Appendix 4

Cardiff Economy Today

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The Cardiff Economy

The city's economy continues to perform well. Jobs are being created, and the city's GVA is rising faster than any other UK Capital. We have seen new sectors emerge in the city, from fin-tech to creative and cultural enterprises that are truly competitive on a global level. Our universities continue to provide a pipeline of talent, whilst school and further education performance has improved considerably. Furthermore, the city's NEET population – those not in employment education or training – has fallen dramatically.

We know, however, that challenges remain. Despite job growth we have seen unemployment creep up in recent years. We continue to see stark differences in the economic outcomes of our different communities, and the city's southern arc stubbornly remains an area in need of support.

Brexit also remains a threat, not just in terms of trade and the job market, but also in terms of support for the city-region for regeneration.

Our opportunities, however, are considerable and real, and we should not underestimate what Cardiff can contribute to the Wales and UK economy. Our city is home to household names in the financial services sector, homegrown and Cardiff developed enterprises. Online TV providers are commissioning Cardiff companies to produce their latest boxset shows. The workings of most of the world's mobile phones will include technology developed and made in Cardiff.

As a place to live, work and visit Cardiff continues to punch above its weight. We have well over 20 million people a year now visiting our city, spending more than £1.3bn. We continue to rank highly in quality of life tables, and the likes of the Champions League has meant that the city continues to attract more and more world-class events.

Cardiff Economy Summary – SWOT

Strengths	Weaknesses
• Capital City Status – driver of the Welsh economy • Fast growing and dynamic economy - proven ability to create jobs in competitive sectors • Well qualified workforce – 2/5ths qualified to degree or equivalent • Number 1 in the UK for quality of life • World class university research – Cardiff University ranked 6th in the UK • Greater city-region alignment and established governance • Sporting and cultural assets – including Europe's biggest covered arena • Advanced digital infrastructure	• Relatively low levels of productivity – which in turn affects earnings • Low numbers of HQ operations – impacting on innovation and competitiveness • Pressure on the city's transport infrastructure – which is only due to grow • Lags some UK competitors in visitor numbers – capacity to improve • Large wage disparities – need to support productivity improvement for everyone • Poor international connectivity – physical and digital • Lack of urban policy agenda in Wales – reduces impact of agglomeration'
Opportunities	**Threats**
• Scope for growth in key sectors including financial and business services and the creative sector • Improving business infrastructure such as the world class BBC Drama Studios in Cardiff Bay • Growing economy brings opportunities for wider markets • Investment in Metro will unite the city-region and provide more opportunities • Growing visitor economy – growing faster than any other UK city • Potential to exploit benefits from Brexit such as removal of Structural Funds boundaries	• Competition from other UK cities for mobile investment • Competition from other UK cities for mobile workforce – businesses are reliant on maintain a skilled workforce • Pressures of population growth will impact on infrastructure • Need to maintain and promote the 'Cardiff ' brand in an increasingly competitive marketplace • Impact of Brexit on ability to attract and retain skilled workers • Need to keep pace with technological advances

Employment

A variety of different data sources can be used to highlight the city's employment growth. The most recent, based on the Annual Population Survey suggests that well over 230,000 people are working in the city.

Workplace Employment

Apr 2014-Mar 2015	206,900
Apr 2015-Mar 2016	222,000
Apr 2016-Mar 2017	231,500
Apr 2017-Mar 2018	236,800

Source: annual population survey - workplace analysis

Almost half (47.9%) of those in employment in the city are in one of Welsh Government's priority sectors. Financial and Professional Services (19.0% of total employment) is by far the largest of these in Cardiff with it accounting for almost a third of the sector's total employment in Wales. Creative Industries (7.1%) are also more prevalent in the city, with Cardiff again responsible for around a third of Wales's total employment in the sector.

Employment by Welsh Government Priority Sector, 2016

Priority Sector	Employment (thousands)			
	CARDIFF		Wales	
	No.	%	No.	%
Advanced materials / manufacturing	**5.6**	**2.5**	83.9	6.2
Construction	**13.9**	**6.1**	110.5	8.2
Creative industries	**16.1**	**7.1**	48.6	3.6
Energy & environment	**25.3**	**11.2**	155.8	11.6
Food & Farming	**1.6**	**0.7**	50.6	3.8
Financial & professional services	**43.1**	**19.0**	136.8	10.2
ICT	**5.6**	**2.5**	26.6	2.0
Life sciences	**3.4**	**1.5**	17.2	1.3
Tourism	**21.3**	**9.4**	131.2	9.8
In A Priority Sector	***108.6***	***47.9***	*604.1*	*45.0*
Not In A Sector	***118.3***	***52.1***	*738.6*	*55.0*
Total	**226.9**	**100.0**	1,342.6	100.0

Source: Welsh Government

NB. Local units are individual sites of an enterprise.

The priority sector totals will not equal the sum of the individual priority sectors as there is overlap between several sectors.

Today over two-thirds (69.9%) of Cardiff's population aged 16-64 are in employment; the fifth highest rate amongst the core cities and Edinburgh. National comparisons tend to be difficult – simply because of the city's large student population. This also impacts on the city's economic activity rate.

Employment and Employment Rate (Aged 16 to 64), Jan – Dec 2017

Area	Employment Rate (%)	Economic Activity Rate (%)
Bristol, City of	78.2	81.8
Leeds	76.6	80.1
Edinburgh, City of	75.7	77.6
Sheffield	70.7	75.6
CARDIFF	**69.9**	**74.9**
Manchester	67.5	72.0
Liverpool	67.1	71.3
Newcastle upon Tyne	66.6	71.1
Glasgow City	66.0	70.0
Birmingham	63.6	69.4
Nottingham	57.4	62.4
Wales	72.4	76.0
United Kingdom	74.7	78.2

Source: Annual Population Survey, ONS

Cardiff's unemployment rate for those aged 16+ (6.1%) is one of the highest across the core city network. Although it experienced a sizeable decrease between 2012 and 2016, Cardiff has also consistently exceeded the figures of both the Wales and Great Britain since 2004, and saw its rate increase over the past year. Much of this rise has been driven by a substantial increase in the economically active population over recent years, where more people are entering the labour market and looking for work.

