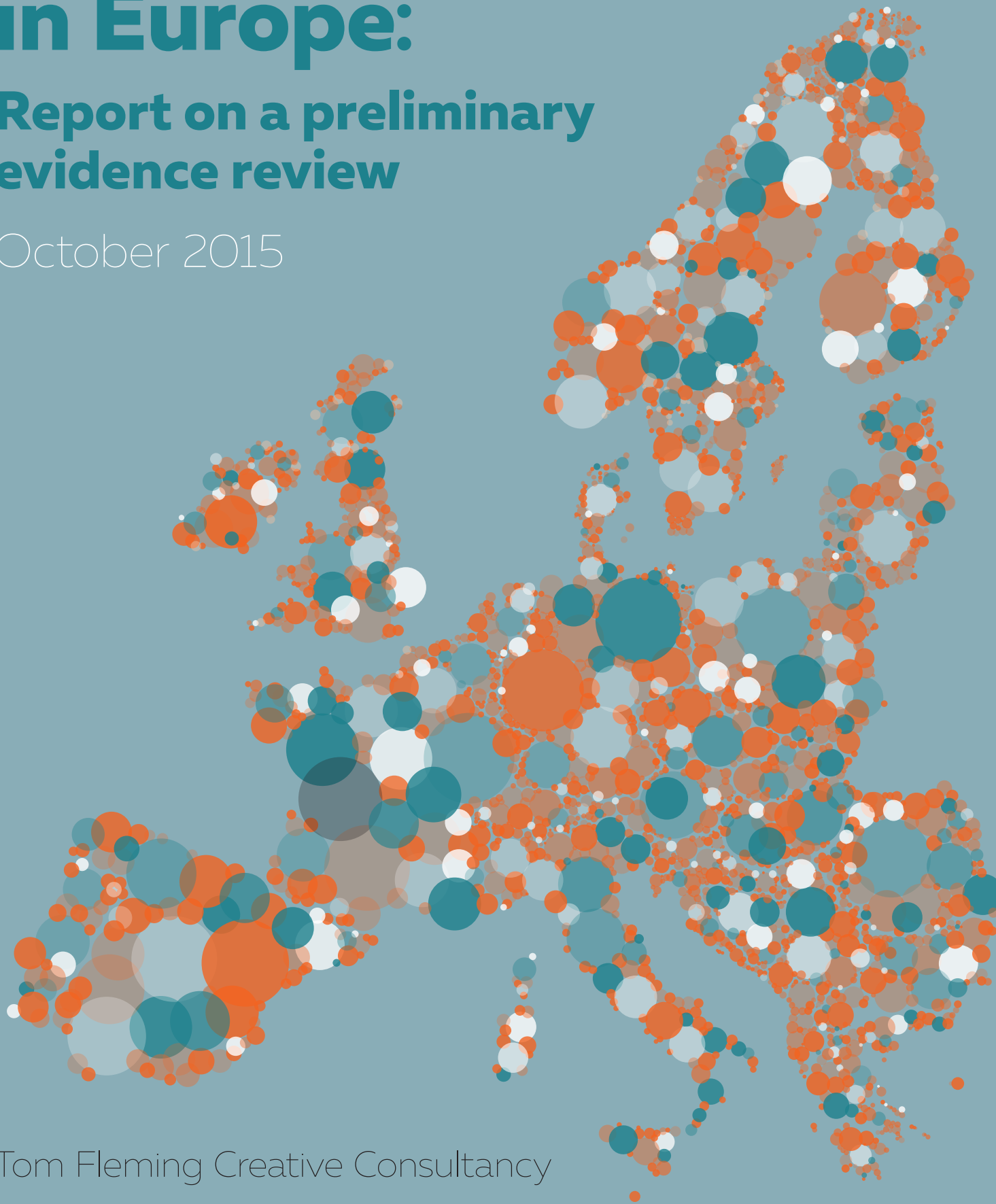


Cultural and creative spillovers in Europe:

Report on a preliminary evidence review

October 2015



Tom Fleming Creative Consultancy

This report was commissioned and funded by:



Arts Council England (ACE) champions, develops and invests in artistic and cultural experiences that enrich people's lives. The organisation supports a range of activities across the arts, museums and libraries – from theatre to digital art, reading to dance, music to literature, and crafts to collections. Great art and culture inspires us, brings us together and teaches us about ourselves and the world around us. In short, it makes life better. Between 2015 and 2018, ACE plans to invest £1.1 billion of public money from government and an estimated £700 million from the National Lottery to help create these experiences for as many people as possible across the country.



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The **European Centre for Creative Economy (ecce)** stems from RUHR.2010 – the first European Capital of Culture that has come to accept the cultural and creative economy as an essential pillar of its programme and part of cultural diversity. ecce supports the creative economy and the development of creative locations and spaces in the region. A central part of the work of ecce is to organise debates on culture and the creative industries in the Ruhr region that are relevant across Europe. ecce is funded by:

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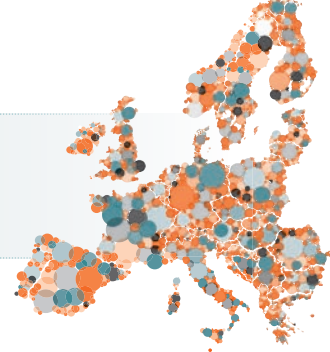
The **European Cultural Foundation (ECF)** is an independent foundation based in the Netherlands, which has been operating across Europe since 1954. Over the past six decades, ECF has been striving towards an open, democratic and inclusive Europe in which culture is valued as a key contributor. It bridges people and democratic institutions by connecting local cultural change-makers and communities across wider Europe. ECF supports creative collaborations that contribute to fostering democratic societies, doing this through grants, awards, programmes and advocacy.



The **European Creative Business Network (ECBN)** is a network of cultural and creative industries development agencies. They represent 19 board members and over 220 creative centres. As a non-profit foundation, based in the Netherlands, their aim is to help creative entrepreneurs to do business and collaborate internationally and firmly believe that Europe and its neighbourhood can be powered by culture.

ECBN supports the project in-kind through financial administration and contracting

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This report has been authored by Tom Fleming Creative Consultancy (TFCC). TFCC are the leading international consultancy for the creative economy. They offer strategy and policy leadership across the creative, cultural and arts sectors. Through research, evaluation, collaboration and advocacy, they are a 'think and do' tank for the creative economy. TFCC offer technical expertise, strategic thinking and the tools to position creativity to the heart of society.

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Foreword

In 2012, the European Commission put spillover effects of the arts, culture and creative industries on the political agenda (COM(2012) 537). In 2014, Arts Council England (ACE), Arts Council of Ireland, European Centre for Creative Economy (ecce), European Cultural Foundation, European Creative Business Network (ECBN) and Creative England initiated and funded a collaborative preliminary methodological review about the evidence and causality of spillover effects in Europe.

As a European research partnership on cultural and creative spillovers we came together through a shared desire to demonstrate the value of public funding for arts and culture and to investigate how we could map the various value chains between the arts, culture and the creative industries as well as the wider economy and society. We had two core objectives in mind: to evaluate the relationship of public funding in the spillover context and to recommend methodologies that may be able to capture spillover effects, as well as to advocate for longer-term European funding, to address the wider research gap in this area and to strengthen development and the case for public support of the arts, culture and the creative industries.

We are proud of how our organic approach has brought partners together across Europe around a shared yet complex research agenda. Our collaborative research process has included partners from nine countries: national cultural funding agencies, regional cultural development bodies, foundations, universities and organisations operating Europe wide.

We'd like to take this opportunity to thank Tom Fleming Creative Consultancy (TFCC), who we commissioned in January 2015 to undertake this analysis, for their dedication and collaboration in delivering this research. They were the first to encounter the enormity and complexity of the task. Together we acknowledge the limitations as well as the key learning points of this exploratory review of the very first evidence base on spillover effects.

