

A review of the potential of R&D tax policy to support the creative industries

Report

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Authors:

Ema Talam

Prof Geoff Pugh

Prof Jon Fairburn

PERN



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Overview of the report

Creative industries represent a vital segment of the UK economy, contributing to the growth of local economies (Mateos-Garcia et al., 2018) and the country's competitive advantage (HM Government, 2018). In 2018, the creative industries comprised 6.2% of the economy of the United Kingdom in terms of employment (DCMS, 2019) and 5.8% in terms of gross value added (GVA) (DCMS, 2020). Additionally, the creative industries are fast growing – employment in the creative industries grew by 30.6% over the period 2011 to 2018, while the GVA in real terms increased by 43.2% since 2010 (DCMS, 2020). Creative industries tend to be innovative (Bird et al., 2020) and can be highly productive, although they constitute a diverse sector of the economy embracing a wide range of productivity levels (see Section 2 below). Currently, the creative industries, and arts, humanities and social sciences more generally, are ineligible for R&D tax policy support in the United Kingdom (Bakhshi, Breckon and Puttick, 2021). This report will explore the potential of R&D tax policy to support the creative industries.

The first section of the report provides definitions of the creative occupations and the creative industries, identifying the main characteristics of both and the links between the two. Additionally, the features of the firms in the creative industries, especially features relevant for the purposes of the policy making, are discussed in detail in this section.

The second section discusses the creative industries in the United Kingdom – their importance, main characteristics, and R&D and innovation in the creative industries.

The third section discusses R&D tax policy more generally, how it can be used to promote innovation, and the effectiveness of the scheme. Additionally, the section will discuss the main applications of the policy in the United Kingdom and the changes over time.

The fourth section details public support measures for creative industries other than tax credits. Finally, Section 5 offers policy recommendations.

1. Creative occupations and creative industries: Definition and scope

Definitions of the creative industries are not uniformly agreed on (UNCTAD, 2010). Since the focus of this report is within the context of the United Kingdom, the Department of Digital, Culture, Media and Sport (DCMS) definition of the creative industries will be utilised throughout this report. The DCMS in its *Creative Industries Mapping Document* defines creative industries as “those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property” (DCMS, 2001, p. 5).

The definition and scope of the *creative industries* used by the DCMS is widely used both nationally and internationally (Müller et al., 2008) and is arrived at via three steps (DCMS, 2015): (i) identification of creative occupations; (ii) calculating for each industry the proportion of jobs belonging to creative occupations; and (iii) identification of industries as creative that have a proportion of creative jobs above a specified threshold (*30 per cent*: DCMS, 2016, p. 7). DCMS publications do not specify the conceptual grounds for identifying particular occupations as creative, instead referring readers to Bakhshi et al. (2013) for a “replicable method of determining whether an occupation is creative” (DCMS, 2016, pp. 5 and 7; also DCMS, 2015, p. 4).

According to Bakhshi et al. (2013, p. 24) creative occupations combine cognitive skills (problem solving) and collaborative relationships “to bring about differentiation to yield either novel, or significantly enhanced products whose final form is not fully specified in advance”. There is no single criterion for whether or not an occupation is creative. However, occupations displaying all or most of the following five characteristics “are very likely to function as an economic resource that the creative industries require” (Bakhshi, 2013, p. 24).

1. *Novel process*: Achieving a goal, even one that has been established by others, in novel ways. Requirements are typically “expressed semantically rather than in terms of process ... the creative worker has a concept of what ‘kind’ of effect is required, but is not told how to produce that effect in the same way that ... even a skilled technician is instructed” (Bakhshi, 2013, p. 22);
2. *Mechanisation resistant*: Specialised labour not subject to automation;
3. *Non-repetitive or non-uniform function*: The cognitive task or problem to be solved is likely to vary each time it is applied, because each product is novel (at least to some extent);
4. *Creative contribution regardless of the context*: People in creative occupations can be found in industries not defined as creative;

5. *Interpretation rather than transformation*: Occupations that do more than “shift” the product form or place or time.¹

Occupations with four or five of these characteristics are deemed creative. This approach is reflected in the DCMS list of nine creative occupational categories (DCMS, 2015): (i) Advertising and marketing; (ii) Architecture; (iii) Crafts; (iv) Design (product, graphic and fashion design); (v) Film, TV, video, radio and photography; (vi) IT, software and computer services; (vii) Publishing; (viii) Museums, galleries and libraries; and (ix) Music, performing and visual arts. There are other occupations that may be creative. However, whereas these nine creative occupations are concentrated into a narrow range of industries, other occupations with creative characteristics are dispersed across a broad range of industries (Bakhshi, 2013, pp. 12-14).

Turning to the intensity with which people in these nine creative occupational categories are employed across different industries, Bakhshi et al. (2013, pp. 17-18; pp. 30-32) show that the distribution of intensities identifies creative industries as a coherent grouping:

- Employment in the non-DCMS-creative industries lies on a distribution skewed towards zero, with two-thirds of all creatively-occupied jobs located in industries whose intensity of creative jobs is less than 15 per cent.
- In contrast, employment in the DCMS-creative industries lies on a very different distribution, with 60 per cent of all creatively-occupied jobs located in industries whose intensity of creative jobs is greater than 55 per cent.

DCMS (2015) lists the creative industries under the same headings as the creative occupations.²

The creative industries are not only statistically distinct, but also constitute a coherent unit of analysis on economic grounds, because structural changes in the economy have given rise to new opportunities to which creative industries have responded in similar ways.

1. Broader economic developments have favoured the creative industries.
 - a. On the supply side, information and communications technologies (ICT) have a strategic, cross-industry importance among the heterogeneous creative industries, which typically engage in the joint application of ICT and other creative skills. In particular, digitisation “provides the capacity to transcend the traditional barriers of service production ... distance ... time... quantity”

¹ Bakshi (2013, p. 24) states that “for instance, a draftsman/CAD technician takes an architect’s series of 2D drawings and renders them into a 3D model of the building. While great skill and a degree of creative judgement are involved, arguably the bulk of the novel output is generated by the architect and not by the draftsman.”

² A list of the Standard Industrial Classification (SIC) codes corresponding to the creative occupational categories is provided in Appendix 1.

(Bakhshi, 2013, p. 21). This is particularly evident in the growth in the creation and delivery of creative 'content' for both consumers and firms. In addition, ICT has promoted 'open innovation' (i.e. the use of external knowledge sources to inform, and collaborative contracts to enact, product development), which according to Bakhshi (2013, p. 23) is characteristic of the production processes of creative industries.