Unemployment rate - aged 16-64, Jan – Dec 2017

Area	Unemployment Rate (Aged 16+)
Nottingham	8.3
Birmingham	8.1
Newcastle upon Tyne	6.9
CARDIFF	**6.1**
Sheffield	6.0
Liverpool	5.9
Manchester	5.6
Glasgow City	5.6
Leeds	4.7
Bristol, City of	4.0
Edinburgh, City of	3.2
Wales	4.8
Great Britain	4.4

Source: Annual Population Survey, ONS

NB. Local authority rates are model-based

Economic Output

In 2016, Cardiff (£9,933m) accounted for 17% of the total gross value added (GVA) for Wales, with its GVA growing at a faster rate (5.7%) than both Wales and the UK over the year. In terms of GVA per head, Cardiff (£27,480) is only a mid-table performer across the major cities, with the figure for Edinburgh over 40% higher at £39,321, although its rate of growth over the year again compared favourably with the other areas.

Gross Value Added (Balanced) (£million), 2016

Area	2016	Annual % Change
Birmingham	£25,720	4.3
Leeds	£21,951	2.2
Glasgow City	£20,371	3.5
City of Edinburgh	£19,942	4.6
Manchester	£18,172	5.4
Bristol, City of	£14,313	4.7
Sheffield	£11,433	1.4
Liverpool	£11,334	0.6
CARDIFF	**£9,933**	**5.7**
Nottingham	£8,911	4.4
Newcastle upon Tyne	£7,802	2.1
Wales	£59,585	4.0
United Kingdom	£1,747,647	3.7

Source: ONS (2016 figures are provisional)

Gross Value Added (Balanced) Per Head of Population (£), 2016

Area	2016	Annual % Change
City of Edinburgh	£39,321	2.9
Manchester	£33,573	3.2
Glasgow City	£33,120	2.0
Bristol, City of	£31,513	3.6
Leeds	£28,079	1.2
CARDIFF	**£27,480**	**4.5**
Nottingham	£27,393	2.3
Newcastle upon Tyne	£26,317	0.8
Liverpool	£23,389	-0.6
Birmingham	£22,871	3.0
Sheffield	£19,870	0.4
Wales	£19,140	3.5
United Kingdom	£26,621	2.9

Source: ONS (2016 figures are provisional)

In terms of trends, Cardiff's GVA per head has consistently exceeded the UK average since 1998. Although the gap gradually declined following a 2007-peak, in recent years it has again diverged away from the national figure.

In 2016, the GVA per hour worked was £28.8 for Cardiff and Vale of Glamorgan. This was only 88.5% of the UK figure and made it a mid-level performer across the major UK NUTS3 areas. GVA per filled job (£45,157) for 2016 compared even less favourably with it only exceeding the Nottingham, Sheffield, and Tyneside regions, and was just 85.8% of the UK figure.

Enterprise

In 2016, there were 1,780 new enterprises in Cardiff, equating to 49.3 births per 10,000 residents. Although this exceeded the rate for Wales (38.9 per 10,000), it was below the UK average (63.1 per 10,000) as well as many of the major cities, in particular Manchester (119.1 per 10,000). The number of new enterprises per 10,000 residents in Cardiff has consistently been below the UK rate and, in contrast to the national figure, has declined since 2014.

Births of New Enterprises, 2016

Area	Births of New Enterprises	Population (Mid-2016)	Births per 10,000 Population
Manchester	6,445	541,319	119.1
Birmingham	9,200	1,128,077	81.6
Bristol, City of	2,920	455,966	64.0
Leeds	4,820	781,087	61.7
Edinburgh, City of	2,915	507,170	57.5
Liverpool	2,670	487,605	54.8
Glasgow City	3,290	615,070	53.5
CARDIFF	**1,780**	**361,168**	**49.3**
Nottingham	1,480	324,779	45.6
Sheffield	2,525	574,050	44.0
Newcastle upon Tyne	1,265	293,713	43.1
Wales	12,115	3,113,150	38.9
United Kingdom	414,355	65,648,054	63.1

Source: Business Demography/Mid-Year Population Estimates, ONS

Visitor Economy

Data for 2017 showed that 22 million people visited Cardiff with an economic impact of £132bn. Between 2007 and 2017, both the number of visitors to Cardiff and their expenditure in the city has followed an upward trend, reflecting the increasing contribution the visitor economy is making towards the city's economic performance.

No. Visitors to Cardiff and Expenditure for Cardiff, 2007 – 2017

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total spend (£m)	757	817	889	1,038	1,094	1,129	1,133	1,172	1,252	1,240	1,325
Staying Visitor (m)	1.4	1.5	1.6	1.7	1.8	1.9	1.9	2.0	2.0	2.0	2.1
Visitors (£m)	12.1	13.0	14.7	18.3	18.4	18.9	19.0	19.5	20.5	20.4	22.0

Source: Steam Data

Whilst there has been an overall positive trend in terms of visitor numbers and spend, Cardiff still lags behind many UK cities and towns in terms of attracting international visitors.

