CLWSTWR CREATIVE INDUSTRIES REPORT NO 1.3

REPORT UPDATE: THE SIZE AND COMPOSITION OF THE CREATIVE INDUSTRIES IN WALES IN 2022

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ABOUT THE REPORT

This report is part of the Clwstwr programme, a five-year project that aims to put innovation at the core of media production in South Wales. Clwstwr wants to build on South Wales' success in making creative content by putting research and development (R&D) at the core of production.

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Introduction

This report updates two earlier Clwstwr reports[1] on the size and composition of the Welsh creative industries analysing data up to 2019 - before COVID-19. COVID-19 had a profound impact on the creative industries, with several creative sectors experiencing a range of negative impacts, such as suspension of live shows, concerts, film & TV production, exhibition and distribution, sporting events, and photo assignments on an unprecedented scale and for a prolonged duration.

THIS REPORT GIVES ESTIMATIONS ON THE IMPACT OF COVID-19 ON KEY ECONOMIC AND LABOUR DATA FOR THE CREATIVE INDUSTRIES IN WALES, THE CARDIFF CAPITAL REGION ("CCR" HENCEFORTH) AND IN CARDIFF (2020-2022).

Our findings are estimations based on most recent available data (please note that changes to the data may occur in future updates due to shifts in data availability). To maintain consistency with our previous reports, we adopted the same methodological principles, using information from ORBIS and FAME (published by Bureau van Dijk).[2] To allow comparability with other UK reports[3], we have used the Standard Industrial Classification (SIC 2007) codes adopted by the UK Government's Department of Culture Media and Sport (DCMS) (see Appendix 2). The methodological note below provides detailed information about the approach and limitations of the analysis (see Appendix 1).

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1 1st Report: Komorowski, M. & Lewis, J. (2020). Clwstwr creative industries report no 1 - The size and composition of the creative industries in Wales. Clwstwr publication series, Cardiff, Clwstwr. Accessible via: https://clwstwr.org.uk/sites/default/files/2020-05/Creative%20Industries%20Report%20No%201_Final_compressed.pdf

2nd Update report with available data till 2019: Fodor, M. M., Komorowski, M. & Lewis, J. (2021). Clwstwr creative industries report no 1.2 – Report update: The size and composition of the creative industries in Wales in 2019. Clwstwr publication series, Cardiff, Clwstwr. Accessible via: https://clwstwr.org.uk/sites/default/files/2022-02/Creative%20Industries%20Report%20No%201.2_Final_compressed.pdf
2 See https://bvdinfo.com/en-gb/our-products/data/international/orbis

3 **Please note, that the DCMS delineation of the creative industries based on SIC codes applied in this report is different to the codes applied by Creative Wales, which include film and TV, music, animation, games, publishing and emerging sectors. More information about the differences in sector estimates can be found in Appendix 3. Please find more information about Creative Wales' sector estimates and delineation via https://www.creative.wales/creative-sectors.**

Findings for Wales, the CCR and Cardiff

Creative industries enterprises

Key numbers

Based on our estimations and preliminary data from 2022, there are approximately 10,500 enterprises active in the creative industries in Wales. The estimated total turnover of Wales' creative industries hit an all-time high of £4.2bn in 2022, comprising 4.6% of total turnover in Wales.[4]

Around 59% of the economic activities of the creative industries (in terms of turnover) is concentrated in the Cardiff Capital Region (CCR), whose enterprises generated an estimated £2.5bn. Within the CCR, these are clustered in Cardiff, which has 4,700 enterprises, generating a total turnover of £2.0bn in 2022. As Table 1 shows, the strength of the creative industries in the Welsh capital is striking: over half the total turnover in Wales comes from Cardiff, these sectors constituting over 11% of the city's total GDP.

Creative industries key data in 2022	Wales	CCR	Cardiff
No of enterprises	10,500	6,200	4,700
Turnover	£4.2bn	£2.5bn	£2.0bn
% of total business turnover[5]	4.6%	4.6%	11.2%

Table 1: Overview of key data economic data of creative industries enterprises in 2022.

As Figure 1 shows, the CCIs in Wales produce a significantly higher turnover than many other key sectors of the Welsh economy. These include: health and social work; mining and utilities; accommodation and food services; agriculture, forestry and fishing, and transport and storage. As we note when we discuss employment below, these figures exclude freelancers, who are a

4 https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/Businesses/Business-Structure/Headline-Data/turnover-by-industry-sic2007-sizeband-area
5 Ibid.

particularly significant part of the creative industries, so these figures will underestimate the size of the creative industries.

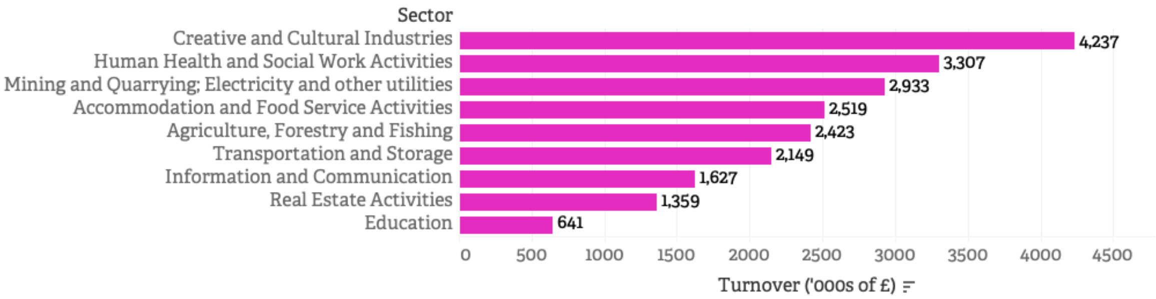


Figure 1: Comparison of the size of the turnover of the Welsh CCIs to other sectors' turnover in the Welsh economy (2022 data).