- b. On the demand side, there are (i) the increasing importance of discretionary spending by consumers and (ii) the changing emphasis of business investment: consumers spend an increasing proportion of their income on products in which "taste and subjective perception of experience predominate over pure quantity";³ while "businesses are investing more on creative services, such as design, advertising and software, than on more 'tangible' expenditures" (Bakhshi, 2013, p. 21).
2. Because the economic functioning of these industries is grounded in the characteristics of their workforce (as detailed above), the responses of the creative industries have been conditioned by their intensive employment of people in creative occupations. Specialised labour applying cognitive skills to address customer needs in new ways gives creative industry firms the capacity to produce highly differentiated products "adapted to customer needs" (Bakhshi, 2013, p. 22). In turn, this favours a business model in which "the key requirement is no longer the production of large volumes at low prices, but a continuous succession of small runs of products each varying from its predecessors ... sufficiently highly prized ... to attract the loyalty of a discriminating clientele" (Bakhshi, 2013, p. 22). In this model, creating and maintaining competitive advantage requires not only the legal defence of intellectual property (IP) (through copyright, trademarks and patents), but also non-IP methods such as "first-mover advantage ... in which the seller ... creates and maintains a client base on the basis of brand, distinctiveness and 'novelty'" (Bakhshi, 2013: 22).

Building on the above insights from Bakhshi (2013), we can explain in addition why the creative sector is characterised by an imperative to innovate.

1.1 Distinguishing features and heterogeneity of firms in the creative industries

The small size of the typical firm in the creative industries⁴ together with their production of novel and thus highly differentiated products⁵ (Caves, 2002; UNCTAD, 2010; Bird et al., 2020)

³ According to Bakhshi, 2013: p. 21): "In 1994, for the first time, UK families spent more on leisure products and services than on food. By 2004 they were spending twice as much."

⁴ As will be elaborated in the next section, over 9 in 10 firms in the creative industries are microenterprises. Additionally, in the representative sample of creative industry firms in Austria gathered by Müller et al. (2008), 35% are sole traders and the median number of employees 3.

⁵ Bird et al. (2020) note: "Producing novel outputs and services is the essence of any enterprise in the creative industries."

suggest that the theory of monopolistic competition can yield insights about the functioning of firms in the creative industries. Monopolistic competition is a form of market structure arising from firms whose functioning combines monopolistic elements in the short run and – as firms adjust – competitive elements in the long run. Continuous innovation is the enabler of profit sustainability for firms competing in monopolistically competitive markets.

In the short run, first-mover creative firms innovate products for clients that – because they are novel – give them a temporary monopoly and thus the market power to charge a high price and appropriate high profits. However, this state cannot persist. In the long-run, because creative firms tend to be small and numerous, competitors produce more or less close substitute products, which – as they are brought to market – increase supply, which causes the first movers to suffer from falling demand, reduced market power and, hence, lower prices and falling profits. Worse, because new entrants will have been attracted by the initially high profits of the first mover, firms in such an industry tend to suffer from chronic over-capacity (i.e. typically, there are insufficient new orders to keep their resources – labour and capital – fully occupied).⁶ In the long run, therefore, the small firms in such an industry will just about cover costs, including just sufficient profit to stay in business but not to thrive and grow. Fixed costs of producing products in the creative industries tend to be very large, while marginal costs of production can be very low (e.g. the fixed costs of filming a new movie or making a computer game tend to be large, while the marginal costs of producing another copy of either a movie or a computer game are low) (Towse, 2011a; Towse 2011b).

This theory implies that, even more than firms in other sectors, creative firms are continuously confronted by competitive threats to their profitability. Conversely, if small creative firms are to thrive and grow then they must continuously innovate so that they are perpetually in the short term. In this case, continuous innovation means continuous renewal of monopoly positions and the market power needed to maintain high profitability. Moreover, given that cognitive ability cannot be collateralised for bank loans, high profitability and corresponding retained earnings are likely to be particularly important for firm growth in the creative sector. Accordingly, given that entrepreneurs do not set up businesses to be content with covering costs,⁷ the imperative to innovate is particularly strong in the creative sector.⁸ Consequently, policy makers concerned with firm growth and

⁶ This is an informal interpretation of the “excess capacity theorem”.

⁷ However, some findings do suggest that financial gains might not be the most important goal for all firms in the creative industries. The location choices of creative firms can be based on the lifestyle preferences of the entrepreneurs (i.e. locating firms in rural areas) (Chaston, 2008). Chaston (2008) finds that, in the small firms operating in the creative industries, the importance of other factors (i.e. self-expression, work-life balance) can be greater than that of financial gain. Looking at different subgroups, the author concludes that for some small creative industry firms financial performance is indeed important, while for other subgroups less so.

⁸ This is confirmed by data in Section 2.2 below. Compared to the rest of the economy, the firms in the creative industries are more engaged in all types of innovation: (1) product innovation (33% in creative industries compared to 22% in the rest of the economy); (2) new to the market innovation (14% compared to 8%); (3)

employment in the creative sector need to understand (i) the nature of innovation in the creative sector and (ii) what public policy can do to promote it.

An alternative business model to continuous innovation for a creative firm may be to do one big “radical” innovation and then sell-out to a larger company. This model may be particularly feasible for high-tech creative firms (e.g. software engineers). However, from the perspective of policy makers – especially at the regional or local level – takeover may effectively sever whatever links there are between the creative firm and the local economy. The local innovation ecosystem may suffer damage from the removal of a particularly innovative firm, while employment opportunities and potential tax revenue may be lost.

From a broader national perspective there are additional reasons for public policy to support firms in creative industries.

- From the perspective of consumer choice, monopoly pricing is not necessarily inefficient, especially when short-lived, because the number of differentiated products is increased.
- Creative sector R&D and innovations support and promote innovation in other sectors (Müller et al., 2008; Bakhshi, Breckon and Puttick, 2021).
- Monopoly profits for UK firms are partly levied on non-UK residents. Outputs from the UK’s creative sector are widely exported – either to overseas markets or by being consumed by visitors to the UK – so that at least part of the monopoly profits accruing to UK producers comes from foreigners, and thus, via tax revenue, accrues to the UK government and UK households.

2. Overview of the creative industries in the UK

Creative industries are considered to be “at the heart of the nation’s competitive advantage” (HM Government, 2018), “a motor of growth in local economies across the UK” (Mateos-Garcia et al., 2018), and “a national strength” (Gkypali and Roper, 2018) of the United Kingdom. The contribution of the creative industries to the UK economy was £111.7 billion in 2018, or 5.8% of total UK value added (Bird et al., 2020). Additionally, the creative industries are a fast-growing segment of the economy (DCMS, 2020a).

In 2021, the creative industries in the United Kingdom employed over 1,300,000 people (Office for National Statistics, 2022). The largest employer within the creative industries in 2021 was the *IT, software and computer services* sector that accounted for 44% of the total employment in the creative industries. The *Film, TV, radio, photography* industry was the second largest employer in the same year (13.3% of total creative industries employment),

process innovation (21% compared to 16%); (4) organisation innovation (52% compared to 44%); and, finally, (5) ongoing innovation activities (32% compared to 20%) (Gkypali and Roper, 2018).

followed by *Advertising and marketing* (12.1% of total creative industries employment). In terms of turnover, in 2021, the same industries were the most significant ones – *IT, software, computer services* industry makes up 41% of the total turnover in the creative industries; *Film, TV, Radio, Photography* 20.7%, and *Advertising and marketing* 18.0% (Office for National Statistics, 2022).