International visits, nights and spending in the top 20 UK towns 2017 Ranked by Spend

	Visits (1000s)	Nights (1000s)	Spend (£mil)
London	19,828	114,016	13,546
Edinburgh	2,015	11,240	1,019
Manchester	1,319	8,230	668
Liverpool	839	3,658	358
Birmingham	1,117	5,300	349
Glasgow	787	4,006	319
Oxford	536	3,243	268
Brighton / Hove	491	3,407	214
Cambridge	519	3,098	212
Bristol	602	3,842	200
Bournemouth	164	1,752	132
Newcastle-upon-Tyne	297	2,286	125
Cardiff	**372**	**1,736**	**120**
Bath	361	1,914	118
Leeds	294	1,708	117
Aberdeen	276	1,814	112
Nottingham	267	2,535	106
Sheffield	155	2,431	101
York	289	1,087	97
Inverness	311	1,418	95

Source: Office for National Statistics

Commuting Data

Around 90,000 people commute into Cardiff each day with the city receiving a net daily inflow of 56,100 people, comprised of a daily inflow of 88,700 commuters and an outflow of 32,600.

In-commuting to Cardiff by Area, 2017

Vale of Glamorgan	21,600
Rhondda Cynon Taf	18,900
Caerphilly	11,600
Newport	7,200
Bridgend	7,100
Other outside Wales	5,100
Torfaen	3,500
Merthyr Tydfil	2,900
Monmouthshire	2,800
Swansea	2,500
Neath Port Talbot	2,500
Blaenau Gwent	1,100
Other	2,000

Source: Welsh Government

Qualifications

Almost half (48.0%) of Cardiff's population aged 16 to 64 are qualified to NVQ4+, significantly above the comparative figures for Wales (35.1%) and the UK (38.4%). In addition, only one-in-fifteen (6.6%) have no qualifications. These figures compare well with other major cities.

Qualifications (Aged 16 to 64), Jan – Dec 2017

Area	NVQ4+	NVQ3 only	Trade Appren-ticeships	NVQ2 only	NVQ1 only	Other Qualifi-cations (NVQ)	No Qualifi-cations (NVQ)
Edinburghf	57.8	10.8	5.3	8.7	7.1	7.2	3.2
Bristol	54.2	15.0	2.1	10.7	8.2	4.6	5.1
CARDIFF	**48.0**	**17.4**	**1.7**	**14.9**	**7.0**	**4.4**	**6.6**
Glasgow City	46.3	11.8	2.5	12.4	7.4	7.1	12.4
Sheffield	41.7	15.5	3.1	15.6	10.6	5.0	8.5
Manchester	39.9	17.0	3.3	12.5	9.5	6.6	11.1
Newcastle	37.3	22.5	2.4	15.2	7.7	5.9	9.0
Leeds	36.4	17.2	3.1	15.3	10.9	6.0	11.2
Liverpool	35.0	15.9	2.5	18.3	10.4	4.7	13.1
Birmingham	31.4	18.4	1.2	14.4	11.2	10.8	12.6
Nottingham	30.1	21.4	2.8	14.2	9.6	8.9	12.9
Wales	35.1	17.8	3.4	17.9	11.2	6.0	8.7
United Kingdom	38.4	17.0	3.2	16.0	10.7	6.8	8.0

Source: Annual Population Survey, ONS

Since 2004, the qualification levels of the Cardiff population aged 16 to 64 have improved and compared favourably with those of Wales and the UK. The proportions qualified to NVQ4+ and NVQ2+ have increased over the period, while the percentage with no qualifications has declined.

Income and Earnings

In 2017, the median gross weekly earnings of Cardiff residents working full-time were £538.5; up 0.8% on the previous year. This exceeded the earnings of most other major cities although, as has been the case since 2012, it was below the UK average.

Median Gross Weekly Earnings of Full-Time Workers, 2017 (Resident Analysis)

Area	Earnings (£)	Annual Percentage Change (%)
Edinburgh, City of	583.8	4.3
Bristol, City of	539.9	3.0
CARDIFF	**538.5**	**0.8**
Leeds	536.6	1.6
Newcastle upon Tyne	532.5	4.6
Sheffield	524.0	3.9
Birmingham	523.0	5.7
Glasgow City	519.7	-0.5
Liverpool	509.2	2.5
Manchester	479.1	1.6
Nottingham	450.6	0.5
Wales	505.9	1.3
United Kingdom	550.4	2.2

Source: Annual Survey of Hours and Earnings, ONS (provisional data for 2017)

The gross weekly earnings of full-time workers working in Cardiff was £528.8 in 2017. In contrast to the resident analysis, this compared poorly with other major cities and was the only core city to see earnings fall since the previous year (see Table 4). In addition, it has predominantly been below the UK figure since 2011, with the gap between the two increasing over the year (see Figure 9).

Median Gross Weekly Earnings of Full-Time Workers, 2017 (Workplace Analysis)

Area	Earnings (£)	Annual Percentage Change (%)
Edinburgh, City of	598.5	5.1
Manchester	570.8	4.3
Glasgow City	560.8	2.6
Newcastle upon Tyne	554.2	6.8
Birmingham	549.4	1.0
Bristol, City of	545.3	1.6
Leeds	543.4	2.2
Liverpool	530.7	2.3
CARDIFF	**528.8**	**-0.9**
Sheffield	526.6	2.9
Nottingham	494.8	3.1
Wales	498.4	1.0
United Kingdom	550.4	2.2

Source: Annual Survey of Hours and Earnings, ONS (provisional data for 2017)

Gross Disposable Household Income per Head

In 2016, Cardiff's gross disposable household income per head (£16,769) compared fairly well with other major cities. Since 1997, it has followed an upward trend and has consistently been above that of Wales. However, it has remained below the UK figure with the gap increasing over time.