Economic growth and the impact of COVID-19

Overall, all UK countries and regions reported negative growth during 2020, the first year of COVID-19, followed by a partial recovery in 2021.[6] A 2022 study of UNESCO[7] estimated that losses in revenue of the creative and cultural industries in 2020 ranged between approximately 20% to 40% across different countries. We see a similar pattern in Wales, showing that the creative industries were hit harder by COVID-19 than many other sectors in Wales (see Figure 2):[8]

- **In Wales,** during the first year of COVID-19 (2020), the output of the creative industries (in terms of turnover) shrunk by 14%, taking it back to 2013 levels. This compares with Wales as a whole, where total turnover actually grew by 4.3% from 2019-2020. In 2021, turnover in Wales' creative industries bounced back, growing by 11%, although turnover in 2021 remained significantly lower than in 2019 (and only slightly higher than turnover in 2018). In Wales as a whole, total turnover decreased by 0.6% in 2021. In 2022, we saw a further – and in this case more dramatic – recovery in the Welsh creative industries, with a 12% growth in turnover, the sector recording its highest ever figures. Indeed, as Figure

6 https://www.gov.wales/regional-gross-domestic-product-and-gross-value-added-1998-2021
7 https://unesdoc.unesco.org/ark:/48223/pf0000377863
8 For comparison the following data source from StatsWales has been used: https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/Businesses/Business-Structure/Headline-Data/turnover-by-sizeband-area-year

1 indicates, growth during the period from 2018 to 2022, despite the demonstrably disruptive impact of COVID-19, outpaced the steady growth between 2012 and 2018.

- **In the CCR,** the turnover of the creative industries in 2020 decreased by 14.7%, but with strong 13% growth thereafter.
- **In Cardiff,** much like in the rest of Wales, we saw turnover decline in 2020, with a recovery in 2021 and in 2022. As a result, Cardiff's creative output was around 4% higher in 2022 than in 2019.

Our data points to both the resilience and the potential of the Welsh creative industries. Despite being hit disproportionately by Covid, across Wales the creative industries not only recovered from the impact of COVID-19 but grew faster overall than the rest of the Welsh economy.

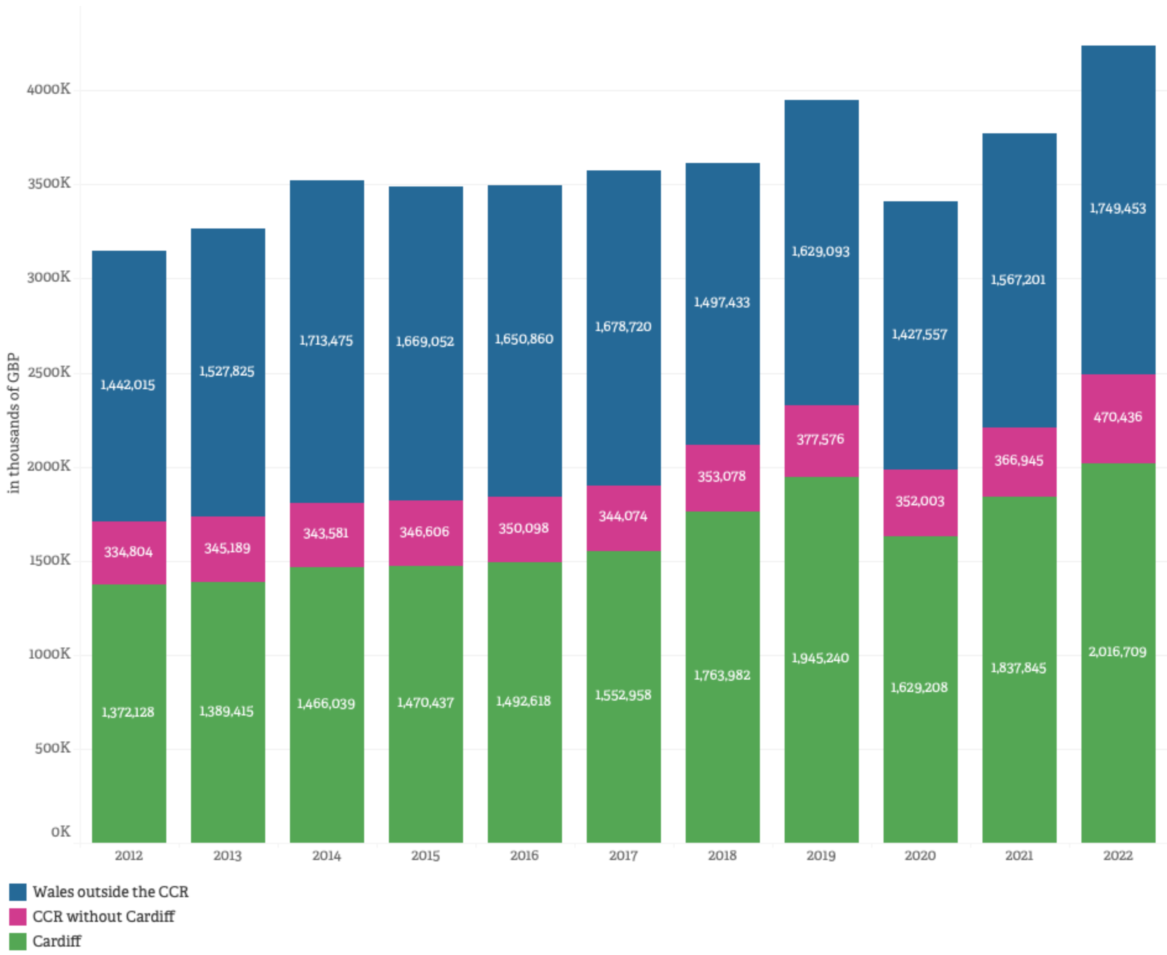


Figure 2: Growth of turnover of the creative industries in Wales.