In 2021, there were 286,400 firms operating in the creative industries sector in the United Kingdom. Most firms in the creative industries are classified as microenterprises, as 94% of all firms employed fewer than 10 employees in the same year. However, most employment in the creative industries is based in medium-sized and large companies (i.e. companies with over 50 employees), accounting for 46% of total creative industry employment, while microenterprises account for 35% and small companies for 19% of all employment in the creative industries.

Dent et al. (2020) discuss diversity, precarity and spatiality of the creative industries at a national level. The national figures show that within *Advertising and marketing* the self-employed comprised 21% of the sector, rising to 55% in *Design and designer fashion* and 72% in *Music and performing arts*. In comparison, in the economy as a whole the self-employed comprise about 15% of total employment.

Labour productivity for firms in the creative industries tends to increase with firm size.⁹ Microenterprises were the least productive of the observed categories, as can be seen from Table 1, with overall labour productivity of £128,385 per employee in 2021. The most productive sector within the microenterprises size bracket was the *Film, TV, radio and photography* sector with labour productivity of £211,211. Overall labour productivity for all sectors combined for the firms which employ between 10 – 49 employees was £154,618, while the most productive sector for this group of firms was *Film, TV, radio and photography* with labour productivity of £270,245 in 2021. Finally, firms employing more than 50 employees were the most productive group. The overall labour productivity for this group was £262,211, while the most productive sector within this size bracket in 2021 was *Crafts* with labour productivity of £441,183.

⁹ Labour productivity in Table 1 is calculated as turnover divided by the number of employees. It is thus average sales revenue per employee. As such, this measure of productivity does not account for the contribution of non-labour inputs to the value of output.

TABLE 1. COUNT, EMPLOYMENT, TURNOVER AND LABOUR PRODUCTIVITY OF FIRMS IN THE CREATIVE INDUSTRIES, GROUPED BY EMPLOYMENT BAND (2021)

0-9				
Industry	Count	Employment	Turnover (£)	Labour productivity
Advertising and Marketing	23,670	45,327	6,906,075,000	152,361
Film TV Radio Photography	33,565	54,336	11,476,347,000	211,211
IT software computer services	128,705	209,776	21,854,397,000	104,180
Architecture	15,495	33,617	3,248,634,000	96,637
Crafts	1,260	2,929	375,186,000	128,094
Publishing	9,685	19,691	2,455,874,000	124,721
Music Performing Arts	34,405	58,553	9,107,050,000	155,535
Museums Galleries	730	2,183	146,556,000	67,135
Design	22,850	40,078	4,320,377,000	107,799
Total	270,365	466,490	59,890,496,000	128,385
10 – 49				
Industry	Count	Employment	Turnover (£)	Labour productivity
Advertising and Marketing	1,845	36,183	6,604,500,000	182,530
Film TV Radio Photography	1,165	21,693	5,862,429,000	270,245
IT software computer services	5,730	116,440	17,670,059,000	151,752
Architecture	1,160	21,659	1,880,843,000	86,839
Crafts	75	1,365	198,933,000	145,739
Publishing	860	17,282	2,163,529,000	125,190
Music Performing Arts	1,130	20,528	2,656,274,000	129,398
Museums Galleries	195	4,218	164,966,000	39,110
Design	980	17,570	2,525,757,000	143,754
Total	13,140	256,938	39,727,290,000	154,618
50 +				
Industry	Count	Employment	Turnover (£)	Labour productivity
Advertising and Marketing	430	80,636	33,531,248,000	415,835
Film TV Radio Photography	280	101,757	36,820,958,000	361,852
IT software computer services	1,315	263,458	66,947,875,000	254,112
Architecture	215	26,026	3,287,660,000	126,322
Crafts	10	1,069	471,625,000	441,183
Publishing	240	76,668	14,279,112,000	186,246
Music Performing Arts	240	39,432	4,268,503,000	108,250

Museums Galleries	95	21,986	676,308,000	30,761
Design	70	5,938	1,493,139,000	251,455
Total	2,895	616,970	161,776,428,000	262,211

Source: Office for National Statistics (2022), Labour productivity – own calculations

2.1 Overview of the creative industries in West Yorkshire

The latest DCMS (2022) data shows that the employment in the creative industries in the Yorkshire and Humber region is 79,268. However, other available sources point to – while not fully documenting – huge discrepancies in the size of the creative industries in the sub region of West Yorkshire. Careers Yorkshire and Humber (2018) report that there were 16,000 people working in the creative and digital industries in West Yorkshire in 2016. This figure significantly differs from the data on creative employment reported by Swords and Townsend (2019), which suggests 37,440 were employed in the West Yorkshire in 2017.¹⁰ Additionally, Gardiner and Sunley (2020) report that total creative sector jobs for the Leeds City Region alone (LEP) amounted to just under 80,000 in 2018.

Swords and Townsend (2019) provide some indication of the relative importance of different creative industries within West Yorkshire, by weighting the subsectors in West Yorkshire as an Employment Location Quotient in comparison to national data, and came to the following general findings:

- Bradford is very overrepresented in the *Publishing* sector, slightly overrepresented in *Design*, but underrepresented in all the other subsectors.
- Leeds is overrepresented in *Advertising and marketing*, *Museums and galleries*, and *IT and software*, and is underrepresented in the other sectors.
- Calderdale and Kirklees is overrepresented in *Design* and *Museums and galleries*, and to a small extent *Architecture*. It is underrepresented in *Music*, *Publishing*, *Film and TV*.

For each local authority in West Yorkshire, Table 2 displays eight of the nine creative industry group according to (i) its employment intensity in the local authority compared to its employment intensity in the UK as a whole and (ii) its productivity across the UK compared to the productivity of UK creative industries as a whole. (The *Crafts* group is excluded for reasons explained in the Table key.) For employment, under (over) average intensity means that the proportion of the local workforce employed in some creative industry is less (more) than the proportion of the national workforce employed in that industry. Productivity is calculated as turnover (sales) per employee, and below (above) signifies that in the UK as a whole some

¹⁰ The split of the employment according to the NUTS 3 Regions in 2017 was: Leeds (21,865), Calderdale and Kirklees (5,840), Bradford (7,275) and Wakefield (2,460) (Swords and Townsend, 2019).

particular creative industry is below (above) the national average for creative industries as a whole. For each local authorities matrix, the most desirable cell is the bottom right – i.e. creative industries with relatively high local employment intensity and above national average productivity.