This report sets a framework that incorporates the diversity of the arts, culture and the creative industries. It sheds light on cultural and creative spillovers in Europe, and spurs interest for new and continued collaboration in research at the European level.

We are in a good position to test the findings and recommendations presented in this report. Having identified future research topics to address local, regional, national and international needs to better understand, evaluate and improve public funding schemes, this review closes with recommendations primarily to the European Union, paying tribute to its policy focus on spillover effects as laid down in

the EU communication (COM(2012) 537). We will advocate at European policy level, as well as in each of our Member States and beyond, in order to mainstream a new holistic approach for evaluating cultural and creative spillovers.

Our primary policy recommendation is the creation of the first holistic agenda for cultural and creative research, envisioning the Joint Research Centre of the European Union as a key player to innovate research methods in the cultural and creative industries (CCIs), and to drive spillovers in the arts, culture and the creative industries within the context of Agenda 2020.

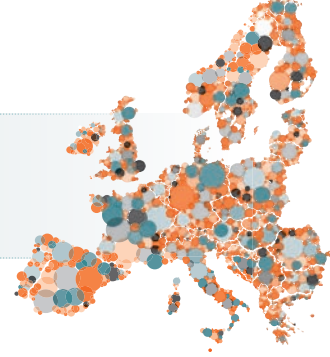
To launch a new holistic approach to cultural and creative research, we recommend that the European Commission takes the lead as change-maker by:

- Dedicating a small proportion (e.g. five per cent) of all Creative Europe- and Horizon 2020-funded projects in the cultural and creative sectors for holistic evaluation that balances qualitative and quantitative evidence capture.
- Creating a new programme for the development and progression of qualitative methods and indicators in the cultural and creative industries, to be led by the Joint Research Centre of the European Union.
- Calling for the co-ordination of national research agendas in the cultural and creative sectors by an Open Method of Coordination (OMC) group. This group will be tasked with strengthening and testing new qualitative methods as part of a balanced quantitative and qualitative research agenda.

Without a new holistic research agenda, cultural and creative policies will not be able to innovate, unleash and capture the wider value of the arts, culture and the creative industries to the wider economy and society. We recommend that governments and policymakers at all levels realise that they are key change-makers for the creation and evidencing of cultural and creative spillovers.

Finally, as policymakers and advocates for public investment in the arts, culture and creative industries, we know we are not the only research initiative in this area. Collaboration and open information-sharing are at the heart of this research agenda to evidence cultural and creative spillovers. We look forward to engaging with others to develop further, enrich and share broadly our future research activities. We now look forward to sharing our future European research agenda in 2015/16 and creating a wider evidence base for cultural and creative spillovers through <http://ccspillovers.wikispaces.com/>.

Please join the conversation.



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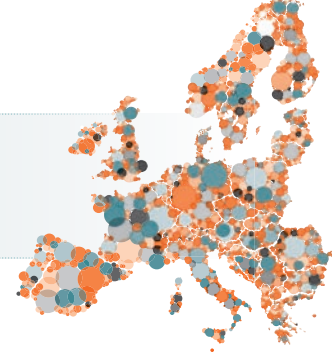
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Executive summary

In 2012, the European Commission made spillover effects of the arts, culture and the creative industries the subject of its agenda for the first time (COM(2012) 537). A little after, conversations about the need for further research into spillover effects began and, in 2014, Arts Council England (ACE), Arts Council of Ireland, European Centre for Creative Economy (ecce), European Cultural Foundation, European Creative Business Network (ECBN) and Creative England initiated and funded a collaborative research project about the evidence and causality of spillover effects in Europe. The research consisted of:

- the creation of the first evidence base of 98 spillover projects,
- a review of evaluation methods and the strengths and weaknesses of existing methodologies,
- finding an evidence-based concept and definition of 'cultural and creative spillover effects', and
- recommendations for future research on spillover effects.

Despite the preliminary and exploratory nature of this research, we have noted a widespread interest and curiosity among researchers and politicians in Europe – including the Latvian EU Presidency in 2015.

This response – even before the research was finished – reflects what we believe to be one of the major findings of this report: that there are research gaps about causality and even more about commonly accepted methods of quantitative and qualitative evaluations.

The policy recommendations focus on:

- a holistic concept of research to correlate to interdisciplinary (sub-)categories of spillovers,
- progressing and testing qualitative methods, and
- dissemination and dialogues with the wider economy and society to support the recognition of multiple types of spillover and the whole value of the arts, culture and creative industries.

The missing proof of causality of the spillover effects of public investments was the core motivator for the research project, which has developed into an international research partnership. This partnership continues and grows as connections are made with others through the open collaborative wikispaces platform, <http://ccspillovers.wikispaces.com/>. This is vital for the second stage of research.

Proposal for an evidence-based definition

This study by the Tom Fleming Creative Consultancy (TFCC) sets out a preliminary evidence review of the spillover effects

of public investment (public money awarded directly or indirectly by government) in the arts, culture and the creative industries in Europe. The starting point for this research uses a broad definition of spillovers, which takes account of previous work in the field and seeks to meet the strategic and practical needs of artists, cultural organisations, creative businesses, policymakers, funders and strategic bodies:

We understand a spillover(s) to be the process by which an activity in one area has a subsequent broader impact on places, society or the economy through the overflow of concepts, ideas, skills, knowledge and different types of capital. Spillovers can take place over varying time frames and can be intentional or unintentional, planned or unplanned, direct or indirect, negative as well as positive.

Proposal for a review of cultural and creative spillovers

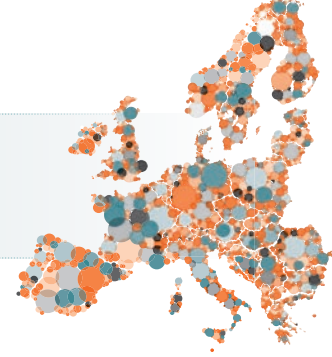
The main focus of study is an evidence library of 98 documents from 17 European countries collectively created by partners¹. These documents – a rich mix of literature reviews, case studies, surveys, quantitative analysis and more – were analysed for what they had to say on spillovers, public investment and methodology. To analyse the evidence they provide, we have adopted an approach which categorises each spillover effect into three broad and overlapping types of spillover:

Knowledge spillovers refer to the new ideas, innovations and processes developed within arts organisations and by artists and creative businesses which spill over into the wider economy and society without directly rewarding those who created them.

Industry spillovers refer to the vertical value chain and horizontal cross-sector benefits to the economy and society in terms of productivity and innovation that stem from the influence of a dynamic creative industry, businesses, artists, arts organisations or artistic events.

Network spillovers relate to the impacts and outcomes to the economy and society that spill over from the presence of a high density of arts and/or creative industries in a specific location (such as a cluster or cultural quarter). The effects seen in these are those associated with clustering (such as the spread of tacit knowledge) and agglomeration, and the benefits are particularly wide, including economic growth and regional attractiveness and identity. Negative outcomes are also common – e.g. exclusive gentrification.

¹ See the full report Acknowledgements for a full list of partners and contributors.



Within these three types of spillover, the report introduces 17 sub-categories where evidence is demonstrated most frequently or there are emerging claims on evidence and impact. The 17 identified spillover sub-categories are presented in Figure 1. The full report features an analysis of each of the 17 sub-categories with a short summary of key points relating to methodology, public investment and evidence strengths.

Findings

Strength of evidence in the preliminary library

There are three areas where evidence for spillovers is particularly strong and/or where there is an apparent need for further research (e.g. because of the strategic importance afforded certain types of return on investment).