The creative industries' workforce

Key numbers

We estimate that in 2022 the 10,500 enterprises in the Welsh creative industries *directly* employed more than 45,100 full-time employees, representing 6.4% of the nation's total employment.[9] The CCR had roughly 28,000 full-time employees working in the creative industries. Cardiff had the highest concentration of people working in the creative industries, **with every 2 in 11 jobs in Cardiff being in the creative industries** (even stronger than in 2019, when the ratio was 1 in 7, or 2 in 14).[10]

Creative industries employment in 2022	Wales	CCR	Cardiff
No of full-time employees	45,100	28,000	22,400
% of total employment	6.4%	4%	12.3%

Table 2: Overview of key workforce data of the creative industries in 2022.

The figures for direct employment under-estimates the number of people working in the creative industries, which is particularly dependent on a large freelance workforce. Based on data from the DCMS Sector economic estimates, 30%-50% of the creative workforce are self-employed in the UK (depending on the region and the sectors).[11] We can therefore estimate that between 68,000 and 90,000 people work in the creative industries in Wales (including employees and freelancers).

Employment growth and the impact of COVID-19

The multiple nationwide lockdowns had a major effect on the workforce in Wales. Previous research has found that the so-called 'shutdown sectors' (many of which are part of the creative industries) account for almost a fifth

9 See https://www.nomisweb.co.uk/reports/lmp/gor/2013265930/report.aspx for total employment in Wales. https://www.nomisweb.co.uk/reports/lmp/gor/2013265930/subreports/nrhi_time_series/report.aspx
10 Including freelance and direct employment. For Cardiff's total employment numbers, please consult https://www.nomisweb.co.uk/reports/lmp/la/1946157397/printable.aspx (and please scroll to the bottom of the page)
11 See https://www.gov.uk/government/statistics/dcms-sector-economic-estimates-employment-july-2021-june-2022

of the Welsh workforce - or a quarter of a million workers.[12] This resulted in job losses, furloughs, a reduction in hours worked, and a reduction in pay and average income in 2020. By the start of 2021, employment levels began to improve, but economic inactivity continued to grow in the UK, peaking in December 2021-February 2022 at 8.89 million.[13] This was also the case in Wales.

The impact of COVID-19 on employment growth in the Welsh creative industries followed a similar (albeit less erratic) trend (see Figure 3).[14] However, the creative industries showed a stronger recovery, although our data does not take into account the impact COVID-19 had on freelancers (a large part of the total workforce in the creative industries)[15] and does not reflect changes in the overall work situation (pay, working hours, etc). The figure below shows the evolution of employment in the CCIs in Wales, broken down by regions.

- **In Wales**, employment in the creative industries decreased by more than 5.2% between 2019 and 2020, followed by an increase of almost 7.8% in 2021.This compares to a decrease of employment of 0.2% in 2020 and an increase of 2.1% in 2021 in overall employment in Wales. In 2022, employment in the Welsh creative industries is roughly 5% higher than in 2019.
- **In the CCR,** fluctuations in creative industries employment were more dramatic, decreasing by more than 7% between 2019 and 2020 followed by an increase of 10.5% in 2021. Currently, overall creative industries employment is more than 8% higher than its 2019 level.
- **In Cardiff,** the figures are even more dramatic: employment in the creative industries decreasing by more than 8% between 2019 and 2020, but increasing by almost 13% in 2021. In 2022, overall creative industries employment in the city is at its highest ever level.

12 https://phw.nhs.wales/publications/publications1/covid-19-and-employment-changes-in-wales-what-we-know-about-current-and-future-impacts/
13 https://commonslibrary.parliament.uk/research-briefings/cbp-8898/
14 https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/Businesses/Business-Structure/Headline-Data/turnover-by-sizeband-area-year
15 See the following report for more details on the impact of COVID-19 on cultural freelancers in Wales:
Komorowski, M., & Donnelly, S. (2022). Road to Recovery? Cultural Freelancers Wales Report 2022. Cultural Freelancers Wales. https://cfw.wales/recovery

