coventry University, the University of Wolverhampton, and the University of Worcester, and represents a regional part of the nation-wide Contemporary Visual Arts Network, initiated and funded by the Arts Council England. This initiative provides a space where members of the creative community can share or discover new opportunities, engage with local news in the sector, and find out about events in the area. Additionally, NAWM organises and curates the

New Art West Midlands annual exhibition, where students in the final year of their degree programmes have the chance to display their creative works, with the opportunity to be selected to display their work in galleries across the West Midlands.

Staff also enhance the city's cultural offering in notable other ways, such as sitting on the boards of many of its entertainment venues, such as the Hippodrome theatre, DanceXchange, and Birmingham Big Art Project. Staff also serve as academic advisors to the city's museums, such as the recommendations offered to Birmingham Museum and Art Gallery on how to appeal more to a Birmingham-based demographic. Staff and students were involved in the “Face of Suffrage” artwork unveiled at Birmingham New Street Station in November 2018, and volunteer widely—for example, helping to put on the city's free arts festival, the Birmingham Weekender.



4. CONCLUSION

Birmingham City University (BCU) makes substantial economic, cultural, and social contributions to Birmingham and the wider West Midlands region. Together, these support its vision of being the University for Birmingham.

In 2017/18, spending by the University, its students, and their visitors supported a total gross value added contribution to Birmingham's GDP worth £286 million—around 1.0% of the local area's total GDP. BCU also stimulated 4,810 jobs within Birmingham in that financial year. Across the rest of the West Midlands, it supported an additional £106 million contribution to GDP, and 2,220 jobs. Therefore, in the whole West Midlands region, it supported a £392 million contribution to GDP, and 7,030 jobs.

BCU also makes a positive contribution to the productive potential of the local and regional economies, by enhancing the human capital of the future local workforce. In 2017/18, 60% of its students were drawn from the West Midlands region. Six months after graduation, 69% were employed or in full time study in the West Midlands region. BCU also helps enhance the skillset of the region's existing workforce, delivering 66,152 days of continuous professional development training that year.

The University provides extensive business support programmes for local firms.

Over the three years from 2016/17-2018/19, it delivered 10 business support projects with a combined value of £9.0 million. From these initiatives, companies received 1,081 instances of business support, with SMEs benefiting from 10,215 hours of expert assistance. This support helped bring 16 new products and services to market, as well as allowing for the expansion of the participant business offerings with existing products.

BCU fosters innovation across the Birmingham and wider West Midlands economies.

Through initiatives such as STEAMhouse and BSEEN, as well as the University's knowledge transfer activities such as knowledge transfer partnerships and intellectual property licensing, BCU supports local enterprise from its inception, and provides local businesses with the tools and knowledge they need to grow to their full potential.

The University also has a positive impact on culture, creativity, and the arts in Birmingham and the West Midlands. This is demonstrated by the scale of University's cultural events, including those run in collaboration with the New Art West Midlands programme, which were attended by more than half a million people in 2017/18. In addition, BCU is responsible for the Royal Birmingham Conservatoire, which supports music and engages young people in the arts with its outreach activities.

These combined impacts clearly demonstrate that Birmingham City University makes a substantial contribution to the prosperity and culture of Birmingham, the West Midlands, and the United Kingdom as a whole, both through its own activities and its extensive collaboration with other parties. **Many of these are long-term impacts which will carry benefits to the region for years to come.**

APPENDIX 1: ECONOMIC IMPACT ACROSS THREE GEOGRAPHIES

The tables below show the economic impact results calculated for Birmingham local authority district, the West Midlands region and the whole of the UK. The results are larger the bigger the geographical area considered, as more of the supply chain and wage spending impacts are captured.