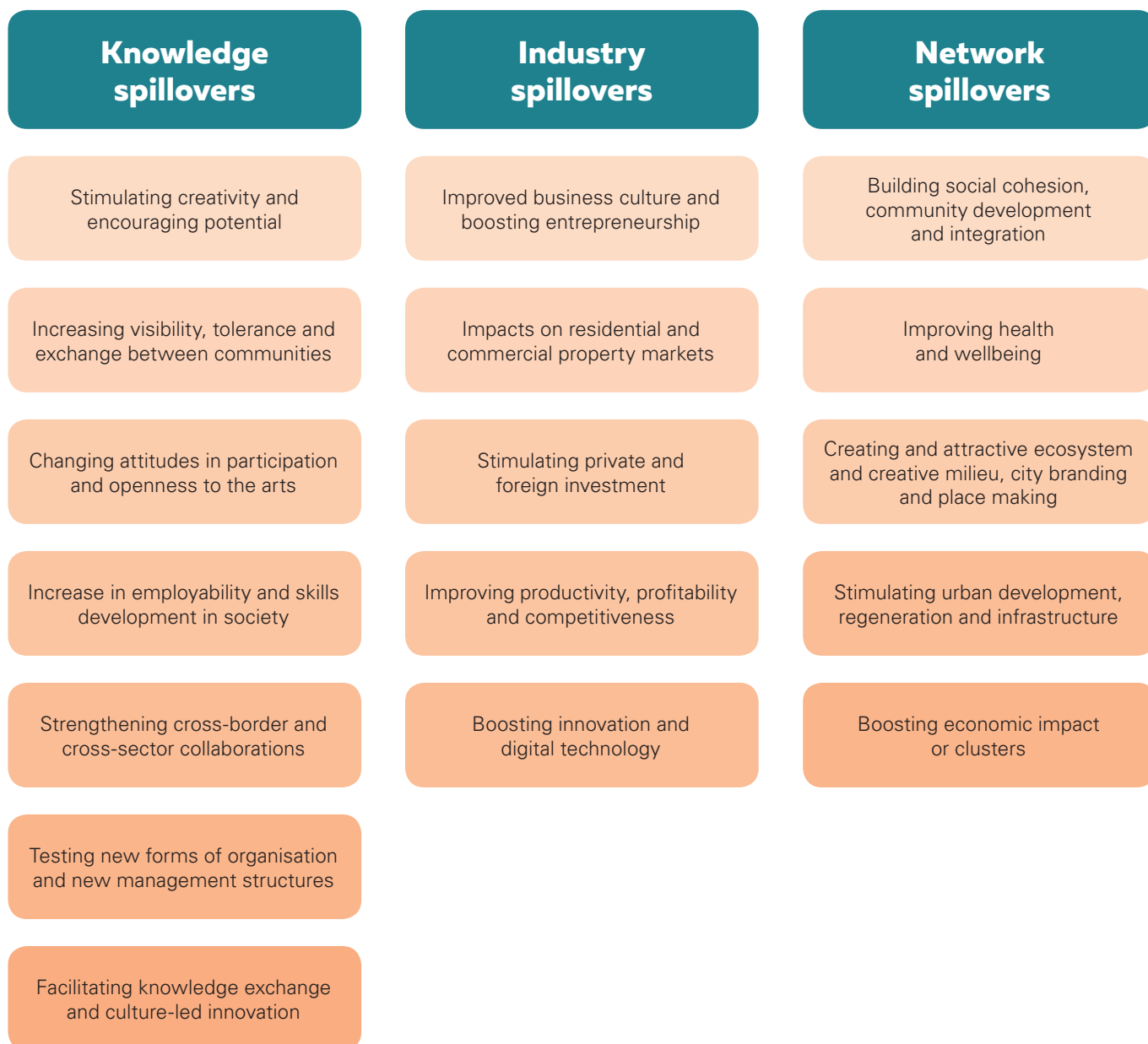


Figure 1. Diagram of spillovers and sub-categories

These are discussed in more detail in the report, and are:

- Innovation via knowledge spillovers.
- Health and wellbeing via knowledge and industry spillovers.
- Creative milieu and place branding/positioning via network, knowledge and industry spillovers.

Evidence in knowledge spillover is most persuasive² around the benefits to individuals of long-term engagement with arts organisations (CEBR, 2013, and Cuypers et al., 2011), the role of culture in developing social capital (OECD, 2005), the wide impact of large-scale cultural events (Rutten, 2006), the spillover between publicly funded and commercially funded arts (Albert et al., n.d., and Tafel Viia et al., 2011), the importance of culture in improving cross-border co-operation (Interact, 2014) and the linkages between culture, creative industries and innovation (Rutten, 2006).

Analysis of the library suggests that evidence of knowledge spillovers would be improved through more research into how experiencing and practising 'creativity' in one sphere translates into bringing a more creative approach to other spheres of activity. Furthermore, as long-term engagement with the arts seems to be so important in delivering personal impacts, studies which allow for this to be tracked would help fill in current gaps. Other key areas for examination include the role of volunteering in developing social capital, the special impact and value of large-scale cultural events, the value of cross-border networks, and the impact of creativity throughout the value chain and beyond manufacturing.

The strongest evidence of industry spillovers is that communications within organisations can be boosted (Antal/Strauss, 2012), culture-led regeneration has a positive impact (Rutten, 2006), cross-fertilisation occurs between commercial and non-commercial sectors (OCE, 2014), investment in design has an impact (Sternó/Nielsén, 2013), spillovers play a role in boosting uptake of new technology (KEA, 2006) and networks are important in spreading innovation (Schopen et al., 2008).

Examination of the library suggests that the evidence of industry spillovers would be improved if there was more analysis of the two-way relationship between culture and the wider economy in terms of innovation and entrepreneurship. Further research in the value of public sector investment in stimulating risk-taking would be valuable, as would be exploring the role of social media and spillover effects that occur without the benefits of physical proximity through clusters.

The clearly articulated and developed evidence of network spillovers is found in the impact of culture on

social cohesion (KEA, 2009, and BOP, 2011) and community cohesion (Dümcke/Gnedovsky 2013, 2013), on the way that the process of social cohesion occurs (Goodlad et al., 2002), on the individual benefits of visiting museums (Fujiwara, 2013), on the association between cultural activity and perceived health and satisfaction with life (Cuypers et al., 2011, and Billington, 2010), on the role of culture in place-making and city-branding (ICC, 2010, and Rutten, 2006), on the 'creative milieu' effect and on the importance of creative entrepreneurs (CURE, 2014).

Reviewing the library indicates that evidence of industry spillovers would be improved by further research into the complex relationship between arts, culture and wellbeing, and taking an ecosystem approach to analysing the interplay of complex factors also supports our understanding of the role that culture plays in place attractiveness. Other areas where further research would be particularly valuable include understanding the spillover effects of individuals.

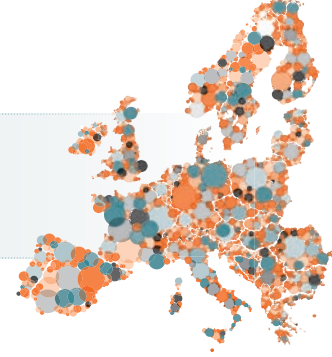
Analysing and reporting on the methods of evaluation used – especially in the 17 spillover sub-categories – is the main contribution of this report to the current scientific and political debate. Furthermore, it has clear outcomes for cultural practitioners and academics who want to apply and test methods in their institutions. Based on the evidence library, **causality** is not systematically evaluated in the cultural and creative sectors against scientific standards such as Bradford Hill Criteria. Out of the library of 98 documents only two approach the standards needed for causality (Bakshi et al., 2013, and Cuypers et al., 2011). More methods derived from the social sciences, especially those that test hypotheses using qualitative research methods, could be beneficial.

These include:

- Experimental studies which test cause-effect relationships in a controlled setting including counter-factuals and control groups.
- Action research, where hypotheses are tested through the introduction of interventions into complex social phenomena or ethnographical techniques, including immersion over a period of time.
- The proxy research approach – utilising techniques developed in other areas including research into Social Return on Investment (SROI).

In terms of social policy, a KEA 2009 report recommends encouraging local, regional and national agencies to deploy **cultural resources in social and public services** and to commission 'a series of longitudinal studies (possibly linked to EU funded projects), examining the impact of cultural activity in key social areas such as social cohesion and civic renewal'.