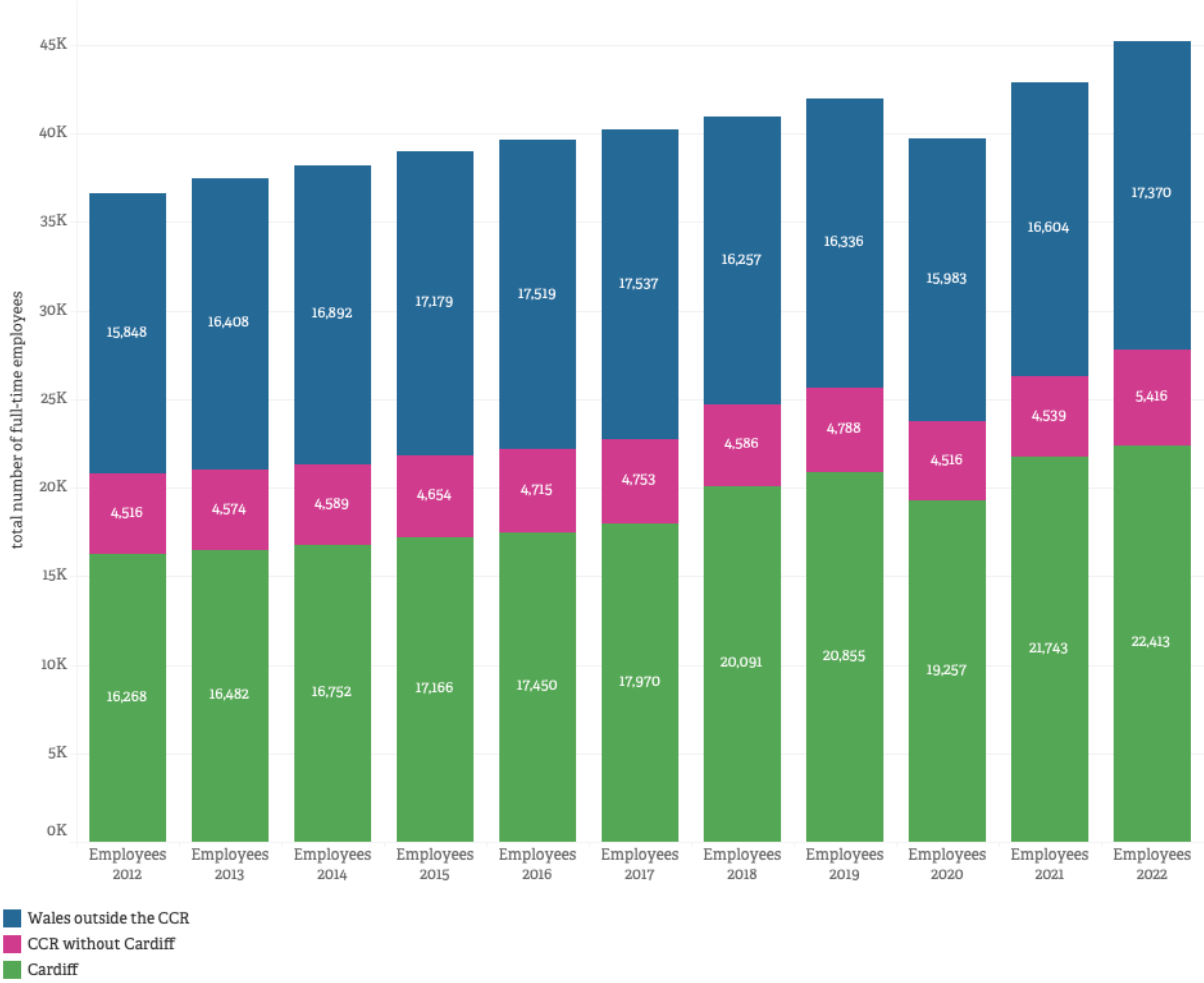


Figure 3: Growth of employment in the creative industries in Wales

The impact of COVID-19 on employment in different sectors

The impact of COVID-19 on employment growth in the creative industries in Wales varied by sector. For example, even in the worst year of the pandemic (2020), some subsectors showed clear employment growth across Wales, while others still have not reovered (see Figure 4).