Gross Disposable Household Income (GDHI) Per Head, 2016

Area	GDHI Per Head (£)
Edinburgh, City of	21,837
Bristol, City of	17,633
Leeds	16,814
CARDIFF	**16,769**
Newcastle upon Tyne	16,180
Glasgow City	15,311
Sheffield	15,057
Liverpool	14,538
Birmingham	14,093
Manchester	13,184
Nottingham	12,232
Wales	15,835
United Kingdom	19,432

Source: ONS (2016 figures are provisional)

Employee jobs with hourly pay below the Real Living Wage

The Living Wage is based on the amount an individual needs to earn to cover the basic costs of living. However, in contrast to the national minimum wage, it is not a legally enforceable minimum level of pay. In 2017, the Living Wage Foundation's living wage was £9.75 for those working within London and £8.45 for those working elsewhere in the UK.

In 2017, just over a fifth (20.7%) of employee jobs in Cardiff had an hourly rate of pay below the Living Wage. This is amongst the lowest levels in Wales and is below the UK level, but is a mid-ranking position against Core Cities.

Employee jobs with hourly pay below the living wage

LA	2016 %	2017 %
Birmingham	21.9	20.8
Bristol, City of	15.6	14.4
CARDIFF	19.2	20.7
City of Edinburgh	15.6	14.0
Glasgow City	17.8	14.6
Leeds	20.0	19.4
Liverpool	23.6	22.3
Manchester	18.0	15.2
Newcastle upon Tyne	21.1	18.4
Nottingham	24.3	23.1
Sheffield	22.5	21.7
Wales	25.1	24.7
UK	23.2	22.0

Source: Office for National Statistics

Employee jobs with hourly pay below the living wage

LA	2016 %	2017 %
Blaenau Gwent	34.1	33.0
Bridgend	23.3	26.2
Caerphilly	22.4	20.2
CARDIFF	19.2	20.7
Carmarthenshire	27.5	23.0
Ceredigion	27.8	21.9
Conwy	33.4	30.5
Denbighshire	24.0	27.2
Flintshire	23.9	27.2
Gwynedd	31.1	32.2
Isle of Anglesey	25.2	31.3
Merthyr Tydfil	27.2	27.4
Monmouthshire	24.4	22.2
Neath Port Talbot	21.3	21.0
Newport	23.3	21.7
Pembrokeshire	31.6	32.7
Powys	32.2	26.2
Rhondda Cynon Taf	27.0	23.6
Swansea	27.8	24.2
Torfaen	18.4	21.8
Vale of Glamorgan	23.0	27.5
Wrexham	27.8	28.0
Wales	25.1	24.7
UK	23.2	22.0

Source: Office for National Statistics

Inclusive Growth

Consideration of the Cardiff economy as a whole does not tell the complete picture. Economic outcomes are different according to your gender, ethnic background, or the community you live in. Employment rates show that almost eight out of ten working age white males are in employment in Cardiff, whereas less than half of working age ethnic minority females are in employment.

Employment rate (%) - aged 16-64 (2017)

White	74.8
White males	77.9
Ethnic minority males	71.2
White females	71.6
Ethnic minority females	47.3
Ethnic minority	59.0

Source: Annual Population Survey

Disabilities also impact significantly on economic outcomes in Cardiff, with employment rates for those suffering from disabilities being under half of the working age population.

Employment rate (%) - aged 16-64 (Apr 2017-Mar 2018)

Equality Act (EA) core or work-limiting disabled	45.2
EA core disabled	43.7
Work-limiting disabled	34.0
Not EA core or work-limiting disabled	78.5
All aged 16-64	72.0

Source: Annual Population Survey

Where you live in Cardiff will also have an impact on economic outcomes. The worst performing ward in Cardiff in terms of unemployment claimants, Ely, has 18 times the proportion of working age residents claiming unemployment benefits than the best performing ward, Lisvane. Notably there is little relationship between unemployment and volume of jobs provided within the wards, with fewer employee jobs to be found in Lisvane than any other Cardiff ward bar one according to the Business Register and Employee Survey.

