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Film, Television & Radio, Books, Music and Art: UK Investment in Artistic Originals*

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Film, Television & Radio, Books, Music and Art: UK Investment in Artistic Originals*

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This report reflects ongoing work with ONS on these issues.

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Executive Summary

This report contributes to the measurement of the economic value of the UK creative sector. Our focus is on “the creation of long-lived artistic original assets protected by copyright.”, as defined by the System of National Accounts (SNA). This includes new broadcast programmes, books, art, music and films. In particular, the report offers revised estimates of UK investment from 1990-2008 and a new calculation of the total stock of artistic originals. We also contribute to the measurement of depreciation and prices. The most significant artistic originals, in order of magnitude in UK spending, are: TV & Radio, Books, Miscellaneous Art, Music and Film.

As a result of our work, we show that the total value of new artistic asset creation in the UK is even more significant than previously assumed, and is likely to be worth £3bn more in Gross Value Added (GVA) than national statistics currently suggest.

The report includes:

- i. a description and explanation of the appropriate conceptual framework for estimating investment in artistic assets;
 - ii. a description of official Office for National Statistics (ONS) methods in the context of that framework;
 - iii. new estimates of investment for the UK, using new data and methods;
 - iv. triangulation of estimates using other methods suggested by the conceptual framework;
 - v. a comparison of those estimates with data from the US;
 - vi. estimates of depreciation rates based on work in the US;
 - vii. a discussion of appropriate price indices, required to deflate data on investment and construct real capital stocks;
 - viii. estimates of the newly measured UK capital stock.
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This work is an important step forward in the measurement of UK artistic asset creation and the contribution of the ‘creative industries.’¹ We intend to collaborate with ONS in the near future, resulting in new estimates for Artistic Originals incorporated in the National Accounts, and so we anticipate an update to our estimates sometime in the near future. Here is a brief summary of the contents:

1. First, we take a general overview and compare official UK with developmental US data. We discover that UK estimates are considerably lower on both an absolute and relative basis. In particular, the UK seems to invest much less in Film than the US as a share of GDP.
2. Second, we set out a framework for analysing artistic sector output and investment in artistic originals. Since little data on market transactions exist, our preferred methods - for conceptual and practical reasons - are based on input costs or royalty payments.
3. Third, we evaluate ONS measurement practice, highlighting some ways to build on official data. We plan to collaborate with ONS in the near future to investigate incorporating new estimates into the National Accounts (Blue Book 2012).

1 For some assets, our estimates should be regarded as preliminary, and further work is required. In the case of Music, Books and Miscellaneous Art, accurate estimation requires a longitudinal analysis of the income earned by assets over their lifetime. We had hoped to include such estimates in this report, but legal and administrative complications have prevented us from doing so.

4. Looking at assets in more detail: i) for Film we show UK investment to be higher than currently measured using data on a broader range of UK productions; ii) similarly for TV & Radio we use data for a broader range of productions, but our final estimate is lower because we don't assume a mark-up for the monopoly power exerted by the owner in the commercialisation of their own assets; iii) for Books we generate a higher figure estimating the cost of producing original works; iv) for Music we generate a slightly larger figure by estimating the cost of asset creation, but our data on royalties indicate a larger figure still; v) official data do not include GFCF² in any other types of long-lived artistic assets, though we estimate these as substantial.
5. We use our framework to produce estimates of GFCF in Artistic Originals according to a variety of methods and triangulate those data to check the quality of the results. A summary of these results is presented in the table below.

2 Gross Fixed Capital Formation - the value of acquisitions of new or existing fixed assets i.e. investment.

Table 1: Triangulation: Estimates of GFCF in 'Artistic Originals': 2007, current prices

Method	A. Film	B. TV & Radio	C. Books	D. Music	E. Other
(1) $\Sigma P(X)X$	£183m	£2,297m	£846m	£209m	£718m
(2) $\Sigma P(R)R(t)$	-	-	-	-	-
(3) $\Sigma P(R)R(x)$				£1,721m	
(4) $\lambda \cdot P(Y)Y$	-	-	£609m	£1,096m	-
(5) P(N)N	£890m	£1,992m	-	£251m	-
(6) Official ONS estimate	£34m	£2,598m	£147m	£159m	-

- (1) Upstream Input costs: A) the-numbers.com B) OFCOM C) ASHE D) ASHE E) ASHE;
- (2) Downstream Rental Payments, allocated over lifetime of individual assets, adjusted for additional capital revenues. Data unavailable for this report;
- (3) Downstream Rental Payments: D) Based on aggregates: PPL/PRS/MCPS/VPL/BPI/ Live performance. Indicative only, accurate estimation requires a full longitudinal analysis as in (2);
- (4) Proportion of downstream revenues. Estimates for Books and Music are based on ONS method with new estimates for components;
- (5) Approximation derived from aggregate industry output. Presented for information. Not suitable to use in estimating GFCF. A) ABI, alternative available from UKFC presented in Annex B) ABI D) ABI;
- (6) Official ONS estimate: A) input costs B) input costs adj. for market power in private sector broadcasting C) proportion of revenues D) proportion of revenues E) no official estimate.