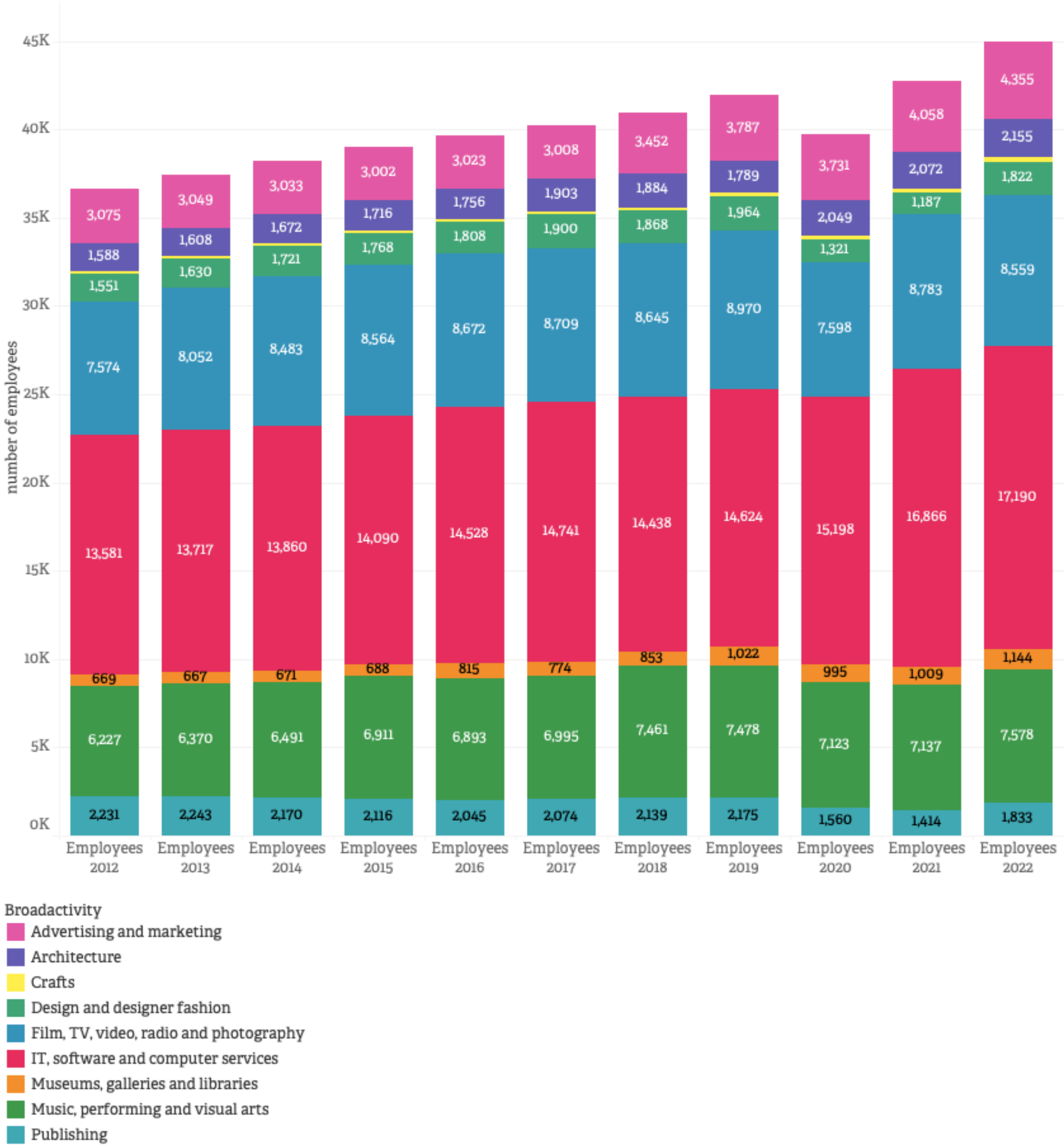


Figure 4: Growth of employment per sector in the creative industries in Wales.

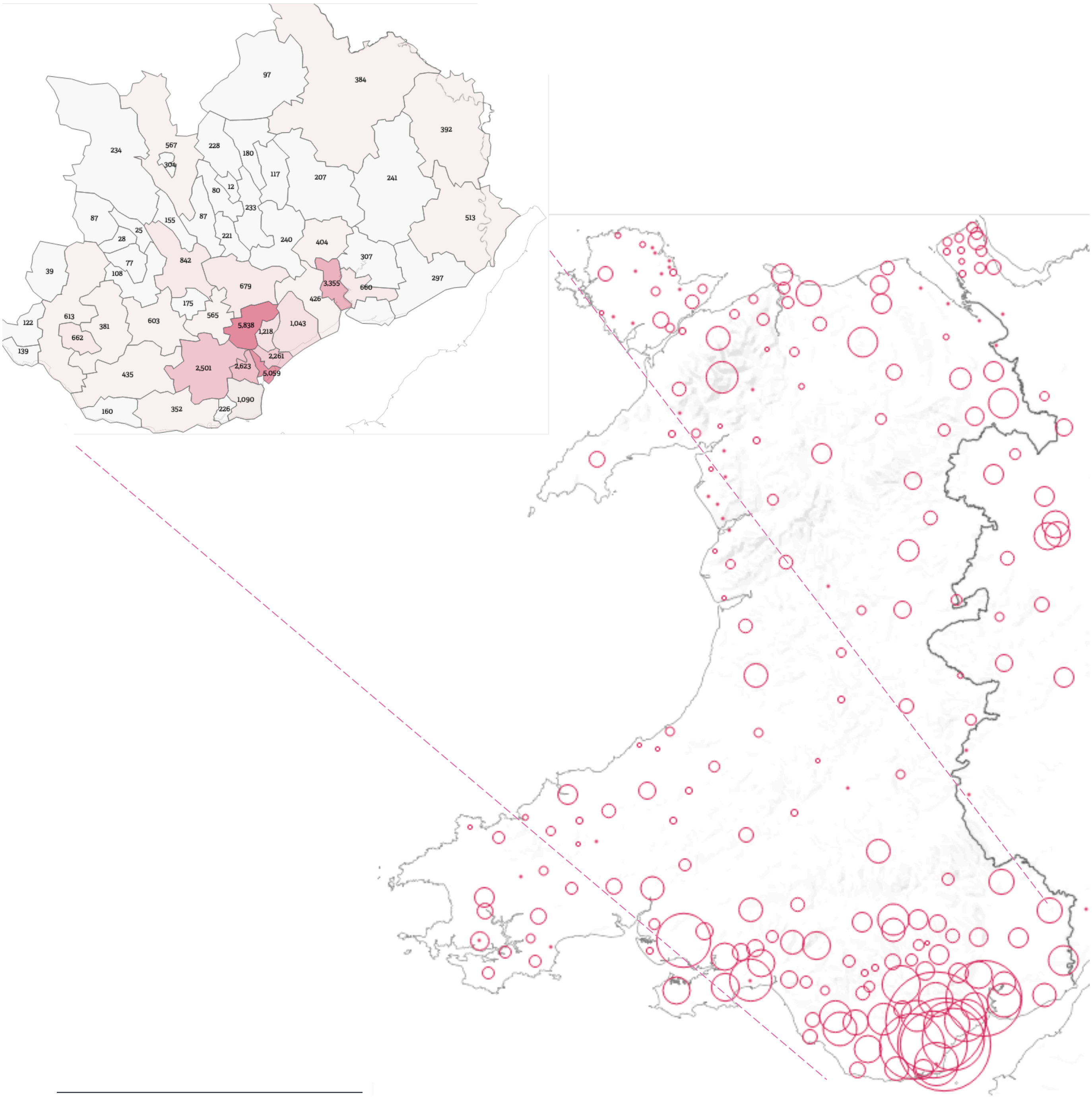
- **The IT, software and computer services sector** experienced strong growth in employment throughout the COVID-19 years. The sector in Wales grew from 2019-2020 by 4% and another 11% from 2020-2021.
- **The film, TV, video, radio and photography sector**, by contrast, was impacted by the shutdown of production and distribution of Film and TV in 2020. This sector declined by 15% in 2020 followed by a 15% recovery in 2021.