TABLE 2. DISTRIBUTION OF THE CREATIVE INDUSTRIES BY LOCATION, INTENSITY AND PRODUCTIVITY

		Leeds		Bradford		Calderdale and Kirklees		Wakefield	
		<i>Productivity</i>		<i>Productivity</i>		<i>Productivity</i>		<i>Productivity</i>	
		<i>Below UK creative sector average</i>	<i>Above UK creative sector average</i>	<i>Below UK creative sector average</i>	<i>Above UK creative sector average</i>	<i>Below UK creative sector average</i>	<i>Above UK creative sector average</i>	<i>Below UK creative sector average</i>	<i>Above UK creative sector average</i>
<i>Employment</i>	<i>Under average intensity</i>	Architecture Music Publishing Design	Film	Architecture IT Museums Music	Advertising Film	Music Publishing	Advertising Film	Music Publishing	Advertising Film
	<i>Over average intensity</i>	IT Museums	Advertising	Design Publishing		Architecture Design IT Museums		Architecture Design IT Museums	

* Key: Advertising and Marketing (Advertising); Architecture (Architecture); Design: product, graphic and fashion design (Design); Film, TV, video, radio and photography (Film); IT, software and computer services (IT); Museums, galleries and libraries (Museums); Music, performing and visual arts (Music); and Publishing (Publishing). Crafts are omitted. Data on Crafts are not reliable, as the industry is represented only by Jewellery production, which across West Yorkshire accounted for 45 jobs (FTE). Source: Own calculations from (i) Location Quotients calculated at the Nuts 2013 Level 3 provided by the authors of Swords and Townsend (2019) and (ii) data provided by the Office of National Statistics (DAS AH984) on employment and turnover for the nine creative industries.

This allocation of creative industries is indicative. As we explain elsewhere in this Report, adequate data on creative industries at local authority – or even sub-regional – level is difficult to come by, so that the employment intensity comparisons use 2013 data and the productivity comparisons use 2021 data. Nonetheless, it is apparent from Table 2 that, in comparison to the UK as a whole, the nine creative industries are typically underrepresented in the employment across all four local authority areas (19 top row entries from a total of 32 entries). Moreover, only in one local authority (Leeds) does even a single above average productivity creative industry account for a proportion of employment greater than the national average (Advertising). Otherwise, Quadrant 4 (bottom right) in each local authority matrix is empty. The remaining 12 creative industries (bottom left) are over represented in terms of employment, but all of these have below average productivity.

A qualification can be made in the case of the IT industry, which is of strategic importance throughout the creative industries (as has been noted in Section 1 above). IT is slightly over represented in the employment of three local authority areas (by 15% in Leeds, 1% in Calderdale and Kirklees, and by 7% in Wakefield) and has productivity only 9.5% lower than the national average for creative industries.

Overall, however, Table 2 suggests that West Yorkshire lags the national average in its intensity of creative industry employment, especially in the higher productivity sectors.

2.2 R&D and innovation within the creative industries

HM Government (2018, p. 36) in the *Creative Industries Sector Deal* emphasises that “the success of the creative industries is critically dependent on their ongoing investment in R&D”. Firms in the creative industries engage both in R&D and innovation more widely (Gkypali and Roper, 2018; Bird et al., 2020). Moreover, R&D and innovation tend to be even more widespread in the creative industries than usually reported (Bakhshi, Breckon and Puttick, 2021a; Bakhshi, Breckon and Puttick, 2021b) due to the definitions of R&D prevalently employed.¹¹ Although the latest edition of the *Frascati Manual* does recognise that R&D can occur in arts, humanities and social sciences,¹² this did not translate directly to definitions employed around the world for data collection and/or purposes of innovation policies (Bakhshi, Breckon and Puttick, 2021a; Bakhshi, Breckon and Puttick, 2021b). Bakhshi and Lomas (2017, p. 1) claim that “official definitions of Research & Development (R&D) used by

¹¹ The differences for some of the creative industries sectors are astonishing. For example, in Bird et al. (2020), 54% of firms in Crafts report that they have conducted R&D under the *Frascati Manual's* definition of R&D, while none of the firms report conducting R&D under the tax definition.

¹² *OECD's Frascati Manual – Guidelines for collecting and reporting data on research and experimental development* definition is commonly used to define research and development (R&D). According to the *Frascati Manual*, R&D is “creative and systematic work undertaken to in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge” (OECD, 2015, p. 28). Five criteria must be satisfied for an activity to be R&D activity: (i) novel, (ii) creative, (iii) uncertain, (iv) systematic, and (v) transferable and/or reproducible (OECD, 2015).

governments worldwide exclude the arts, humanities and social sciences” (AHSS). Definitions employed for the purposes of fiscal policy in the United Kingdom by organisations such as the Department for Business, Energy and Industrial Strategy, HM Revenue and Customs and HM Treasury do not recognise R&D in arts, humanities and social sciences, and Bakhshi, Breckon and Puttick (2021a, p. 6) warn that “the UK’s application of the definition of the R&D means that UK tax policy does not recognise the role that AHSS R&D plays in delivering innovation, productivity and growth, and the role that tax relief can play in incentivising R&D which has its origins in the AHSS disciplines”. In the survey conducted by Bird et al. (2020) among creative industries firms in the United Kingdom, they find that 55% of firms report that they have conducted R&D when the *Frascati Manual’s* definition is used, while only 14% when the definition used for tax purposes is utilised.

Protogerou et al. (2016), in their study of young firms across ten European countries, find that firms in the creative industries perform better in comparison to firms in non-creative industries regarding product innovation and R&D intensity. Gkypali and Roper (2018) compared the performance of manufacturing, services and the creative industries firms using data from the UK Innovation Survey 2012-2014. While their analysis has shed a light on innovation in the creative industries, it is important to note that only firms with ten or more employees are included in the Survey (Gkypali and Roper, 2018). Gkypali and Roper (2018) show that 35% of the firms in creative industries reported conducting in house R&D, compared to 38% of the firms in manufacturing industry and 16% in other services. Furthermore, almost a third of the firms in the creative industries introduced innovations to the market, compared to 29% of the firms in manufacturing industry and one fifth of the firms in services. Compared to the rest of the economy, the firms in the creative industries are more engaged in all types of innovation: (1) product innovation (33% in creative industries compared to 22% in the rest of the economy); (2) new to the market innovation (14% compared to 8%); (3) process innovation (21% compared to 16%); (4) organisation innovation (52% compared to 44%); and, finally, (5) ongoing innovation activities (32% compared to 20%). When looking at different segments within the creative industries, firms in the IT, software and computer services segment outperform firms in other creative industries segments in terms of product innovation, organisation innovation and ongoing innovation activities (Gkypali and Roper, 2018).