² Persuasive, but falling short of proving causality to scientifically accepted standards.



Methodological recommendations

In terms of developing methodologies which will allow for greater understanding of the value of public investment, analysis of the library suggests that the following interdisciplinary approaches should be investigated:

- Longitudinal intervention studies based on best practice from social science, including the use of control groups.
- Testing hypotheses around the process and means by which cultural and creative spillovers drive innovation in places and the wider economy through experimental methodological approaches utilising 'big data' and wellbeing (frameworks).
- Consumer analysis utilising new technology to help us get a better understanding of culture's role in driving the experience economy.
- Developing a holistic set of methodological tools across the 17 spillover sub-categories that could work at different levels of government.

Recommendations for future research

From the evidence library, we can draw out a range of areas where future research programmes would be particularly valuable. These include research into:

- How to embed spillover research into mapping and evaluation tools which track and measure public investment, and how to identify spillover outcomes as part of the overall outcome proposition for public funding programmes.
- Incentivised programmes into cross-sector working including collaborations between the arts and culture, creative industries and other sectors.
- Hybrid and cross-sector spaces and places which allow for structured and unstructured knowledge transfer between the arts, culture and creative industries and wider business, social and technological sectors.
- Incentivised spillover-generating actions such as knowledge- and technology-exchange programmes that connect the arts and cultural sector to universities and technology businesses.
- Strategic commissioning for arts, health and wellbeing and how spillover effects can be encouraged and facilitated.

Policy recommendations

Our primary policy recommendation is the creation of the first holistic agenda for cultural and creative research, envisioning the Joint Research Centre as a key player to innovate research methods in the cultural and creative industries and to drive spillovers in the arts, culture and the creative industries within the context of Agenda 2020.

To launch a new holistic approach to cultural and creative research, we recommend that the European Commission takes the lead as change-maker by:

- Dedicating a proportion (e.g. five per cent) of all Creative Europe- and Horizon 2020-funded projects in the cultural and creative sectors for holistic evaluation that balances qualitative and quantitative evidence capture.
- Creating a new programme for the development and progression of qualitative methods and indicators in the cultural and creative industries, to be led by the Joint Research Centre of the European Union.
- Calling for the co-ordination of national research agendas in the cultural and creative sectors by an Open Method of Coordination (OMC) group. This group will be tasked with strengthening and testing new qualitative methods as part of a balanced quantitative and qualitative research agenda.

Our policy recommendations need the support of national, regional and local level governments and policymakers. We ask that they acknowledge that they are key change-makers in the creation and evidencing of cultural and creative spillovers. Without a new holistic research agenda, cultural and creative policies will not be able to innovate, unleash and capture the wider value of the arts, culture and the creative industries to the wider economy and society.

1. Introduction

One priority of the Agenda Europe 2020 is to promote spillovers from the cultural and creative sectors. However, research into and our fundamental understanding of spillover effects are deficient.

Vickery, J., 2014, to be debated SPILLOVER. (ecce, 2015)

This study by the Tom Fleming Creative Consultancy (TFCC)³ sets out a preliminary evidence review of the effects of public investment (public money awarded directly or indirectly by government) in the arts, culture and creative industries in Europe. It was commissioned by an international consortium consisting of Arts Council England (ACE), Arts Council of Ireland, european centre for creative economy (ecce), European Cultural Foundation, European Creative Business Network and Creative England. These five funding partners were joined in the research project by the European Creative Business Network (ECBN) and partners⁴ drawn from across Europe to establish a critical community of interest.

The aim of this study is to investigate in detail the evidence base of the spillover effects of public investment (public money awarded directly or indirectly by government) in arts, culture and in the creative industries. Central to it is an investigation into the types of methodologies used to capture spillovers and the strength of evidence they present. It stems from a growing consensus involving the funders and research partners, plus a wider network of academics, policymakers and practitioners, that there is a need to build the knowledge base and improve our understanding of the multiple types of value generated through public investment across these sectors. This joint analysis is driven by the shared value and commitment of all partners to improve cultural policies and the role of the arts, culture and the creative industries in society. A greater understanding of the different outcomes and effects of public investment, plus the methodologies required to measure them, will support smarter investment and better evaluation and articulation of values, outcomes and notional 'returns on investment'.

It is necessary to better understand the wider economic and social role that the arts, culture and the creative industries play, how this role is changing, and what this means for policy and investment. Spillovers matter because they are part of the under-told story and until recently rarely registered as part of the prospectus of outcomes that the vibrant and innovative arts, culture and creative industries sectors can offer. The starting point for this research was a locally and nationally perceived lack of evidence of the type, scale and outcomes of effects which could be termed spillovers. We also lack a shared approach of methods and indicators, with research historically driven by multiple methodologies and analysis shaped by different definitions and strategic factors.

This review has been designed to provide a diverse European perspective. How do different methods or indicators for spillovers operate in different countries? What is the potential to transfer different research methodologies and experiences between countries?

For the first time, therefore, this study has brought together an international library of research and evaluation that has been assessed to demonstrate spillover effects across Europe.

The primary objectives of the study are to:

- better understand what evidence exists on a Europe-wide level on spillover effects of public investment in arts and culture,
- develop an interdisciplinary and shared understanding of the methods of gathering evidence around spillovers,
- identify the strengths and weaknesses of existing methodologies, and
- recommend suitable qualitative and quantitative methodologies for measuring spillover effects.

Specific objectives are to:

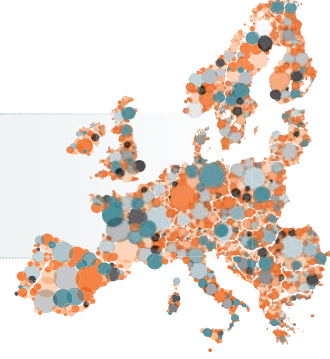
- promote consistent and credible research methods to enable sector and public authorities to undertake effective policy making and improve resource allocation,
- identify and develop supplementary qualitative methods,
- better demonstrate the causality behind spillover effects that operate between public investment in arts and culture and in the creative and cultural industries, and between these fields and the wider economy and society, and
- make the best case for cultural support.

Mapping methods, indicators and evidence for the first time on a European scale is a complex process. This research has attempted to establish a baseline of knowledge by taking a scientific approach to a set of commonly held assumptions about the effects of cultural and creative spillovers. In doing so it has exposed strengths, weaknesses and gaps in evidence methods and indicators.

Some of the study's objectives have been achieved, others remain outstanding – undelivered due to shortcomings in the evidence base or the methodologies used to generate it. The methodological challenge is significant. Much of the collated evidence library has not been designed to focus directly on the spillover effects of public investment in arts, culture and the creative industries. Each piece of research has been commissioned with a different object of study and set of strategic requirements. This means the methodologies may have been designed for different foci – e.g. to evaluate the outcomes of a specific programme, or to develop a strategy for sector development in a specific place. Thus notions of

³ www.tfconsultancy.co.uk

⁴ See Acknowledgements.



'spillover' are either diversely defined or not defined at all. This has required us to attempt interpretation of the types of spillover being described and to critically assess the extent to which the methodology used can demonstrate spillover effects.

The report is structured as follows:

- **Section 2** presents an overarching definition of spillovers. This has been co-created with the funding and research partners and it is also based on analysis of differentiation: i.e. where spillover effects are understood as different from the more commonly measured and articulated outcomes such as jobs created, GDP (gross domestic product) and GVA (gross value added).
- **Section 3** brings into focus the role of spillovers in a changing strategic investment landscape for culture, the arts and creative industries. It explores how a clear and consistent understanding of spillovers could inform a more effective approach to policy and investment in arts, culture and the creative industries.
- **Section 4** explains the rationale and methodology for the research and how the analysis of the evidence library was conducted.
- **Section 5** describes the typology of spillovers used in the report.
- **Section 6** is an analysis of the library, presenting key findings by spillover type.
- **Section 7** presents key learnings from the research and main findings from the analysis of the library.
- **Section 8** contains the methodological recommendations and suggestions for further research of spillovers in the context of public investment.