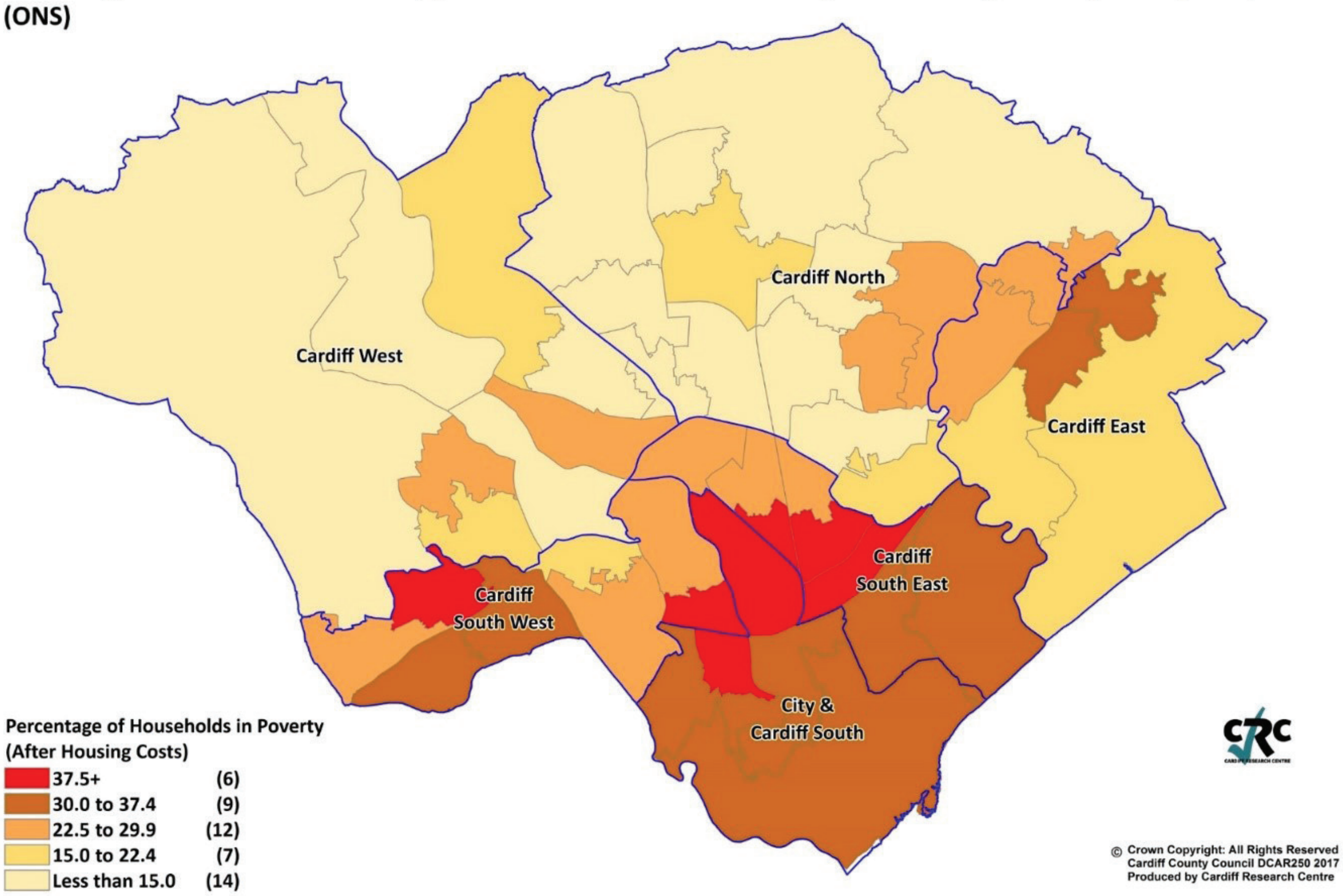
Claimants as a proportion of residents aged 16-64 (August 2018)

Ely	5.4	Llanishen	1.5
Adamsdown	4.8	Penylan	1.5
Splott	4.4	Whitchurch and Tongwynlais	1.5
Caerau	4.2	Pentyrch	1.3
Trowbridge	3.8	Gabalfa	1.1
Riverside	3.7	Llandaff	1.0
Fairwater	3.5	Pontprennau/Old St. Mellons	1.0
Llanrumney	3.5	Creigiau/St. Fagans	0.9
Pentwyn	3.4	Heath	0.9
Grangetown	3.2	Cathays	0.8
Plasnewydd	3.2	Rhiwbina	0.8
Llandaff North	3.1	Cyncoed	0.7
Butetown	2.9	Radyr	0.7
Rumney	2.7	Lisvane	0.3
Canton	2.4	All Cardiff	2.5

Source: Claimant Count

Around a quarter of the city's households have income of below 60% median income after housing costs. However this only tells part of the story. The concentration of poverty in Cardiff is heavily weighted towards the 'Southern Arc'.

Percentage of Households in Poverty (i.e.Below 60% of Median Income) After Housing Costs by MSOA, 2013/14 (ONS)



Percentage of people living in households in material deprivation (National Indicator 19) (National Survey)

Household material deprivation, by local authority, 2016-17

	Household in material deprivation %
Blaenau Gwent	19
Bridgend	11
Caerphilly	15
CARDIFF	16
Carmarthenshire	15
Ceredigion	12
Conwy	13
Denbighshire	16
Flintshire	15
Gwynedd	14
Isle of Anglesey	16
Merthyr Tydfil	21
Monmouthshire	12
Neath Port Talbot	16
Newport	14
Pembrokeshire	12
Powys	12
Rhondda Cynon Taf	19
Swansea	18
Torfaen	15
Vale of Glamorgan	12
Wrexham	13
Wales	15

Source: Stats Wales

Cardiff’s Industrial Strengths

In responding to the UK's Industrial Strategy it is important that Cardiff can outline its economic strengths and opportunities, as well as where we can support the economy to become more innovative and productive.

It is clear that Cardiff offers a lot to the national, regional and city-region economies. However it is also clear that it can deliver a lot more. Specifically the city has a skilled and resourceful labour market, with emerging clusters in creative and digital, reg-tech and fin-tech, life sciences and emerging technology such as compound semi-conductors.

Through exploiting this potential Cardiff has the potential to significantly improve levels of productivity, both contributing to the growth of the city, the city-region and national economies, whilst also increasing earnings for local workers and providing a greater range and choice of jobs for the residents of the Cardiff Capital Region.

We have the necessary tools...	...but we are not converting our potential
• Highly qualified workforce • Over 65,000 higher education students • HE reputation for commercialisation of research • Established city-region • Service sector with exporting perspective • Strong TV and broadcast sector • Concentration of 'reg-tech' and cyber security skills • Competitive fin-tech and digital start-up community • Emerging technology clusters, including compound semi-conductors • Internationally prominent life-sciences businesses • Strong quality of life offer	• Low levels of productivity across all sectors • Knowledge base not being fully exploited • Prevalence of low value activity in business sectors • Lack of recognised brand • City centre dominated by retail • Need for infrastructure investment in both transport and digital connectivity •

Higher Education

Cardiff is home to almost 70,000 students studying at three universities: Cardiff University, Cardiff Metropolitan University and the University of South Wales which between them offer three business schools and three law schools. The city's universities attract talent from around the world, with 1 in 4 students being international students.

Enrolled Students by Institution

	Enrolled Students 2016/17
Cardiff Metropolitan University	10,995
University of South Wales	23,465
Cardiff University	31,595

Source: StatsWales

Cardiff University is a member of the Russell Group of leading research universities and has a strong reputation for the quality of its teaching and research. 31,500 students, including more than 4,000 from over 100 countries outside the UK, help to create a vibrant, cosmopolitan community.