- **The music, performing and visual arts sector** was especially hard hit, In employment dropping by almost 33% in 2020, and even by 2022 remaining below its 2019 level.
- **The publishing sector** experienced employment drops in both 2020 and 2021. Despite a very substantial rebound of 30% in 2022, employment in publishing remains below its pre-COVID (2019) level.
- **The design and designer fashion sector** followed a similar pattern.
- **The architecture sector** experienced growth both in 2020 and in 2021. Consequently, employment in this sector by 2022 was at its highest ever level, 22% above its 2019 numbers.

We found similar employment patterns in the CCR and Cardiff. Cardiff however shows strength in the Film, TV, video, radio and photography subsector, which represents 21% of employment in the creative industries in the city (compared to 18% across Wales) in 2022. Overall, as we might expect, the pandemic-period shifted the structure of employment in the creative industries in Wales towards those working in creative digital and IT.

The geography of the creative industries

The following map visualizes the geographical distribution of Wales' creative industries.[16]



16 Please note: Each circle in the first map is a postal code area in Wales. The size of the circle is proportional to the number of employees in the creative industries in that area. The second map shows the number of employees in the creative industries located in the different postal code areas in the Cardiff Capital Region.

CONCLUSION

OUR FINDINGS CONFIRM THAT THE CREATIVE INDUSTRIES CONTINUE TO BE A SIGNIFICANT AND GROWING PART OF THE WELSH ECONOMY. DESPITE BEING DISPROPORTIONALLY IMPACTED BY THE COVID-19 DOWNTURN, THE CREATIVE INDUSTRIES HAVE, OVERALL, BEEN MORE RESISLIENT THAN OTHER PARTS OF THE WELSH ECONOMY. MUCH OF THIS STRENGTH, IS BASED ON THE RESILIENCE OF THE MEDIA CLUSTERS IN CARDIFF AND THE WIDER CCR.

In 2022, there are almost 10,500 active enterprises and – including freelancers - between 68,000 and 90,000 people working in the creative industries in Wales. If we exclude freelancers, the creative industries generated a £3.8bn turnover in 2022, making 5,3% of total Welsh GDP. The creative industries are particularly strong in the Cardiff Capital Region (66% of Welsh turnover) and Cardiff (53% of Welsh turnover). These figures confirm Cardiff's importance as a creative cluster and that the city is becoming increasingly dependent on the creative industries for employment.

Our analysis showed that COVID-19 caused a 14% decline in creative industries' turnover. This was followed by a recovery that, over the 2019-2022 period, outpaced the rest of the Welsh economy. Some of Wales' creative sectors have managed to grow in terms of employment, even in the lockdown year of 2020, such as IT or architecture.

There is no doubt, however, that those creative sectors most impacted by shutdowns and risk of infection – notably music and the performing arts - have been worse hit than others and are still struggling to get back to 2019 levels.

What's next?

During the period explored in this report – 2019 to 2022 - Clwstwr provided support for the Welsh creative industries that had a significant impact on the Welsh creative industries. This is documented in detail in the Final Clwstwr Report available via:

https://clwstwr.org.uk/clwstwr-model-research-development-and-innovation-creative-industries.

In 2022, Cardiff University launched a 23-partner Consortium – Media Cymru - designed to continue and develop Clwstwr's support for research, development and innovation (R,D&I) in the Welsh creative industries, successfully securing £22 million in funding from the UK Research and Innovation's (UKRI) flagship Strength in Places Fund, as well as the Cardiff Capital Region and Welsh Government, through Creative Wales, with match funding from industry and university partners.

Find out more about the Media Cymru programme to support the local creative industries in Wales and get support through our funding and activities via: https://media.cymru/

Appendix 1: Methodological note

For this study we used information from companies extracted from ORBIS and FAME (published by Bureau van Dijk).[17] The data sources are based on Company House public data and additional data gathered through Bureau van Dijk. Empty data fields on numbers of employees and turnover were harmonized by applying the median and average values of the applicable years.[18] The data downloaded from the FAME dataset has been fully harmonised to be compatible with the data used in our previous reports. While small discrepancies in a few metrics may persist, we estimate that they will not exceed a statistical margin of 5%. The data was analysed with Tableau and Stata. The most recent data represents figures from 2022 (the most recent available data in 2023 due to the filing requirements of companies).