Fig. 26: Economic impact results for Birmingham in 2017/18

Birmingham	to GDP (£ m)		
The University itself (direct)	165	2,580	41
Its supply chain (indirect)	31	870	10
Its wage payments (induced)	24	550	6
Additional Student Spending	63	740	9
Visitor Spending	2	70	1
Total	286	4,810	66

Fig. 27: Economic impact results for the West Midlands region in 2017/18

West Midlands region	Gross valued added contribution to GDP (£ m)	Employment (people)	Tax revenue (£ m)
The University itself (direct)	165	2,580	41
Its supply chain (indirect)	48	1,180	14
Its wage payments (induced)	64	1,340	15
Additional Student Spending	112	1,840	22
Visitor Spending	3	90	1
Total	392	7,030	92

Fig. 28: Economic impact results for the UK in 2017/18

UK	Gross valued added contribution to GDP (£ m)	Employment (people)	Tax revenue (£ m)
The University itself (direct)	165	2,580	41
Its supply chain (indirect)	111	2,120	25
Its wage payments (induced)	157	2,360	46
Additional Student Spending	95	1,570	22
Visitor Spending	3	60	1

APPENDIX 2: METHODOLOGY FOR CALCULATING BCU'S MULTIPLIER IMPACTS

Direct impact

Our estimate for the gross value-added contribution to GDP generated by Birmingham City University is the sum of its surplus and employee compensation. This approach, the income method, is consistent with the principles of national accounting. Direct employment is the average monthly number of employees, including the Executive Group, sourced from the Report of the Board of Governors and Financial Statements.

Direct labour taxes, including income tax, and employee and employer NICs, have been estimated using University employee compensation data from the University and HMRC data on tax allowances and receipts. Due to its charitable status, the University does not pay any corporation tax.

Indirect and induced impacts

The modelling for this study made use of Input-Output tables, as published by the ONS.²⁹ These data are the most detailed official record of the economic links between different parts of the UK economy, and with the rest of the world. Oxford Economics use these tables to develop bespoke sub-regional models to capture the local economic impact of the University.

Our methodology utilises so-called 'Flegg-adjusted Location Quotients (FLQs)', which are consistent with the latest approaches and evidence in regional I-O modelling.³⁰ Employment data from the ONS' Business Register and Employment Survey (BRES) were used to adjust the I-O tables, to reflect the industrial structure and productive capacity of Birmingham local authority district and the West Midlands region.

Oxford Economics' impact models quantify purchases along the entire length of the University's supply chain, and that of the consumer businesses supplying goods and services to additional students and visitors. The regional models estimate the extent to which these demands can be met in the city and region, and the leakages in and out of the local area.

The transactions along the supply chains are translated into gross value added using West Midlands specific ratios of value-added to gross output derived from the ONS' Annual Business Survey.³¹ The impact on employment was modelled using the latest data on output per head in the industrial sectors for the West Midlands, derived using BRES.

Taxes were estimated using HMRC data on tax allowances and receipts, along with statistics on average profitability of each UK sector derived from the I-O tables, the average wage rates seen in these sectors (from the ONS' Annual Survey of Hours and Earnings), and the indirect employment supported within them.³²

Induced impact

The induced impact is modelled in a similar way. Using wage and postcode data supplied by the University, Oxford Economics used household spending data from the I-O tables to model the typical spending profile of University staff living in Birmingham and the West Midlands, making allowances for 'leakages' of imports and savings.

²⁹ ONS, (2018), 'United Kingdom input-output analytical tables, 2015', 2 March.

³⁰ Flegg, A, Webber, C, and Elliot, M, (1995), 'On the appropriate use of location quotients in generating regional input-output tables', Journal of Regional Studies, Volume 29, Issue 6, pages 547-561.

³¹ ONS, (2019), 'Non-financial business economy, UK and regional (Annual Business Survey): 2017 revised results', 16 May.

³² ONS, (2019), 'Earnings and hours worked, industry by four-digit SIC: ASHE Table 16', 29 October.