The university is ranked top 5 UK University for research quality and impact in the most recent Research Excellence Framework (REF 2014) with 87% of research assessed as world-leading or internationally excellent. The School of Engineering is ranked no.1 in the UK for research impact (REF 2014) and has developed strong links with industry.

Cardiff Metropolitan University is a growing university with business and management a key strength. Its career-orientated courses make graduates popular with employers.

Cardiff Metropolitan's specialisms are focused around its five schools, namely Cardiff School of Management, Cardiff School of Art & Design, Cardiff School of Education, Cardiff School of Health Sciences, and Cardiff School of Sport. In addition, the National Centre for Product Design and Development Research (PDR) provides expertise in design and innovation, offering support to manufacturing businesses.

In the recent Research Excellence Framework results, Cardiff Metropolitan University was ranked as the highest post-1992 'modern' university, with 80% of the University's overall quality profile rated as world leading or internationally excellent.

The **University of South Wales** is one of the largest universities in the UK with 17,000 undergraduates and is renowned for its partnership with major employers in the region.

The university has established a Centre for Financial and Professional Services in Cardiff, working with the Welsh Government to meet the city's demand for skills in the growing financial and professional services sector.

With specialisms in the cyber security, creative industries, sustainable energy, and mobile communications, many lecturers at the University of South Wales are producing research which is contributing to advances within their field of expertise. The latest Research Excellence Framework results rated half of the university's research as either world-leading or internationally excellent.

Innovation

As a result of its skilled workforce and higher education base, the city has a relatively innovation focussed economy, exemplified by proportionally high numbers of patent applications and a high proportion of skilled jobs focussed on exporting.

City	Patent Applications 2015 (per 100,000 of population)
Bristol	34.7
Nottingham	18.1
Cardiff	16.8
Newcastle	15.3
Sheffield	13.2
Manchester	13.2
Leeds	12.5
Liverpool	10.1
Glasgow	10.0
Birmingham	8.2

Source: Centre for Cities Analysis

City	High skilled share of export jobs
Bristol	51%
Cardiff	49%
Leeds	47%
Manchester	43%
Newcastle	40%
Nottingham	40%
Liverpool	38%
Birmingham	38%
Sheffield	37%

Source: Centre for Cities Analysis

Sector Strengths

Creative and Digital Sector

Cardiff has become the hub of Wales' creative industries sector, with particular strengths in broadcasting, TV and film production. A significant concentration of creative companies are attracted to Cardiff due to the presence of major broadcasters, such as the BBC, ITV, S4C, and the city's academic excellence.

Pinewood Studios Wales has founded a base in Cardiff, adding to established studios including the BBC Drama Village. Located in Cardiff Bay, the 170,000 sqft facility, including nine studios equivalent in length to three football pitches is now the purpose-built home of four flagship BBC dramas - Casualty, Doctor Who, Pobol y Cwm, and Sherlock.

BBC Wales has invested in a new Foster & Partners designed regional headquarters at Central Square. The statement building is the centre piece of a new destination for the creative sector in the heart of the city centre. Cardiff University's new School of Journalism will relocate immediately next to the new BBC HQ.

As well as being a prime location for major players in the creative sector, Cardiff is also home to a growing creative start-up community that has been increasing in size and confidence. The city benefits from a wide variety of incubation space for the creative industries, from the newly developed Gloworks in the heart of Cardiff Bay, Tramshed Tech and Indycube as well as space in the city's established Cardiff Business Technology Centre.

- Cardiff is one of the UK's fastest growing creative sectors outside of London
- Employs over 16,000 people
- Around a third of all Welsh creative industry jobs are based in Cardiff
- 3000 creative businesses in Cardiff
- Home to triple Emmy Award production Sherlock as well as leading BBC prime time production Dr Who and Casualty
- 98.43% penetration of superfast broadband boosted by an Internet Exchange in the heart of the city
- The creative industry sector is the fastest growing sector in Wales with employment increasing 58% between 2005 and 2018
- Renowned universities with 7,000 creative industries graduates each year in subjects including animation, visual effects, digital and mobile technology development, fashion and fine art
- Contributes over £1bn of GVA to the city's economy each year

There is already support in the sector. University of South Wales' Faculty of Creative Industries is one of the largest in the UK. The school runs 33 undergraduate courses with around 3,000 students. Cardiff University's School of Journalism, Media and Culture has a world leading reputation for its industry-facing research and training. The school houses the Centre for Community Journalism, the UK's leading network centre for 400 community and hyperlocal news outlets across the UK. Cardiff Metropolitan University's School of Art & Design is home to 1,200 students with subjects including Animation, Fashion Design, Fine Art, Graphics and Illustration. All of them undertake live projects with industry. The newly launched Cardiff Metropolitan School of Technologies will move to a purpose-built campus in the city centre near Cardiff Central Station from 2020.

Another initiative of the school is Creative Cardiff a network of 1,750 creative companies and freelancers. Creative Cardiff brings industry and academics together on initiatives including research and sector mapping, co-working spaces and international networks.

Life Sciences

The fast-moving Life Sciences sector in the Cardiff Capital Region is diverse, research-driven and categorised by global enterprises including Norgine, Biomet, GE Healthcare, Convatec and Johnson & Johnson Innovation.

The sector is well supported by the region's universities which are home to world leading research expertise with a strong commercial outlook. As well as facilities such as the Cardiff Medicentre (a medical technology incubator on the site of University Hospital Wales), there has also been significant investment in Life Sciences Hub Wales, based in Cardiff Bay, which is a nerve centre for academic and healthcare organisations, business, expert advisers, clinical and funding organisations. The Hub seeks to stimulate interaction, innovation, networking and collaboration, making the link between ideas and commercialisation a reality and providing a commercially-driven resource for the sector.