To allow comparability with other UK reports, we have used the Standard Industrial Classification (SIC 2007) codes adopted by the UK Government's Department of Culture Media and Sport (DCMS). The creative industries are categorised in 9 main sectors as follows:[19] advertising and marketing; architecture; crafts; design and designer fashion; film, TV, video, radio and photography; IT, software and computer services; publishing; museums, galleries and libraries; and music, performing and visual arts. The research focuses on Wales, with data further broken down for the Cardiff Capital Region and for Cardiff. The Cardiff Capital Region (CCR) represents the ten local authorities in Southeast Wales (Bridgend, Vale of Glamorgan, Rhondda Cynon Taff, Merthyr Tydfil, Caerphilly, Blaenau Gwent, Torfaen, Monmouthshire, Newport, and Cardiff). The Cardiff data is based on postal areas within the city.

17 See https://bvdinfo.com/en-gb/our-products/data/international/orbis

18 The missing information on the number of employees was calculated as the median of employment at the companies, which did report a number. This is indeed highly cautious, because it does not allow for the larger enterprises that have statutory requirements to report on the number of their employees to drag estimates upwards (which would be the case, if we had employed the mean instead of the median). Given that there is much more variation in turnover reported (and, as opposed to the number of employees, turnover figures are not natural numbers), we have used a different, albeit equally cautious methodology. We have taken the turnover of the bottom 85% of the firms that had reported this information and we have taken the average across them. This again allows for us to eliminate the skew that the large IT firms, studios and broadcast companies would exert on a simple mean.

19 See Appendix 2. It is important to stress that this doesn't include all creative work (there are many creatives working in other sectors) or non-market creative activities and output. It is therefore likely that our figures on the number of creative workers is conservative. For more details about how the creative industries and creative economy in the UK is defined and what it includes and excludes in terms of activities see: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499683/CIEE_M ethodology.pdf

Our research methods have some inevitable limitations:

First, the creative industries involve complex structures and is strongly impacted by converging technology advances. The demarcation of the creative industries through **classification systems (like SIC) as applied in this study is neither exclusive nor exhaustive**. Additionally, irregularities can be encountered between attributed codes and actual business activity.

Second, working with industry statistics means that there are **constraints in data availability**. Financial data on firms have many constraints. In particular, the UK does not have any obligatory filing requirements for freelancers, and small companies do not file financial figures in detail. Only about 5% of creative enterprises extracted from FAME include numbers on employees. The remaining 95% have been harmonised using calculations based on median and average values per year. BBC Wales – the largest media employer in Wales - was also not included in the database due to filing requirements (information was added in the research process). Other unavailable data cells due to reporting requirements and time constraints needed to be harmonized.

Third, the **available data does not allow us to distinguish directly between trading addresses, addresses for filing purposes and subsidiaries**. Only companies registered at one of the analysed locations are included in the analysis. The data does not allow to see where employees are located and therefore where exactly economic activities are taking place. Consolidated accounts have been used, meaning if subsidiaries are working at different locations, the turnover and number of employees are still designated to one location.

Appendix 2: SIC 2007 codes of the creative industries (based on DCMS's delineation)

Creative industries Sector	SIC Code	Description
Advertising and marketing	70.21	Public relations and communication activities
	73.11	Advertising agencies
	73.12	Media representation
Architecture	71.11	Architectural activities
Crafts	32.12	Manufacture of jewellery and related articles
Design and designer fashion	74.1	Specialised design activities
Film, TV, video, radio and photography	59.11	Motion picture, video and television programme production activities
	59.12	Motion picture, video and television programme post-production activities
	59.13	Motion picture, video and television programme distribution activities
	59.14	Motion picture projection activities
	60.1	Radio broadcasting
	60.2	Television programming and broadcasting activities
	74.2	Photographic activities
IT, software and computer services	58.21	Publishing of computer games
	58.29	Other software publishing
	62.01	Computer programming activities
	62.02	Computer consultancy activities
Publishing	58.11	Book publishing
	58.12	Publishing of directories and mailing lists
	58.13	Publishing of newspapers
	58.14	Publishing of journals and periodicals
	58.19	Other publishing activities
	74.3	Translation and interpretation activities
Museums, galleries and libraries	91.01	Library and archive activities
	91.02	Museum activities
Music, performing and visual arts	59.2	Sound recording and music publishing activities
	85.52	Cultural education
	90.01	Performing arts
	90.02	Support activities to performing arts
	90.03	Artistic creation
	90.04	Operation of arts facilities

Appendix 3: A note about the correspondence between Creative Wales' analysis of the creative industries

The Welsh Government and Creative Wales ("Creative Wales" henceforth) also monitor the creative industries, publishing statistics about the number of businesses in the industry, the number of employees, turnover, etc.

The figures released by Creative Wales diverge from ours, even within comparable metrics. To address this disparity, we have collaborated with researchers from Creative Wales to reconcile these differences. Here we review the contrasting data sources and terminologies to show how the data sets are compatible once all mechanical differences in data collection techniques are accounted for.

- **Diverging SIC activity codes:** Firstly, the subdivisions that Creative Wales use to define and categorise the creative Industries diverge from the DCMS categories used in our analysis. Our catalogue of subsectors can be found in Appendix 2 of this report, and the Creative Wales catalogue is in Appendix 4. Creative Wales currently focuses its support to the screen, digital (animation and games), music and publishing sectors, and so-called emerging sectors, which include additional SIC codes. Perhaps the most conspicuous difference is Creative Wales exclusion of SIC subsector 62.02 (computer consultancy) — a significant hub of activity accounting for 18% of the entire creative output in Wales for the year 2022. Creative Wales definition of the creative industries also encompasses numerous smaller, burgeoning sectors, not yet included in the DCMS definition, which relate to the fashion industry.
- **Diverging data sources:** Secondly, the data resources deployed by Creative Wales encompass data from the Interdepartmental Business Register (IDBR), Annual Population Survey (APS), and the Annual Survey of Hours and Earnings (ASHE). In contrast, our data is sourced from the Bureau van Dijk and Companies House. The IDBR utilises VAT and PAYE records from HMRC, hence businesses without such records are excluded from Creative Wales' studies. Our study incorporates these businesses, as well as larger ones holding VAT and PAYE records and is built on the Company House Registry.