2. Spillovers – definition and context

What do we mean by spillover?

There is no consistently recognised definition of the term ‘spillover’ in the context of the arts, culture and the creative industries. As a term, it has its origins in economic geography and cluster theory, such as Jacob (1960) and Porter (1990), but, like many terms which once had a tight definition, it has become diluted as a near synonym of externalities. Indeed, it is at times used interchangeably with terms such as cross-overs, value-added or subsumed within a wider set of outcomes, impacts or values. A further complication is that most of these terms lack a clear and shared definition, with variations across Europe and by sector. In turn we have centred our attention on establishing a shared definition of and approach to measurement for spillovers, with other related terms qualified as having different meanings in different contexts. Even authoritative sources present a slightly grey area where spillovers are inadequately differentiated from other related but distinctive terms. For example, *The Economist* states that:

Financial risk is systemic. It causes large spillover effects (externalities) both among financial institutions and, more importantly, to the real economy. These spillovers can be caused by (i) direct links between different institutions (domino effects) or (ii) by price externalities.

(Brunnermeier, 2010)

For arts, culture and creative industries, spillover effects have been positioned as means to capture and express the ‘indirect’ social and economic impacts and outcomes. Bakshi et al., in their 2013 report *Creative clusters and innovation*, outline their understanding of spillovers in the following way:

In addition to contributing directly to regional innovation processes through the innovative activities in which they engage, they could also do so indirectly, by generating spillovers that benefit the wider economies of the places where they are located.

KEA European Affairs⁵, at the launch of the URBACT Creative SpIN (Creative Spillovers for Innovation) project, define ‘creative spill-over’⁶ as:

(A) process by which the interactions between artists, creative professionals and industries and/or cultural organisations contribute to economic and/or social innovation in other sectors of the economy or society. The spillover process takes place when creativity originating from culture and creative professionals and industries influences innovation in sectors where culture and creative professionals do not usually evolve.

As the Creative SpIN project developed⁷, so too did the definition, broadening to include ‘positive externalities’ and not just innovation:

Creative spill-over is defined as benefits arising from the activities of CCI⁸s including artists and creative professionals, which determine positive effects on other sectors of the economy or society. Those positive externalities result from processes through which culture-based creativity spreads out from the CCI⁸s, across economic sectors and industries, thus contributing to innovation in the wider economy.

For this review, such a definition was deemed as too narrow to capture the wide range of effects that flow from public investment into the arts, culture and creative industries. An academic definition of what this means is provided by ecce in the discussion document on spillovers (ecce, 2015):

Spillover might involve:

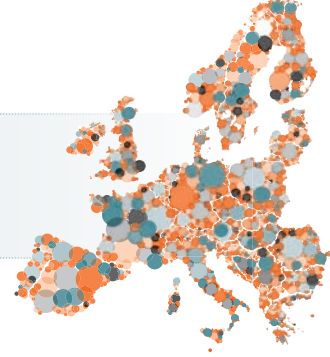
Complex interactions/effects/influences operating on different registers – not simply “cause effects”...

⁵ www.keanet.eu

⁶ There is some debate over whether spillover should be hyphenated (‘spill-over’) or not.

⁷ For an introduction to the project, see: www.eciapplatform.eu/newsarticle/urbact-project-creative-spin-enters-implementation-phase/

⁸ Cultural and creative industries.



A process of dialogue, interaction and engagement that might be place specific or place sensitive or optimised by drawing on the resources of place and contributing to the broad economic development of place...

Crossing boundaries – informal as well as formal jurisdictions, questions of agency and legitimacy.

John Holden, in his 2015 study *The Ecology of Culture*, takes the view that spillovers inadequately describe the processes at work because:

The notion of spillover defines a cultural “expressive” core that is then commercialised through the creative industries. As this report makes clear, no such division should be drawn – creativity and expression flourish throughout the cultural ecology and can be exploited for economic gain anywhere within it.

However, his criticism of the term spillover is actually more of a criticism of the ‘concentric circle’ model of culture and the creative industries (adopted in The Work Foundation’s 2007 report *Staying ahead: The economic performance of the UK’s creative industries*, which placed artistic creators at the centre, with their creations spilling over into the creative industries and wider economy. This model is inadequate, not least because creation happens across culture and the creative industries and is not just limited to artists, and because it undervalues the role of others (producers, distributors, agents, the social network) in the ‘creation’ and reception of art. The definition we adopt below complements Holden’s perspective that spillovers are mobilised by the flows of careers, ideas, knowledge and money across a ‘cultural ecology’ configured by multiple interdependencies.

For this study we have developed a definition which is shaped by what has gone before but seeks to set out one which scores more highly for clarity and coherence:

- We understand a spillover(s) to be the process by which an activity in one area has a subsequent broader impact on places, society or the economy through the overflow of concepts, ideas, skills, knowledge and different types of capital. Spillovers can take place over varying time frames and can be intentional or unintentional, planned or unplanned, direct or indirect, negative as well as positive.
- We refer to these as **cultural and creative spillovers**. In this research context, we are interested in those spillover effects that arise as a consequence of investment by public or private stakeholders in the arts, culture and creative industries.

We therefore define cultural and creative spillovers as the process by which activity in the arts, culture and creative industries has a subsequent broader impact on places, society or the economy through the overflow of concepts, ideas, skills, knowledge and different types of capital.

3. Situating spillovers in the arts, culture and creative industries' policy and research context

Though the term spillovers is by no means new, its application to the arts, culture and creative industries is relatively recent. Frontier Economics undertook one of the earliest pieces of research in this field, with their 2007 study for the UK government's Department for Culture, Media & Sport: *Creative industry spillovers – understanding their impact on the wider economy*. But it is only in the last two years that this concept has risen to prominence in research and policy literature – such as in the paper *Capital of Culture?* (Bakshi et al., 2014), which explored the impact of arts and cultural clustering on local productivity. The 2015 conference in Latvia on cultural and creative crossovers (part of the Latvian government's EU presidency programme of activities) and the launch of the recent URBACT-funded Creative SpIN report show how this agenda is gaining momentum. They also begin to shape recommendations for the role of public-sector partners in nurturing spillovers – such as through cross-sector collaboration, workspace and research. It is important here to be aware of the challenges the use of the term brings while being open to its potential to articulate values which we have continuously struggled to understand and/or describe. As is often the danger in policy making, a term or concept can be adopted, very quickly become ubiquitous, fleetingly feature in conferences and policy documents, and then be displaced by the next term or concept.

With this study focusing on existing evidence and effective methodological approaches, we hope for a stronger, clearer and more consistent use of the term in the future. However, it is likely that we will continue to face issues of complexity and inconsistency. For example:

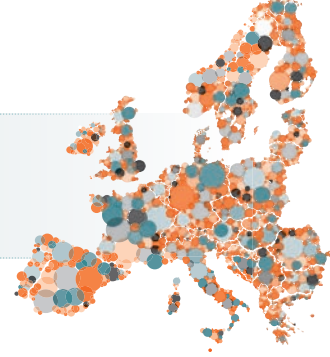
- There can be a productive tension between emergent policy themes and priorities and the communities of practice and research which have helped generate them but, at the same time, themes can emerge before proper scrutiny is possible and for which a consistent evidence base may not have been created. In part this is an outcome of the subsidiarity of cultural policy and research across the European Union, which leads to a plethora of policy and research activities (from cities to member states), but a lack of knowledge exchange, research partnerships and co-ordinated policy and guidance.
- Consensus exists more on the types of value generated by investment in the arts, culture and creative industries, but less on how to measure such value, describe it and translate it into policy and investment. This should be considered in the context of differing levels of investment for arts, culture and the creative industries, where at the most favourable end of the scale, there is some room for a more nuanced understanding of the types

of values public investment generates and a more holistic appreciation of the indirect, subtle, even tacit outcomes of a strong, confident and connected sector. We should correspondingly be aware that this study will, to an extent, be of value for those parts of Europe and elsewhere which lack substantial research budgets and thus face difficulties in measuring and articulating value.