In comparison with the UK's Core Cities, Cardiff has a broad range of businesses within life sciences. A greater proportion of people are employed in Cardiff in the manufacture of irradiation, electromedical and electrotherapeutic equipment, medical and dental instruments, supplies and pharmaceutical preparations than the UK average.

- The sector and related industries employ 17,000 people in the city (Business Register and Employment Survey 2016)
- The Cardiff Capital Region is home to one of the world's top five world diagnostic companies in Ortho Clinical Diagnostics, the £4 million Welsh Wound Innovation Centre, ReNeuron, the first company to carry out clinical trials of stem cells in stroke patients and leading European specialist pharmaceutical company Norgine.
- Cardiff University is the base for Sir Martin Evans, Nobel Prize Winner for discovery of embryonic stem cells, and has an MRC Centre for Neuropsychiatric Genetics and Brain Imaging Research Centre (CUBRIC)

Compound Semi-Conductors

The compound semi-conductors sector is developing a cluster of international standing in South East Wales. Anchored by IQE, and supported by both City Deal investment and Cardiff University expertise, there is ambition to establish the cluster and the globe's premier location for the future development of a technology that will be fundamental to the growth of the digital sector.

To date almost 700 businesses have been identified as part of the cluster in South East Wales and South West England, benefitting from increasing levels of FDI, as well as the development of the city's home-grown businesses.

Overall, wider sector support is provided by:

- The Institute of Compound Semiconductors
- The Compound Semiconductors Centre
- The Compound Semiconductors Manufacturing Hub
- The Compound Semiconductors Applications Catapult.

Already the Cardiff Capital Region has made a £40m commitment to the development of a compound Semiconductor Industrial cluster in the region, with the aim to develop a cluster that will:

- Lever £375m of private sector investment,
- Create up to 2,000 high skilled jobs,
- Return the investment for use on other regional schemes, and
- Create hundreds more jobs in the wider supply chain cluster

The cluster is intended on supporting a wide range of service sector and manufacturing activities across the entire city-region, which already has established concentrations of enterprise in areas such as instrumentation and communication equipment.

Financial Services and Reg-Tech

In comparison with the UK's other Core Cities, a broad range of businesses within the financial services sector are represented in Cardiff. Welsh government research states that Cardiff is the preferred location for contact and shared service centres in the UK and the city has a growing reputation in outsourced HR, legal and other corporate services. The flourishing financial sector is dominated by banks and building societies, with an increasing number of insurance and pension companies making Cardiff their home. Employment in insurance is significantly above the UK average, with the proportion of people employed in life insurance seven times greater than the UK average.

A number of globally recognised financial services companies, some of the UK's biggest accountancy firms as well as home-grown companies have expanded their operation in Cardiff over recent years, all supported by higher education in the city that not only provides a steady stream of skilled graduates, but also works closely with business to design and shape future courses for the sector.

More recently Cardiff has experienced growth in its fintech sector, with businesses such as Wealthify, a new online investment service, and Delio, which provides technology support for financial services businesses, choosing Cardiff as their base.

The sector has also recently developed a reputation in 'Reg-tech' and cyber security. These sectors are supported by higher education institutions, public sector organisations and competitive businesses, including the establishment of a National Cybersecurity Academy

The presence of numerous government bodies already in the wider South Wales region has created the foundations of a highly skilled, digitally-adept and technically proficient workforce. These bodies include core ministerial and non-ministerial departments such as DWP and HMRC, but also more specialised agencies including the DVLA, Companies House, the Intellectual Property Office and the Office for National Statistics.

Role of the City Centre

Of the Core Cities, Cardiff has the smallest city centre by radius. The expansion of the city-centre into Central Quay, Callaghan Square and Dumballs Road will see Cardiff join the rest of the UK's Core Cities in terms of city centre size. Analysis shows that Cardiff also lags the better performing cities in terms of the proportion of its city centre space dedicated to office and non-retail development.

The introduction of more office and non-retail commercial development in the city-centre is seen as critical in exploiting the benefits of agglomeration and cluster development.