As a result, we anticipate the numbers from Creative Wales will be significantly smaller than ours. This aligns with Table 3 below. We can reverse engineer Creative Wales' numbers from our dataset by implementing a filter based on the presence of a VAT number linked to a specific business, eliminating companies from our dataset that lack a VAT registration. Although this doesn't entirely address the PAYE coverage variations, it yields numbers that are broadly comparable. The reference point for data comparison is the most recent year for both analyses, specifically, 2022 for ours and 2021 for Creative Wales.

Data for the CCIs in Wales	Number of firms	Turnover	Number of FTEs
Our published data[20]	10,500	£4.2 bn	45,100*
Creative Wales' latest data	3,423	£1.70 bn	35,400
Reverse-engineered data to match Creative Wales' methodology using our dataset[21]	3,634	£1.78 bn	35,500

Table 3: Overview of the data discrepancies between Creative Wales' research and ours. *see footnote 17.

In summary, when methodological differences are accounted for, the two data sets are in broad alignment with one another. There are strong arguments for both methodologies: we use the DCMS definitions to make our data comparable with UK data, but acknowledge that these are issues with these definitions that Creative Wales have begun to address.

20 The number of FTEs in "our published data" does not include freelancers, contrary to Creative Wales' numbers. If it did, following Creative Wales' incidence of the proportion of freelancers in the Welsh creative economy, the total figure in the row would be between 65,000 and 80,000. However, our own estimates of the incidence of freelancers in the sector is somewhat higher than Creative Wales', being closer to 50%, which is most likely due to the methodological differences detailed in this section above.
21 The number of FTEs that we have obtained with this methodology was 24,500. However, as we detail in the footnote above, Creative Wales' estimations include freelancers assuming that 31% of all Welsh workers in the Creative Industries are freelancers. Adjusting with this proportion, we obtain 35,500 as the number of FTEs in the Creative Industries using Creative Wales' filters on our dataset.

Appendix 4: SIC 2007 codes of Creative Wales' delineation of creative Industries

59111	Motion picture production activities
59113	Television programme production activities
59120	Motion picture, video and television programme post-production activities
59131	Motion picture distribution activities
59133	Television programme distribution activities
78101	Motion picture, television and other theatrical casting
60100	Radio broadcasting
60200	Television programming and broadcasting activities
59200	Sound recording and music publishing activities
85520	Cultural education
90010	Performing arts
90020	Support activities to performing arts
90030	Artistic creation
90040	Operation of arts facilities
18201	Reproduction of sound recording
58210	Publishing of computer games
58290	Other software publishing
62011	Ready-made interactive leisure and entertainment software development
70210	Public relations and communications activities
73110	Advertising agencies
73120	Media representation services
74100	Specialised design activities
58110	Book publishing
58120	Publishing of directories and mailing lists
58130	Publishing of newspapers
58141	Publishing of learned journals
58142	Publishing of consumer, business and professional journals and periodicals
58190	Other publishing activities
18129	Printing (other than printing of newspapers and printing on labels and tags) n.e.c
18130	Pre-press and pre-media services
74300	Translation and interpretation activities
32120	Manufacture of jewellery and related articles
32130	Manufacture of imitation jewellery and related articles
74201	Portrait photographic activities
74202	Other specialist photography (not including portrait photography)
74203	Film processing
74209	Other photographic activities (not including portrait and other specialist photography and film processing) n.e.c.
13200	Weaving of textiles
13300	Finsihing of textiles
14110	Manufacture of leather clothes
14120	Manufacture of workwear
14131	Manufacture of men's outerwear, other than leather clothes and workwear
14132	Manufacture of women's outerwear, other than leather clothes and workwear
14141	Manufacture of men's underwear
14142	Manufacture of women's underwear
14190	Manufacture of other wearing apparel and accessories n.e.c.
14200	Manufacture of articles of fur
14310	Manufacture of knitted and crocheted hosiery
14390	Manufacture of other knitted and crocheted apparel
15110	Tanning and dressing of leather; dressing and dyeing of fur
15120	Manufacture of luggage, handbags and the like, saddlery and harness
15200	Manufacturer of footwear

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Marlen performs the impact analysis of Clwstwr's interventions in the screen sector (and creative industries more generally) in South Wales. She is also associated with the research centre imec-SMIT-VUB (Studies on Media, Innovation & Technology) in Brussels and Professor for European Media Markets at the VUB. Since 2019, she is Senior Research Fellow for the Media Cymru programme at Cardiff University. As a researcher, her work focuses on media and creative industries-related projects, impact analysis, industry clustering, ecosystem and value network analysis, new business models and the impact of the digitisation and innovation on industries and firms.

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Justin is Professor of Communication and Creative Industries at Cardiff University's School of Journalism, Media and Culture. He has conducted research with many different creative organisations, including the BBC, the BBC Trust, Channel 4, the Guardian, as well as UK and European Research councils. He has published over 100 books, journal articles and chapters about a wide range of media and cultural issues.

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