It is important then that the value of investment is properly and consistently measured, analysed and described and that we share what we measure and learn more effectively. In the UK, the recently completed Warwick Commission's *Comprehensive and holistic investigation into the future of cultural value* made it clear that while we may think we know what happens when we invest in culture, measuring and explaining what actually happens is quite another thing. It did, however, argue that with application, commitment and collaboration, we can go beyond any 'special pleading' on the value of public investment in the sector to a much more confident assertion of value based on evidence. Similarly, a 2013 Spanish study by Boix et al. – *Inter-regional spillovers of creative industries and the wealth of regions* – identifies the gap between evidence and effective policy development:

The translation of this evidence to efficient policy strategies is hampered because some relevant aspects of the relationship between creative services and regional wealth are still unknown.

The establishment of a coherent and consensus-based methodology for measurement of spillovers is further complicated by the constantly shifting strategic agendas through which notions of value in the arts, culture and the creative industries are played out. For example, the instrumental framework in which the arts and culture and creative industries operate stretches from delivering outcomes to education to social inclusion and citizenship (see for example ACE, 2014). While the creative industries are not just 'the fastest-growing sector' and critical provider of high-value jobs, they are also notionally vital to cultural tourism, to innovation and to place-branding (see for example DCR, 2012). With so many stated outcomes, plus significant boosterism from local to national policy, the arts, culture and creative industries are carrying a weight of expectation. But while the tangible and direct outcomes may now be well known and effectively evidenced (for example, measurement of sector baselines has generally improved across the EU) the indirect outcomes and the spillover effects lack critical



reflection, and are subject to over- or under-statement because to measure them is complex and requires a shared approach.

Moreover, it is becoming more complex rather than less so to measure the kinds of value chain relationships through which spillovers arise. The arts, culture and creative industries have always formed an integral part of the wider economy. However, the growing diversity of art form practices, audiences, business models and markets are generating sets of relationships which were historically difficult to establish. These include cross-sector collaboration (e.g. where arts, design, film, music and software converge in computer gaming) or international collaboration where creative industries start-ups are often international from birth, collaborating via digital tools to co-create products and services. This complicates notions of the 'local' and stretches the value chain beyond simplistic analysis. It therefore follows that spillover effects to other sectors are likely to emanate from multiple cultural, arts and creative sources, each with a different relationship to any investment and with variations in motivation, intention and outlook. This blurs the view on cause and effect, and brings into question the extent to which simple or top-down or siloed policy and investment tools can make a direct intervention.

Preferable is a policy-level appreciation that the types of spillover generated can not always be predetermined.

Similarly, at this stage we need to recognise a need to move forward conceptually so that we fully appreciate the value of difference and distinctiveness of different types of artistic and cultural activity.

Spillover effects can be found or implied at various points in the European strategic narrative around the arts, culture and creative industries. For example:

- **Creative Europe** (2014-20) (the European Commission's main cultural funding programme) 'declares an expressed interest in dissolving the institutional and ideological boundaries between arts and enterprise, the creative industries and other industries, and in promoting explicit interconnections between cultural policy objectives and the objectives of urban, industry and enterprise policy programmes'⁹. **Yet spillovers per se are not mentioned (ecce, 2015).**
- **The Europe 2020 Strategy** (EC, 2010) positions culture and creativity as central to the 'Innovation Union', which will drive economic success. A similar agenda is apparent in the call for an 'integrated industrial policy for the globalisation era' – which places the cultural and creative

industries as providers of innovation and emphasises the role of urban policy and cultural policy as enablers of innovation, such as through creative clusters, networks and education/skills. Other key policy documents – such as *Culture as a catalyst for creativity and innovation* (EC, 2009) – position culture and creativity as drivers of innovative capacity (of citizens, organisations, businesses and societies) and calls for EU Member States to better foster synergies between the cultural sector and other sectors of the economy. **Spillovers are inferred but not specified, with the emphasis more on increasing the profile and role of culture and the creative industries in social and economic development.**

- **Wider EU funding programmes, including structural funds – leveraging local economic and cultural policy and investment.** There are plenty of city- or region-based projects which seek to generate a holistic set of outcomes through cultural and creative industries investment – often couched in terms such as regeneration, competitiveness and, of course, innovation. The European Union has published a Policy Handbook (EU, 2012) on how to strategically use the EU support programmes, including structural funds. Implicit in this is an invitation to explore a range of spillover effects – from the value-adding role of design to increased cultural tourism; from the growth in civic participation and via audience development in culture to cross-sector collaboration for creative and digital businesses (e.g. via networks and hubs). **Spillovers are articulated (without being called spillovers), but not in a consistent way.**
- **Innovation and creative networks/exchange projects.** As an outcome of the above EU priorities, we are entering a growth phase for spillover-related projects – with many across the wider innovation and knowledge-exchange theme and some specific examples of creative and culture spillover projects. One of the most well-known of these is Creative SplN (Creative spillovers for innovation) – a three-year URBACT project aimed at setting up tools and methods to trigger innovation and creativity in businesses and other kinds of public and private organisations: '(T)he purpose is to encourage interactions between CCIs and other economic and social sectors, from manufacturing, ICT and tourism to health and the public sector'¹⁰. Other projects and networks are emerging – from individual workshops to pilots held as part of European Capital of Culture programme¹¹; from conferences to Interreg Europe and URBACT creative industries projects which connect different cities/regions with diverse sector profiles. But to date most projects have not positioned spillovers as a

⁹ http://ec.europa.eu/programmes/creative-europe/calls/general/2015-eac-08_en.htm

¹⁰ For a project description, see: www.keanet.eu/docs/press%20release%20urbact.pdf?4f4eb7

¹¹ For example the Creative City (Cidade) Programme of Guimarães, European Capital of Culture 2012 had a dedicated creative spillovers project where designers and artists were commissioned to work with the manufacturing and tourism sectors to co-create new products and services. Essen and the Ruhr2010 also placed great emphasis on cross-sector collaboration.

clearly or consistently defined term – especially in relation to the arts, culture and creative industries. Indeed, several initiatives use the term cross-overs to explore elements which others might term spillovers – such as the high-level conference on creative and cultural cross-overs staged by the government of Latvia as part of their EU Presidency in February 2015¹² – **and which form part of the recommendations of their Presidency**¹³.

Within the current strategic narrative, the claims made for investment in the arts, culture and the creative industries are not always backed up by evidence of causality. Notions of knowledge exchange, knowledge and technology transfer, cluster effect, convergence, value-added, value-chain, and so on, are at times interchanged, infrequently defined and inadequately articulated. All are attempts to formulate a public value narrative for investment in the arts, culture and creative industries.

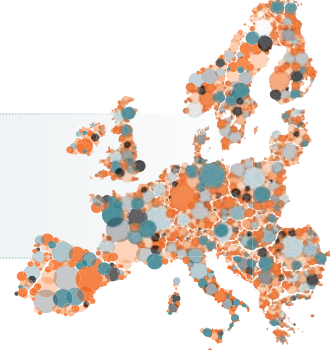
This study is one step on the path to ensuring spillovers make a constructive intervention in this space, rather than simply add to the mix of terms and concepts which fall into the traps of obfuscation, instrumentalisation or both.

The next sections of this report attempt to illustrate the diverse and shared approaches to measuring and articulating the complex relationships being played out through public investment in the arts, culture and creative industries and between these sectors and the wider economy. This, as will be discussed, raises a set of methodological, conceptual and therefore strategic challenges, as well as some clear opportunities for future approaches.

¹² <https://eu2015.lv/events/political-meetings/conference-on-cultural-and-creative-industry-crossovers-2015-03-11>

¹³ <http://www.es2015.lv/en/>

4. The evidence library



4.1 Methodology

The evidence library consists of 98 documents. They are a mixture of academic studies, evaluations, literature reviews, case studies, abstracts of proposed studies and reports by government committees and government departments. Each of the partners was invited to submit pieces of research that demonstrated spillover effects. They were asked to consider the evidence against a typological framework: in the funding and delivery context, programme and project, geography, methodology and assumed spillover relationship or hypotheses¹⁴.