City Centre Spatial Analysis

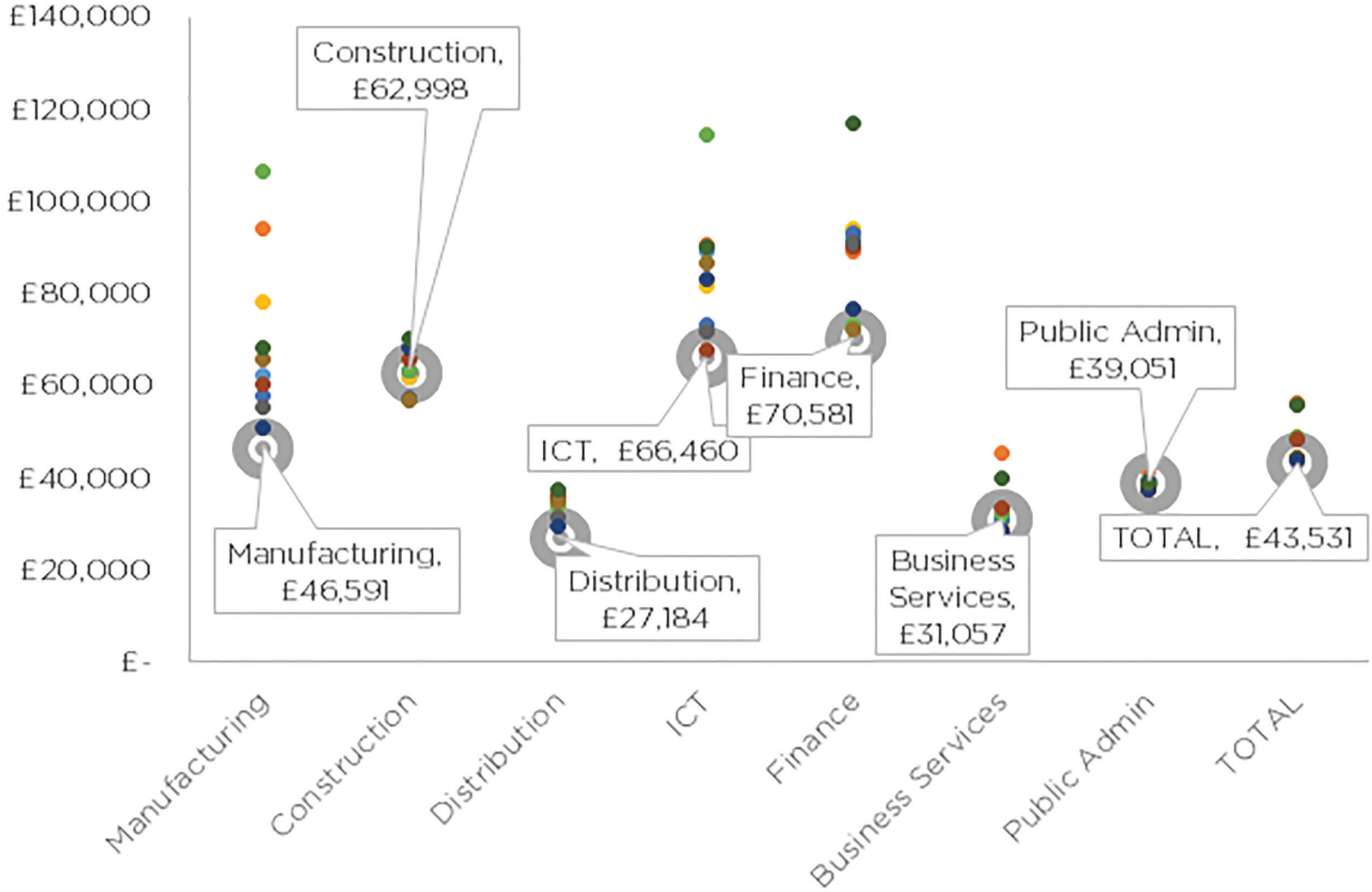
	City Centre Office	City Centre Retail	City Centre Size	radius of city centre (miles)
London	76%	11%	London	2
Birmingham	40%	19%	Large	0.8
Bristol	51%	20%	Large	0.8
Leeds	52%	21%	Large	0.8
Liverpool	45%	29%	Large	0.8
Manchester	55%	21%	Large	0.8
Newcastle	43%	35%	Large	0.8
Nottingham	35%	32%	Large	0.8
Sheffield	38%	24%	Large	0.8
Cardiff	43%	38%	Medium	0.5

Source: Centre for Cities

Productivity

Despite its industrial strengths, Cardiff's productivity lags many of the UK's Core Cities, and overall productivity is £12,000 less than the UK per worker average. Analysis shows that this isn't down to sector mix, rather it is within sector productivity that drives these differentials.

Cardiff Sector Productivity V Core Cities



A city approach to supporting the development of key sectors of potential, through a mixture of interventions, is seen as they primary tool for improving overall city productivity.

Economic Objectives

Cardiff's Well-being Plan sets the city's priorities for action between the city's public and community services, and with the citizens of Cardiff. The Plan contains Well-being Objectives, high-level priorities that the Cardiff Public Service Board has identified as being most important. Given the partnership approach that will take forward the Economic White Paper it is considered appropriate that the city-wide partnership objectives established should be adopted.

In addition the Council's Corporate Plan identifies further objectives around the visitor economy and investment. Added to the original Green Paper objective, the following Key Performance Indicators will be considered:

- GVA per head
- Jobs Growth
- Unemployment rate
- Visitor Spend
- Gross Disposable Household Income per head
- The amount of 'Grade A' office space committed to in Cardiff (sq. ft.)
- Employee jobs with hourly pay below the living wage
- Percentage of population aged 16-64 qualified NVQ4+
- Earnings (Weekly Resident FT Gross)
- Employment Rate (Female as % of all)
- Employment Rate (BAME as % of all)
- Employment Rate (EA core disabled as % of all)
- Percentage of households in poverty
- Long-term JSA Claimants

Economic Indicators Summary

	Cardiff	Wales	UK	Core City Rank
GVA per head (2016)	£27,480	£19,140	£26,621	5th
Jobs Growth (2017-2018)	6.0%	0.7%	1.2%	5th
Unemployment rate (Dec 2017)	6.1%	4.8%	4.4%	4th
Visitor Spend (2017)	£1,325m	n/a	n/a	n/a
Gross Disposable Household Income per head (2016)	£16,769	£15,835	£19,432	3rd
The amount of 'Grade A' office space committed to in Cardiff (sq. ft.)		n/a	n/a	n/a
Employee jobs with hourly pay below the living wage (2017)	20.7%	24.7%	22.0%	5th
Percentage of population aged 16-64 qualified NVQ4+ (2017)	48.0%	35.1%	38.4%	2nd
Earnings (2017 Weekly Resident FT Gross)	£538.5	£505.9	£550.4	2nd
Employment Rate (Female as % of all)	67.4%	69.0%	70.3%	5th
Employment Rate (BAME as % of all) Apr 2017-Mar 2018	59.0%	60.5%	64.8%	2nd
Employment Rate (EA core disabled as % of all) Apr 2017-Mar 2018	43.7%	45.2%	50.8%	6th
Percentage of households in poverty	16%	15%	n/a	n/a
Long-term JSA Claimants	56%	42%	42%	3rd

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