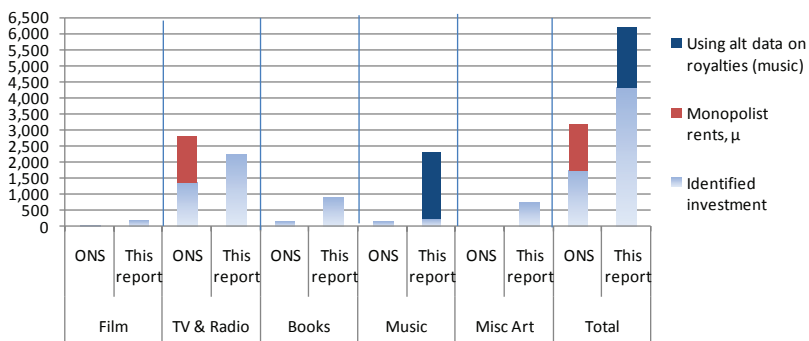
Note to table: All data are nominal and refer to 2007. In cases where we have more than one dataset for that method we choose what we consider to be the superior source. Green highlighted cells in rows (1) and (2) indicate the preferred method for final estimates. Patterned green cells in rows (1) and (3) indicate the second-best approach where data for the preferred method were unavailable. Orange highlighted cells in row (6) contain official data as recorded in the National Accounts.

The second row of Table 1 highlights our preferred method for Books, Music, and Miscellaneous Art., We had hoped to estimate the value of investment as the discounted sum of royalties earned over the life of individual assets. This was not possible in the time available. The estimate of £1,721m for Music (2007) in row 3 is a cross-sectional sum of royalties that accrue to musical assets of all vintages, including estimates of revenues earned from recordings and live performances. Under certain conditions this could be used as a proxy for annual investment; however, the necessary assumptions to infer this relationship are unrealistic for Music. So we use a more conservative estimate of £209m in Row 1. We accept that this is likely an under-estimate and expect a more accurate measure to lie somewhere in between the two figures.

We are unable to present a similar figure based on revenues for Books. Although we have some limited data on royalty rates for authors, we have little data on those that flow to publishers who also have ownership rights to original publications.

6. From the array of methods and estimates summarised in Table 1, we make our final estimate for each asset, and explain our reasoning, whether it be conceptual or practical. Chart 1 compares our new investment estimates with those produced by the ONS (2008) for the five asset categories. This also gives us a new aggregate for investment in artistic originals by these creative industries. Overall investment in 2008 was £4.3bn, exceeding official estimates of £3.2bn.³ We estimate TV & Radio at £2.2bn, lower than the official estimate of £2.8bn, but we estimate Film, Books, Music and Miscellaneous Art to all be higher than official estimates. When using our alternative measure for music, we reach an aggregate figure of £6.2bn. We would expect this figure to increase if we were able to estimate the value of originals Books and Miscellaneous Art based on royalties and revenues.

Chart 1: Investment in Artistic Originals, 2008, Current Prices (£m)



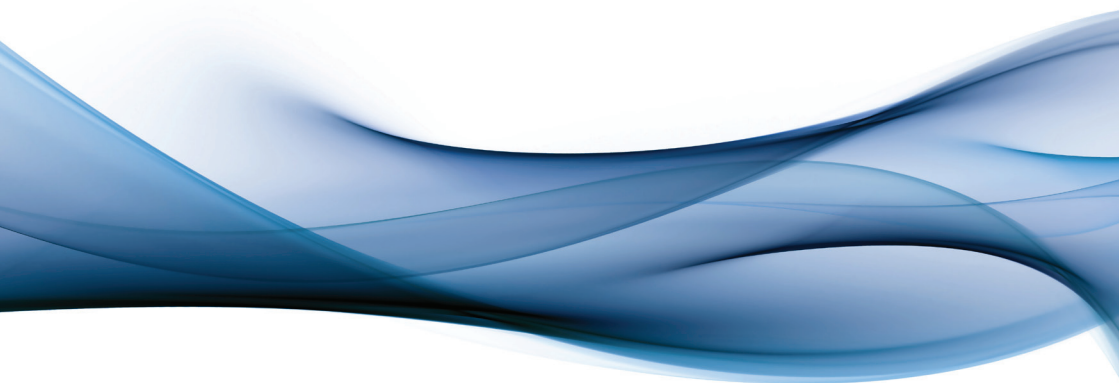
3 Figures are approximations.

Source: ONS estimates are from the National Accounts. For this report, sources are: i) Film, the-numbers.com, UK Film, Council, British Film Institute; ii) TV & Radio, OFCOM; iii) Books, ASHE; iv) Music, ASHE, Alternative estimate, 'PRS for music'; v) Misc Art, ASHE

Note to figure: All data are nominal and are for 2007. Light blue bars show our final estimate and are compared to investment as measured by ONS and recorded in the National Accounts. The latter are effected by an assumed mark-up for monopoly power in private sector broadcasting, highlighted with the stacked purple contribution for 'ONS TV & Radio' and 'ONS Total'. For music we have an alternative estimate based on royalties generated by UK music originals, shown by the dark blue stack for 'This Report, Music' and 'This Report, Total'.

Chart 1 shows that, for most asset categories, our estimates of GFCF are higher than those in the National Accounts (except TV & Radio, where the comparison is not on a like-for-like basis). Measures of investment can include additional rents earned by monopoly owners of intellectual property rights (IPRs) if revenues are used in the estimation. Our interpretation of the ONS method is that it estimates a factor which allows for those additional rents, whereas we make no such allowance. The result is that private sector investment is multiplied by a factor of around four in recent years.

7. To estimate the UK capital stock of artistic originals we need to define suitable price indices and depreciation rates. For prices, we discuss a variety of options but settle on an implied output deflator. For depreciation, we draw on the ground-breaking work of Soloveichik (2010) of the US Bureau of Economic Analysis (BEA), using the reasonable assumption that US and UK originals depreciate at similar rates. We bring these data together and present estimates of the UK stocks compared with those implied by the National Accounts. The result is an upward revision of the real value of the UK stock of around £3.5bn, even when estimates for 'Miscellaneous Artwork' are excluded.
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