4.1.1 Quality and appropriateness assessment

The evidence in the library was assessed in a four-stage process over a two-month period. ecce assembled the library from partners and provided an Excel spreadsheet which contained the partners' rationale for suggesting the documents and a basic breakdown of the contents. Each document was then read by researchers at TFCC who captured the key information in a simple form for each document – this included categories such as the type of study, methodologies used, data and content type, cases of spillover captured and evidence of causality. Thirdly this information was fed back into the spreadsheet, allowing for an overview of the library. At this stage the assessment of quality was made. In addition to the evidence submitted by the research partners, TFCC conducted a wider search of evidence from Europe. The main means of doing this was through email and social media, asking individuals and organisations to contribute papers and evidence they felt were worthwhile. The research partners commented throughout the process and through two group meetings held in London and Dortmund.

Idiomatic quality and relevance assessment criteria were designed to ensure coherence and avoid situations where, for example, undue weighting is given to evidence that is not sufficiently robust or relevant for the purpose of this study. It is acknowledged that notions of quality can be contested, not least because such a variety of evidence was to be explored, from a diversity of sources, each driven by different strategic agendas and each enabled by a specific set of funder-funded relationships. For this reason, assessment was also made of the appropriateness of the research foci for this study. However, we are aware that additional or different criteria might have been adopted in the assessment process and that there are imperfections in analysis as a consequence. This is part of the learning process this study has initiated and it is likely future (and especially longitudinal) studies will refine processes of quality and appropriateness further – e.g. via peer review.

The appropriateness of using the Maryland Scientific Methods Scale was considered as it represents an accepted method of judging the robustness of research in the social sciences (WWC, 2014). This uses a five-point scale with level one (least robust) for evaluations based on simple cross-sectional correlation up to level 5 for randomised control trials. However its value in assessing the evidence within this library was limited as it is mainly applicable to assessing the robustness of evidence from specific interventions, whereas this library as a whole does not deal with testing of a specific causal hypothesis.

Instead, to assess the quality of the evidence in the library, a broader set of criteria was adopted which would cover the greater spectrum of material within the library. This set of criteria was partly based on UK government guidance on evidence assessment (DFID, 2014). Each item in the evidence library was assessed against the following criteria:

- **Conceptual framing** – Does it acknowledge existing research from national and European-wide sources and/or construct a coherent conceptual framework with a clear link between the object of study, the rationale for its measurement, the methodology for measurement, and the results articulated?
- **Transparency** – Is the study open about its methodology and transparent on context and geography? Does the study measure publicly funded / stimulated outcomes or lack specificity regarding the financial drivers? This is vital from the perspective of replicability and for the core research question on the links between public investment and cultural and creative spillovers.
- **Appropriateness** – Does the study directly measure spillovers or can spillover outcomes be at least inferred through outcomes? Do the methods effectively measure such outcomes – either directly or indirectly? Does the study make links with a wider research and knowledge pool – e.g. to other research and to national or to the EU policy landscape?
- **Cultural sensitivity** – Does the study explicitly consider any context-specific cultural factors including place, diversity, legal or regulatory aspects?
- **Validity** – Are the measurements the study uses valid or recognised in other studies (i.e. based on proven research and evaluation tools such as surveys, interviews, workshops, accepted mapping methodologies etc.)?
- **Consistency** – How stable are the measures used in the study? How longitudinal was the study? How large or representative were samples?
- **Cogency** – Are the conclusions based on the study's results?

¹⁴ See Appendix 3 for a full typology.

Of the 98 documents in the evidence library, 71 were judged to meet the majority of these criteria, 14 were felt to be reliable and meet at least three of these criteria and 13 were either incomplete or not in English (with insufficient translation available) to make a full judgement¹⁵. For example Garcia et al. (the evaluation of Liverpool's European Capital of Culture 2008) is a high-quality piece of evidence because it meets all seven of the criteria. Comescu/Dudau (an evaluation of the International Theatre Festival in Sibiu, Romania) is good quality, meeting the criteria for conceptual framing, appropriateness and cogency but less so for reliability and validity. The degree to which each document has something important to say on cultural and creative spillovers is captured in the detailed review which follows.

However, research partners are aware that the assessment criteria used here are pragmatic tools which would benefit from further refinement in future. For example, some criteria are more difficult to assess than others – e.g. cultural sensitivity (where local specificity and depth is difficult to gauge without knowledge of the locality being studied); cogency (where the relationship between findings and analysis may not have been effectively articulated but it might still exist), and transparency (without a clear understanding of the strategic drivers for commissioning the research, the extent to which it delivered on this is difficult to assess).

4.1.2 How the 17 spillover sub-categories were decided

The approach to analysing the library was as follows. First, each piece was read and evidence relating to spillovers was collected. Evidence was sorted using content analysis by the researchers. Following the first meeting with the partners, it was decided to apply an initial typology of knowledge, industry and network spillovers. These three are the most established typology for spillovers, with roots in economic literature. They feature in the *European statistical system network on culture final report* (ESSnet, 2013) and are later used by (among others) Bakshi et al. (2013) and O'Connor et al. (2015).

These spillover types were then further divided until the 17 final sub-categories for analysis were chosen.

4.2 Analysis of the evidence library

4.2.1 Main geographic area discussed in documents

The evidence library contains studies from across Europe. Seventeen different European countries feature as the prime country discussed, eight studies look at the EU as a whole, 14 studies feature countries from the EU and rest of the world (seen in Figure 2 as 'multiple'), two look at Scandinavia and one is geographically focused on Eastern Europe. Twenty-nine studies, by far the largest number, mainly relate to the UK and its constituent countries. There are eight focused on Norway, six each on Finland and Germany. No other country has more than five studies.

Given the nature of the way that the library was built up through partners submitting evidence it is difficult to draw many conclusions from the geographic spread of the evidence. The partners recognise that there is a large geographic area not represented in this review. At the beginning of the process, effort was made to contact and engage partners across Central and Eastern Europe. Although this was to limited effect, any future research will continue to make attempts to engage researchers and organisations in these areas.

However some observations can be made at this stage. The library reflects the research interests of partners involved in assembling the research. The dominance of studies focused on the UK is an example of the degree to which the UK has led the field in cultural evaluation and creative industries policy formulation. It also suggests that the terminology is still to gain currency in non-English-speaking countries and that language barriers persist.

The spread of quality in reports is not significantly related to geography. Of the UK-related reports, 26 were judged to meet the majority of the quality criteria while three were good quality.

¹⁵ For details of the quality assessment of each piece of evidence please see <http://ccspillovers.wikispaces.com/>