Bird et al. (2020) conducted a survey among 625 firms in the creative industries in the United Kingdom in 2020 to explore innovation in the creative industries. They find that: (i) 51% of the firms in the creative industries introduced new or significantly improved products or services within the previous three years, (ii) 29% introduced new or significantly improved products or services that are new to the market, (iii) 21% new or significantly improved products or services that are new to business, and (iv) 31% new or significantly improved organisational business structures or processes. Out of all the creative industries sectors, *IT, software and*

computer services had the largest percentage of firms introducing new or significantly improved products or services, while the *Publishing* sector had the largest percentage of firms introducing new or improved organisation or business structures or processes. Overall, 71% of firms in the creative industries have used IP in the year before the questionnaire was conducted. The most commonly used forms of IP were non-disclosure and confidentiality agreements, while the least commonly used are patents and registered designs. As noted above, more than half of the firms in the creative industries perform R&D under the wider *Frascati Manual* definition, while a substantially smaller percentage (14%) conducts R&D under the definition used for R&D tax credits purposes in the UK. However, Bird et al. (2020, p. 10) note: “Overall, the results suggest that enterprises in the creative industries do perform R&D but tend to spend relatively little on the activity and tend not to have a specific R&D budget.” Bird et al. (2020) support this claim by the finding that median spending on R&D amongst firms that perform R&D is merely £20,000, while the mean R&D investments among the firms that perform R&D is £57,000. The highest mean R&D spending was among the firms in *IT, software and computer services* sector. When it comes to different types of R&D activities undertaken, the largest percentage of firms in the creative industries engages in applied research, followed by experimental development, and then basic research.¹³

According to the data from the Office for National Statistics (2022) reported in Table 2 below, most R&D in the creative industries is performed by *IT, software and computer services*. Important to note are increases in R&D conducted by *Advertising and marketing*, and *Film, TV, video, radio and photography*.

TABLE 3. EXPENDITURE ON R&D PERFORMED BY THE FIRMS IN THE CREATIVE INDUSTRIES (MILLION POUNDS), 2009 - 2018

Industry description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Advertising and marketing	11	12	7	12	16	24	28	42	204	320
Architecture	4	5	4	4	4	10	9	13	17	25
Crafts	1	1	1	1	1	1	1	1	2	2
Design: product, graphic and fashion design	1	2	3	4	8	10	7	6	8	11
Film, TV, video, radio and photography	27	20	24	18	34	169	176	555

¹³ The OECD’s *Frascati Manual* distinguishes between three types of activities for R&D: (i) basic research, (ii) applied research, and (iii) experimental development. Basic research is “experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view”. Applied research is “original investigation undertaken in order to acquire new knowledge”. Experimental development is “systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products or processes or to improving existing products or processes” (OECD, 2015, p. 29).

IT, software and computer services	1,073	939	1,378	1,445	1,446	1,448	1,477	1,668	1,798	1,875
Publishing	26	36	19	30	48	49	48	49	80	78
Museums, galleries and libraries	-	1	1	-	-	-	-	-
Music, performing and visual arts	2	7	5	2	5	2	4	4	10	8
TOTAL	1,146	1,022	1,442	1,516	1,561	1,713	1,749	2,321	2,659	2,874

Source: ONS (2020)

3. R&D tax credits – Overview of the policy and effectiveness of UK policy

The justification for innovation policies, according to economic theory, comes from the existence of market failures (Bloom et al., 2019; Hall, 2019). The most important market failure addressed by innovation policies are knowledge spillovers, whereby knowledge created by one firm eventually benefits other firms (via, for example, imitation and labour mobility). The existence of spillovers points to the existence of a difference between private and social rates of return on R&D investments, where the social benefits tend to be greater than the private benefits (as private knowledge disseminates more and more widely and so becomes increasingly social). Consistent with this theory, the literature that quantifies the discrepancies between private and social rates of return suggests that social rates of return are substantially larger than private rates of return on R&D investments. Moreover, failures in other markets may also serve as justification for innovation policies, e.g. the financial constraints on R&D that firms face. However, failures in other markets may not be a sufficient reason for innovation policies, as governments may lack sufficient information about the quality of projects, which may prevent governments from administering appropriate policies (Bloom et al., 2019). Additionally, another argument for innovation policies is that they may drive research in the areas of public goods (e.g. health), which can improve the provision of those services (Hall, 2019).

The most frequently used innovation policies are: (1) R&D tax credits; (2) intellectual property (IP) boxes; (3) subsidies and grants; (4) supply of human capital; (5) intellectual property measures; (6) product market competition and international trade policies; (7) policies that tend to generate agglomeration effects; and (8) mission-oriented policies (Bloom et al., 2019; Hall, 2019).

R&D tax credits and IP boxes both represent tax incentives for innovation. R&D tax credits are deductions in taxes, which are based on the amount of R&D investments made by firms. In this way, R&D tax credits are targeted towards innovation inputs. R&D tax credits are praised for their ease of administration and the lack of interference of policy makers in the innovation process (What Works Centre for Local Economic Growth, 2015a; Dechezlepretre et al., 2016).

However, R&D tax credits are also criticised for not addressing the source of market failures related to innovation, as well as exhibiting preference for activities delivering short-run profits (Czarnitzki et al., 2011). Hall and Van Reenen (2000), in their overview of different studies on the impact of R&D tax credits, conclude that the impact of R&D tax credits is greater as time passes.

IP boxes, among which the most popular ones are patent boxes, are deductions on tax rates for the income that comes from intellectual property. IP boxes are targeted at innovation outputs (Hall, 2019). Yet the extent of both tax incentives is limited, which is important to recognise in the context of the creative industries: R&D tax credits are focused only on R&D investments; while IP boxes are focused only on innovations that fall under intellectual protection (Hall, 2019). Moreover, as we have indicated above (Sections 1, 1.1 and 2.2) much of the R&D conducted by creative industries is not recognised as such for tax purposes, while the short time-scale of profit opportunities for creative sector innovation means that IP protection may be less important than first-mover advantage and confidentiality agreements.

Various evidence shows that R&D tax credits are effective in increasing private R&D investments (Hall, 2019; Bloom et al., 2019). The studies examining the link between R&D tax credits and innovation (i.e. patents, self-reported innovation activity, etc.) find positive impact of R&D tax credits on innovation (Czarnitzki et al., 2011; Cappelen et al., 2012; Foreman-Peck, 2013; Works Centre for Local Economic Growth, 2015a; Dechezlepretre et al., 2016). However, evidence of the link between R&D tax credits and different economic outcomes such as employment and productivity is inconclusive and mixed (Czarnitzki et al., 2011; Works Centre for Local Economic Growth, 2015a).

Castellacci and Lie (2015) examine the importance of industries and sectors due to the differences in innovation strategies and outcomes across sectors, as well as sector-specific factors. The main result of their analysis is that the impact of R&D tax credits is on average smaller for high-tech industries. This particularly holds true for countries with incremental schemes in place. Another important result suggests that R&D tax credits produce larger additionalities in the case of SMEs, firms operating in service sectors, and firms operating in low-tech sectors in countries with an incremental scheme in place (Castellacci and Lie, 2015).