For workers in the supply chains, we used industry-specific ratios of employee compensation per unit of output, sourced from the I-O tables, to forecast how much household wages are supported among suppliers' workers. Both spending streams were fed into our I-O models, to calculate the total impact of this spending. Taxes were calculated using the same methodology as for the indirect impact.

International students' subsistence spending

Birmingham City University attracts students to the local area from other parts of the UK, and the world, and keeps students previously resident in the locality who would have otherwise gone elsewhere. The subsistence spending of these students would not otherwise occur in the city and region and therefore forms part of the overall impact of Birmingham City University.

Subsistence expenditure refers to all student spending on goods and services except for tuition fees. It includes, for example, the purchases of items required for facilitating their study—such as transport to the University and required books—as well as other consumer expenditure—including on food, leisure, and social activities. Payments to the University for accommodation, food, and other services are removed so as not to double count.

The Department for Education publishes data on subsistence expenditure by students in England and Wales.³³ The latest available covered the 2014-15 academic year. This study focuses on home-domiciled students, however we follow BEIS' assumption that international students' spending is not significantly different to home students'.

Oxford Economics adjusted the average student spend using the ONS' Consumer Price Index to reflect the increase in living costs between 2014/15 and 2017/18. We further adjust the spending to reflect the difference lengths of academic years for undergraduate and postgraduate students, and the fact that international students likely go home less frequently than their UK equivalents.³⁴

After these adjustments, the average student at Birmingham City University spends £11,970 per year off campus, including housing costs.

To calculate how much expenditure Birmingham City University brings into the area, it is necessary to calculate the number of 'additional' students. To do so, Oxford Economics compared students' term time and home time locations. This allowed us to firstly identify how many students live in the city and region, respectively, and how many of those are truly 'additional'.

Visitors to students

The additional visitors the University attracts to the city and region come from other parts of the UK and overseas. The spending profile of the two types of visitors—domestic and international—differs by their origin. Therefore, two methods are used to calculate their spending impact. Additionally, alternative spending profiles are used for open day attendees and graduation ceremony guests, depending on their origin.

Visitors from overseas

The ONS' International Passenger Survey (IPS) provides detailed data on the spending of international visitors to the UK and its nations and regions, disaggregated by nationality of the visitor. To estimate the spending of visitors to students, data on the spending of those visiting friends and relatives in the West Midlands were used. The pattern of spending was taken from ONS data on the regional value of tourism.

University data indicate how many students from other countries were living in the city and wider West Midlands in 2017/18. The ONS, Annual Population Survey (APS) data for 2017 indicate how many people of each nationality there were living in the West Midlands. Therefore, the share of all spending by visitors from each nationality to the region is attributed to Birmingham City University and assumed to have been spent predominantly in the local area.

Domestic visitors

The University's home students also attract visitors. Although no information is available on how many visitors each additional student receives, data do exist on the average spend of a visitor from each part of the UK to friends and relatives in the West Midlands.^{35, 36}

This study assumes that each student from outside the West Midlands gets one visitor from their home region each year. With the likelihood that some students receive multiple family and friend visits during an academic year, and that parents are often involved in the transport of personal effects at the beginning and end of session, this is probably a very conservative assumption.

Graduation ceremony visits

Birmingham City University hosted graduation ceremonies in January and July 2018 which were attended by 5,700 graduands and their guests. Many of these graduands and their guests will have travelled from across the UK, and overseas, to attend the ceremony. Graduating students' origins were estimated using data on the composition of current students' home locations. The spend of international and domestic graduation attendees was calculated following similar methodologies to those used for visitors to current students. It was assumed that students from outside of the West Midlands stayed one night.

Open day visits

In January 2018, Birmingham City University hosted open days which were attended by over 3,000 prospective students. On average, it is assumed that for every 100 students attending, a further 150 guests (including family members) will also have travelled to the University. People travelling from outside of the West Midlands were assumed to incur a day's spending. The domicile of open day guests was estimated based on postcode information.

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