Another commonly applied innovation policy is R&D subsidy, where policy makers are directly involved in choosing between submitted proposals (What Works Centre for Local Economic Growth, 2015a; Dechezlepretre et al., 2016). The projects that bring the largest returns for the individual firm are commonly supported by R&D tax credits, whereas those with the largest social returns receive subsidies (Hall and Van Reenen, 2000; What Works Centre for Local Economic Growth, 2015a). Policy inefficiencies are lower for R&D tax credits compared to subsidies (Castellacci and Lie, 2015). The effect of R&D subsidies on private R&D is estimated to be small, but positive (Dimos and Pugh, 2016; Dimos et al., 2022). There is a

certain degree of consistency in the evidence that the impact of grants, loans and subsidies on R&D spending, innovation and economic outcomes are more likely to be positive for SMEs. Also, studies that assess the impact on exports have found positive effects. Furthermore, the evidence on whether public support in terms of grants, loans and subsidies to R&D results in “crowding in” or “crowding out” effect is inconclusive. The studies suggest that the effect of programmes weakens over the time. Supporting collaboration (i.e. public-private collaboration) seems to be more effective than supporting private firms alone, and this holds true when considering R&D investment, innovation or economic outcomes. Designing subsidy programmes that target specific production sectors appears to be less effective in terms of their effect on R&D investment and innovation outcomes than having sector-neutral programmes (What Works Centre for Local Economic Growth, 2015b).

When comparing R&D tax credits and subsidies, it is important to note that the policies become effective in different time periods. While the impact of R&D tax credits on R&D expenditures is usually visible already in the short run, the impact of subsidies is generally observable only in the medium to long run (Becker, 2013). Dimos et al. (2022) assess the relative effectiveness of R&D tax credits and R&D subsidies using comparative meta-regression analysis. The authors show that both innovation policies tend to be similarly effective: \$1 of either R&D tax credits or R&D subsidies leads to 7.5 cents of additional spending on private R&D. Additionally, the authors show that R&D subsidies become more effective over time (Dimos et al., 2022)

3.1 R&D tax incentives in the United Kingdom

Research and development (R&D) tax reliefs in the United Kingdom are a volume-based scheme focused on developments in science and technology.¹⁴ There are several criteria that must be fulfilled to qualify for R&D tax relief: (i) the project must be related to the firm’s operations – either current or the ones related to the R&D project; (ii) the firm must explain how the project

- “looked for an advancement in science and technology,
- had to overcome uncertainty,
- tried to overcome this uncertainty, and
- could not easily be worked out by a professional in the field” (HM Government, 2020);

and (iii) the project must be related to development or improvement of a new product, service or a process (HM Government, 2020).¹⁵

¹⁴ The rules specifically indicate that the work cannot be “an advance within social science – like economics – or theoretical field – such as pure maths” (HM Government, 2020).

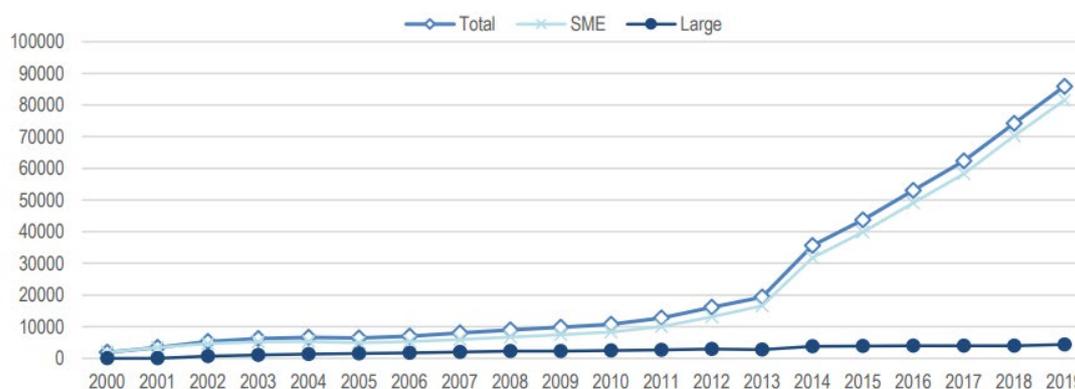
¹⁵ Following a consultation process in first half of 2021, the Government announced the following changes to the scheme in the Autumn Budget 2021 in order to: “support modern research methods by expanding qualifying

There are two types of R&D tax reliefs recognised in the United Kingdom:

1. *Small and Medium Sized Enterprises (SME) R&D Relief*, which is aimed at SMEs with less than 500 staff, and turnover of under 100 million Euros or balance sheet total under 86 million Euros;¹⁶
2. *Research and Development Expenditure Credit*, which is aimed at large firms, who are not eligible to make claims under SME R&D Relief scheme, and “small and medium-sized enterprises (SMEs) who have been subcontracted to do R&D work by a large company or who have received a grant or subsidy for their R&D project” (HM Revenue and Customs, 2021).¹⁷

Figure 1 shows the number of R&D tax relief recipients in the UK from 2000 – 2019. Since 2013, the increase has been primarily driven by increases in the number of recipients among small and medium enterprises (SMEs), who accounted for 90% of the support received. OECD (2021, p.3) indicated that the increases are related to: “an increase in SME allowance rates (2012-13, 2015-16) and the payable credit rate (2014-15), the introduction of a new payable tax credit for large companies in 2013 as well as the inclusion of additional claims from 2014 onwards”.

FIGURE 1. NUMBER OF R&D TAX RELIEF RECIPIENTS IN THE UK, 2000 - 2019



Note: Figures refer to the Corporate R&D Tax Credit and RDEC Schemes and correspond to claims rather than recipients. Break in-series in 2014. The figures for 2018 and 2019 are provisional.

Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rdtax>, December 2021.

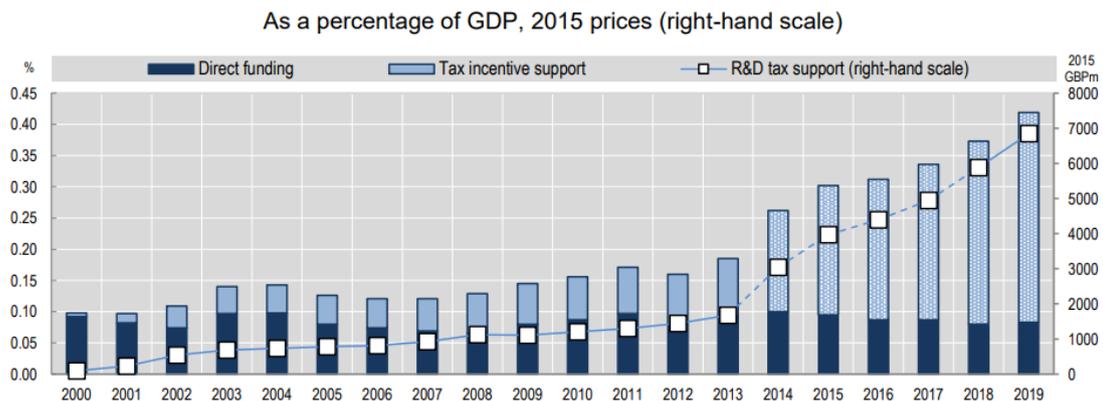
expenditure to include data and cloud costs”; and “more effectively capture the benefits of R&D funded by the reliefs through refocusing support towards innovation in the UK” (HM Treasury, 2021, p. 2).

¹⁶ More information on *SME R&D relief scheme*: <https://www.gov.uk/guidance/corporation-tax-research-and-development-tax-relief-for-small-and-medium-sized-enterprises>

¹⁷ More information on *Research and Development Expenditure Credit*: <https://www.gov.uk/guidance/corporation-tax-research-and-development-tax-relief-for-large-companies>.

Overall, the business support for R&D displayed in Figure 2 shows the split between direct funding for business R&D and tax incentive support. The importance of tax incentive support increased significantly over the period 2000–2019 – almost sevenfold as a percentage of GDP – so that tax incentives made up 80% of government support for business R&D in 2019.

FIGURE 2. DIRECT FUNDING OF BUSINESS R&D AND TAX INCENTIVES FOR R&D IN THE UNITED KINGDOM, 2000 - 2019



Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rntax>, December 2021. Break-in-series in 2014.

The Bird et al. (2020) survey results show that 65% of firms in the creative industries agree that better access to public support schemes would encourage R&D and innovation. Additionally, they show that whereas 55% of firms in the creative industries were aware of R&D tax relief schemes in the United Kingdom, only 9% of firms used the scheme. It particularly stands out that none of the firms in *Crafts; Film, TV, video, radio and photography; and Museum, galleries and libraries* sectors used the R&D tax relief scheme; while the largest uptake was among firms in *IT, software and computer services* sector (17% of the firms used the tax reliefs) (Bird et al., 2020). Bakhshi, Breckon and Puttick (2021b, p. 139) note: “As AHSS [Arts, Humanities, Social Sciences] R&D is explicitly excluded from the definition of R&D used by the UK tax authorities for tax relief purposes, we were surprised to learn that the businesses we spoke with were successfully claiming against it.”

4. Other public support for creative industries at the level of the UK and in West Yorkshire

In this Section, we detail additional sources of public support for the creative sector.

1. *Creative industry tax reliefs for corporation tax*

Creative industry tax reliefs for corporation tax constitutes a broader programme offering eight types of tax reliefs in the following areas: films, high-end television, children’s television, animation television, video games, theatrical productions, orchestral concerts, and museum and gallery exhibitions. (For more detail on each of these, see Appendix 3.) Qualifying criteria for this type of the creative industries support for companies are the following:

- Company has to be liable for corporation tax;
- Direct involvement in production and development;¹⁸
- Involvement in decision-making;
- Direct involvement in negotiation, contracting and payment for rights, goods and services;
- Films, animation, television programmes, and video games must have certifications of being British.

2. *Support available through the Creative Industries Sector Deal*

a. Audience of the Future Challenge

Audience of the Future Challenge was a funding stream made available to the creative industries through the *Industrial Strategy – Building a Britain Fit for the Future* 2017. The aim of the project was support the immersive tech sector.¹⁹

b. The Creative Industries Clusters Programme

The Creative Industries Clusters Programme is another funding stream made available to creative industries through *Industrial Strategy – Building a Britain Fit for the Future* 2017. The aim of the investment is to “drive innovation and skills, and create products and experiences that can be marketed around the world” (Creative Industries Clusters Programme, n.d.).²⁰

¹⁸ Companies involved in the production of films, programmes or games must have responsibilities from the start of the pre-production until the completion of the product. Companies involved in theatrical productions, orchestral concerts or exhibitions, must be involved in producing, running and closing the production (HM Revenue and Customs, 2018).

¹⁹ More information about the Audience of the Future Challenge: <https://www.immerseuk.org/audience-of-the-future/about-audience-of-the-future/>

²⁰ More information about the Creative Industries Clusters Programmes: <https://creativeindustriescusters.com/#about>

Two of the Creative Industries Clusters Programmes are based in the Yorkshire and Humber region:

1. *Future Fashion Factory* – aimed to “explore and develop new digital and advanced textile technologies to boost the design of high value creative products, helping designers and manufacturers work more collaboratively” (Creative Industries Clusters Programme, n.d.). The Cluster lead is the School of Design at the University of Leeds.
2. *XR Stories* – aimed to “establish the Yorkshire and Humber screen industries cluster as the UK centre of excellence in immersive and interactive digital storytelling” (Creative Industries Clusters Programme, n.d.). The Cluster lead is the University of York.

5. Policy recommendations

Continuous innovation is perhaps more essential for (Section 1.1) and thus characteristic of (Section 2.2) the creative sector than any other. Accordingly, firms in the creative industries need a wide range of support activities and infrastructure (i) to enable innovation for their own sustainable development and (ii) to enable them to contribute to innovation elsewhere in the economy (Sections 1.1 and 3).

1. R&D tax credits are the increasingly dominant means of public support for firms' R&D (Section 3.1., Figure 2). Yet relatively few creative firms in the creative sector are able to take advantage of tax credit support (Section 3.1). This suggests two possibilities for policy development at the regional level.
 - a. *Subsidise, or use public procurement of existing sources of private-sector advice, to enable take up of R&D tax credits.* Information provision, especially if supported by low-cost advice on how to claim tax credits, is likely to be particularly relevant for the sole traders, micro and small firms that are disproportionately represented in the creative sector (Section 2).
 - b. *Lobby for changes in the eligibility criteria for R&D tax credits* to better fit the nature of creative sector R&D (Sections 2.2. and 3.1). The *Frascati Manual* definition might be a good place to start.
2. Section 4 details a range of public policy support measures other than R&D tax credits. To ensure maximum take up, *information and practical support to ensure take up are complementary means of delivering effective public financial support.* Regional and local authorities can provide information about, and assist firms to access, all the available support policies. As argued in Point 1a above, this is particularly important for established sole traders, micro and small firms in the creative sector, and may be even more important for assisting potential start-ups and attracting inwardly mobile creative firms. Many such firms are likely to be unaware of the range of available support or else put off by the perceived difficulty and expense of applying for support.
3. Section 1 has demonstrated that creative industries are defined by their relatively intensive use of creative labour. In the longer term, therefore, *regional and local authorities need to work closely with schools, FE Colleges and Universities to promote the supply of creative labour*, which is the main requirement for competitive creative industries.²¹ Close collaboration with local universities is particularly important in this regard, for two reasons.

²¹ According to the Heckscher-Ohlin principle, countries and regions tend to specialise in and thus export goods and services whose production is intensive in the most available factor(s) (e.g. labour and capital).

- a. Multiple data sources suggest that graduates comprise a large part of creative industry employment, thereby emphasising the role of Universities in the region. Incorporation of business/enterprise/entrepreneurship as a pathway on degrees feeding the creative industries could strengthen this sector. As part of this, a flow of information backed by practical support could encourage creative start-ups by graduates, contribute to graduate retention, and ease the problem of precarity (Section 2).
 - b. Universities can offer a range of support to creative sector firms in addition to increasing business awareness amongst their students, including cutting edge R&D as a source of innovation (Section 2.2).
4. Precarity is an issue in the creative sector (Section 2). The reliance on freelancers tends to be greater than in other sectors in of the economy, which was of particular importance during the COVID-19 pandemic (Easton and Beckett, 2021). Policymaking needs to take this into consideration.
5. There may be scope for regional and local authorities to encourage creative sector firms to collaborate with both public authorities and educational establishments by the use of *intelligent procurement* policies (e.g. to incentivise local firms to engage with local universities). Universities may also respond to incentives to engage more effectively with regional agendas.
6. Innovation includes marketing innovation. *Support marketing strategies* to help creative sector firms maintain existing markets and enter new markets (including export markets). Collaboration with Chambers of Commerce may be particularly important in this regard.
7. West Yorkshire has several strong industries: Advertising and Marketing and Film, TV, Radio and Photography (Section 2.1). In addition, as indicated in Section 1, IT, software and computer services is of strategic significance. *Build on the strength of these sectors*.
8. Policy making in this area could be substantially improved were *data to be regularly supplied by the ONS at the 4-digit industry level for each authority*, subject to safeguarding business confidentiality. Data availability proved to be the main challenge while writing this report, despite us consulting a range of experts in the field. Data availability at the level of local authorities is sparse or non-existent and this is an obstacle to evidence-based policy.

Appendix 3 provides details of several completed and ongoing projects conducted at the regional level (funded by the EU) to support and develop creative industries. These provide plenty of knowledge, case studies and contacts to help develop interventions at a regional/local authority level.

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Appendix 1. Creative industries SIC codes and definitions

SIC07 Code	SIC07 Description	Creative industries sector
3212	Manufacture of jewellery and related articles	Crafts
5811	Book publishing	Publishing
5812	Publishing of directories and mailing lists	Publishing
5813	Publishing of newspapers	Publishing
5814	Publishing of journals and periodicals	Publishing
5819	Other publishing activities	Publishing
5821	Publishing of computer games	IT, software and computer services
5829	Other software publishing	IT, software and computer services
5911	Motion picture, video and television programme production activities	Film, TV, video, radio and photography
5912	Motion picture, video and television programme post-production activities	Film, TV, video, radio and photography
5913	Motion picture, video and television programme distribution activities	Film, TV, video, radio and photography
5914	Motion picture projection activities	Film, TV, video, radio and photography
5920	Sound recording and music publishing activities	Music, performing and visual arts
6010	Radio broadcasting	Film, TV, video, radio and photography
6020	Television programming and broadcasting activities	Film, TV, video, radio and photography
6201	Computer programming activities	IT, software and computer services
6202	Computer consultancy activities	IT, software and computer services
7021	Public relations and communication activities	Advertising and marketing
7111	Architectural activities	Architecture
7311	Advertising agencies	Advertising and marketing
7312	Media representation	Advertising and marketing
7410	Specialised design activities	Design and designer fashion
7420	Photographic activities	Film, TV, video, radio and photography
7430	Translation and interpretation activities	Publishing

8552	Cultural education	Music, performing and visual arts
9001	Performing arts	Music, performing and visual arts
9002	Support activities to performing arts	Music, performing and visual arts
9003	Artistic creation	Music, performing and visual arts
9004	Operation of arts facilities	Music, performing and visual arts
9101	Library and archive activities	Museums, galleries and libraries
9102	Museum activities	Museums, galleries and libraries

Source: DCMS (2021)

Appendix 2. Creative industry tax reliefs for corporation tax

a) Film Tax Relief

The deduction for corporation tax is the lower of either: (i) 80% of total costs of pre-production, principal photography and post-production, or (ii) the amount of UK costs on pre-production, principal photography and post-production. Additionally, if a company is a loss-making one, part or all of the loss can be surrendered for a payable tax credit.

b) Animation Tax Relief

Offers the same benefits as Film Tax Relief.

c) High-end Television Tax Relief

Offers the same benefits as Film Tax Relief.

d) Video Games Tax Reliefs

The deduction for corporation tax is the lower of either: (i) 80% of total expenditure on designing, producing and testing the game; or (ii) the amount of expenditure within the scope of designing, producing and testing the games on goods or services that are provided from the UK and EEA. Additionally, if a company is a loss-making one, part or all of the loss can be surrendered for a payable tax credit (HM Revenue and Customs, 2022).

e) Children's Television Tax Relief

Offers the same benefits as Film Tax Relief (HM Revenue and Customs, 2022).

f) Theatre Tax Relief

The deduction for corporation tax is the lower of either: (i) 80% of total expenditure on producing and closing the theatrical production; or (ii) the amount of expenditure on goods and services that are used for producing and closing the theatrical production. Additionally, if a company is a loss-making one, part or all of the loss can be surrendered for a payable tax credit (HM Revenue and Customs, 2022).

g) Orchestra Tax Relief

The deduction for corporation tax is the lower of either: (i) 80% of total expenditure on producing the production; or (ii) the amount of expenditure on goods and services that are used for producing the production. Additionally, if a company is a loss-making one, part or all of the loss can be surrendered for a payable tax credit (HM Revenue and Customs, 2022).

h) Museums and Galleries Exhibition Tax Relief

The deduction for corporation tax is the lower of either: (i) 80% of total expenditure on producing the exhibition or uninstalling and closing the exhibition if it's open for one year or less; or (ii) the amount of expenditure on goods and services that are used for producing the exhibition or uninstalling and closing the exhibition if it's open for one year or less. Additionally, if a company is a loss-making one, part or all of the loss can be surrendered for a payable tax credit (HM Revenue and Customs, 2022).

Appendix 3. Additional creative industries resources

The European Union has funded multiple projects for the creative industries. The outputs from these projects are usually freely available for download from the projects' websites and might be useful additional resource to explore.

Creative Europe: <https://culture.ec.europa.eu/creative-europe>

CEPI - European Audiovisual Production: <https://www.cepi-producers.eu/>

European Creative Hubs network: <http://creativehubs.net/>

Completed projects

1. Regeneration and optimisation of cultural heritage in creative and knowledge cities

Project websites:

<https://cordis.europa.eu/project/id/730280>

<https://www.rockproject.eu/>

The project involved using advanced creative technologies to help with cultural heritage and regeneration. This project is now complete and a wealth of resources are available on the link above.

2. Developing Inclusive and Sustainable Creative Economies

This project included skills, development and issues such as precarity of the workforce of the cultural and creative industries.

Project websites

<https://cordis.europa.eu/project/id/822314>

<https://disce.eu/>

Ongoing projects

1. Hubs of innovation and entrepreneurship for the transformation of historic urban areas

Project dates: 1/9/2020 – 31/8/2024

Project websites:

<https://cordis.europa.eu/project/id/869429>,

<https://hubin-project.eu/>

Cultural and creative industries are one of the clusters being used in the project.

2. Creative industries cultural economy production network

Project dates: 1/2/2019 – 31/1/2023

Project websites:

<https://cordis.europa.eu/project/id/822778>,

<https://cicerone-project.eu/>

3. Transforming industrial buildings for entrepreneurship including creative production

Project dates: 1/9/2020 – 29/2/2024

Project websites:

<https://cordis.europa.eu/project/id/869595>;

<https://centrinno.eu/>