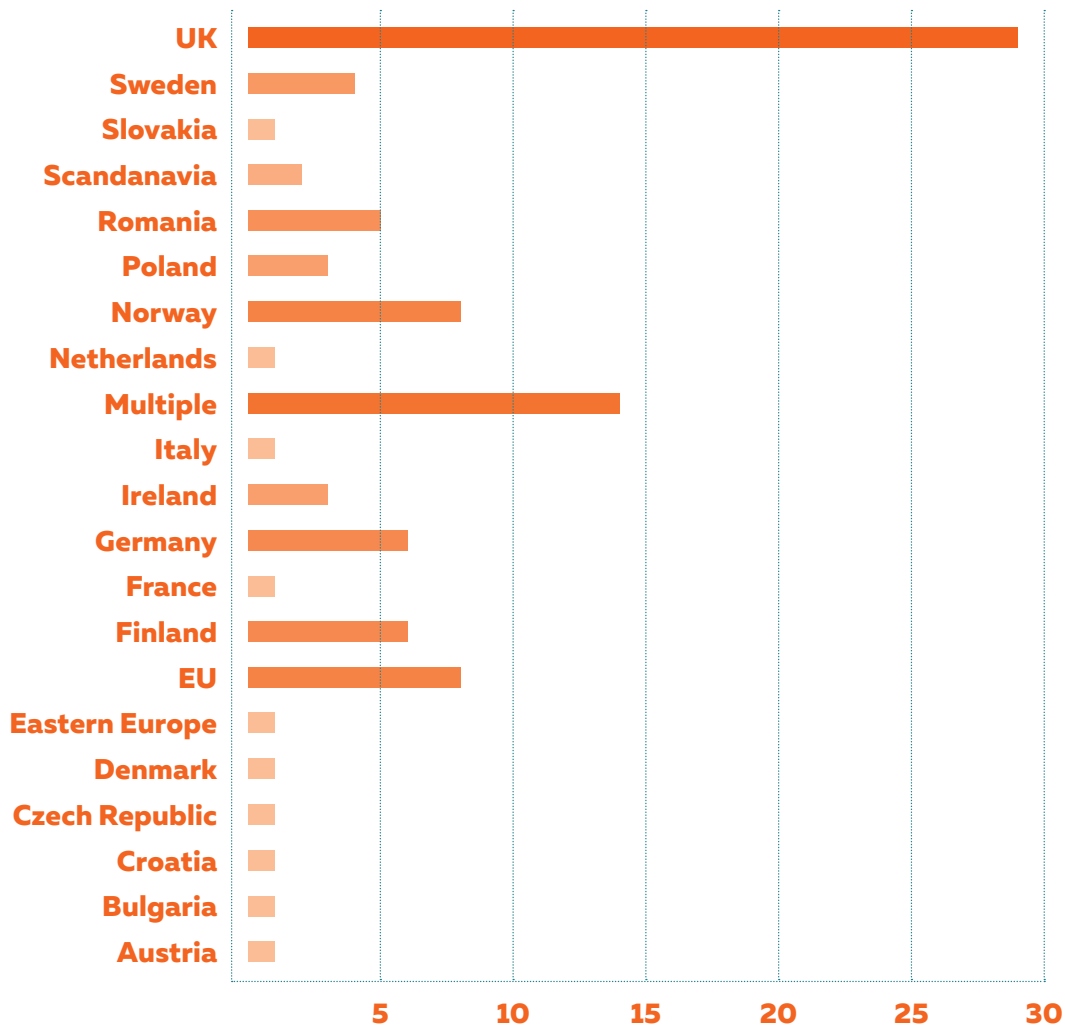
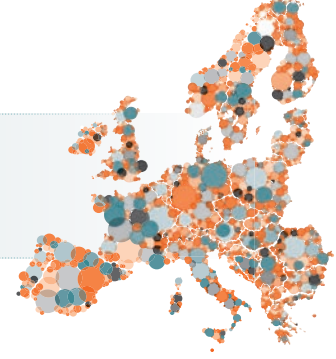


Figure 2. Evidence by main geographic area considered (n=98)

The library contains a very diverse mix of study type and methodology, reflecting the broad range of approaches taken in analysing and evaluating the arts, culture and creative industries. In terms of study approach, the largest group of 44 are evidence reviews which feature a variety of methods including multidisciplinary methods, and quantitative and qualitative analysis, including literature reviews, surveys, case studies and write-ups of seminars. Nearly one in five (17) studies are primarily quantitative analysis, while a third of documents are split between being literature reviews (nine), surveys (nine) and case studies (eight).

Most strikingly, only one study in the library is a randomised control trial (RCT), which sets out to prove a specific hypothesis. This, by Nesta in the UK, examines creative credits and their impact on small businesses and the wider economy (Bakshi et al., 2013), and brings an approach now being increasingly favoured by policymakers taking an

evidence-based approach (WWC, 2014). The absence of more 'experimental' studies such as this is testament to the complexities and expense of establishing randomised control trials (with control groups). It also reveals that the general approach to examining the arts and creative industries in the area of spillovers has rarely been from a hard economic or social science background.

The presence of only one study which uses data collected as part of a large-scale longitudinal study is another weakness. Cuyper et al. (2011) is grounded in the third population-based Nord-Trøndelag Health Study (2006-08), part of one of the largest health studies ever performed, and now containing a database of approximately 120,000 people in total. It is very difficult to reach the evidence standard required to prove causality in terms of the personal impacts of participation in culture without being part of significant longitudinal studies.

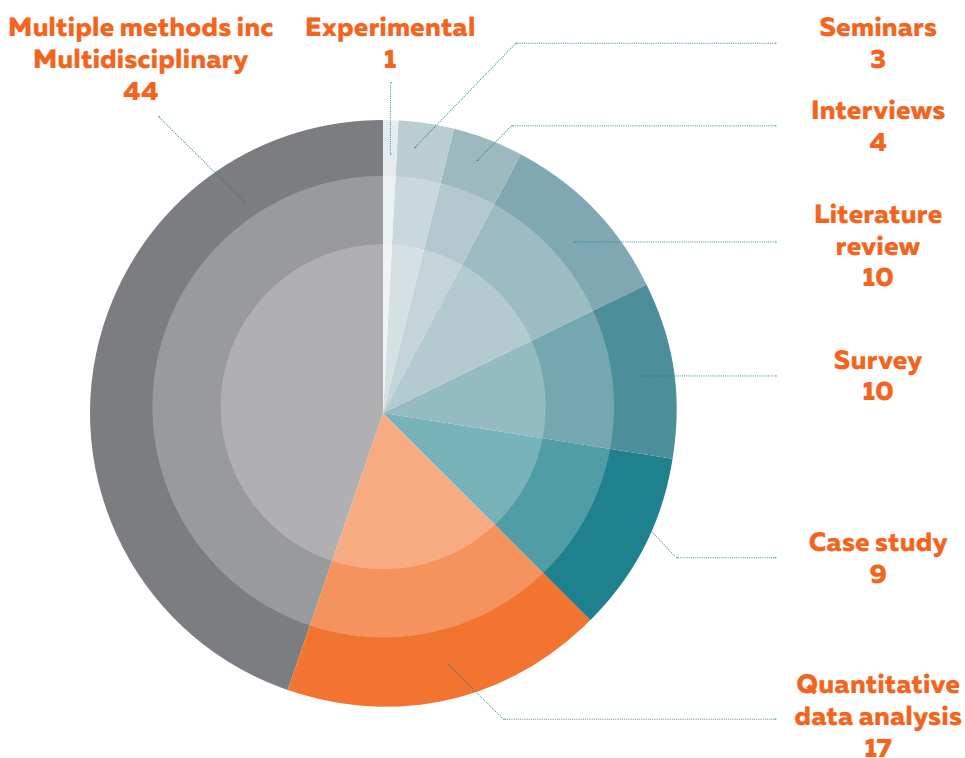
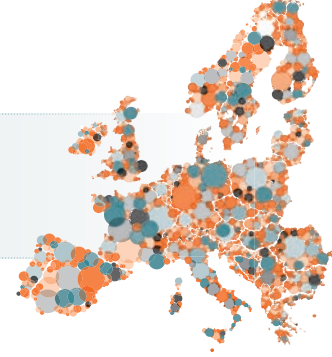


Figure 3. Number of reports using type of methodology (n=98)



The evidence library predominantly features contemporary studies from the past 13 years. More than half of the evidence library (with a publishing date) has been published since 2012. This could be taken to indicate the extent to which interest in spillovers and the wider impacts of investment in culture and creativity is reflected in research as well as the interests of the research partners. There is no significant difference in quality of reports across time.

In terms of language used to discuss spillovers, the library reflects the ongoing blurring of terms found across the arts, culture and creative industries. The term spillover is the most commonly used in 28 documents but this again needs to be viewed with caution and within the constraints of the library. While the term spillover may be gaining currency, it does not mean that it means the same thing within documents. 'Added value', the second most commonly used term, still has considerable currency and popular use as a term particularly around public investment. The challenge that language presents is discussed below.

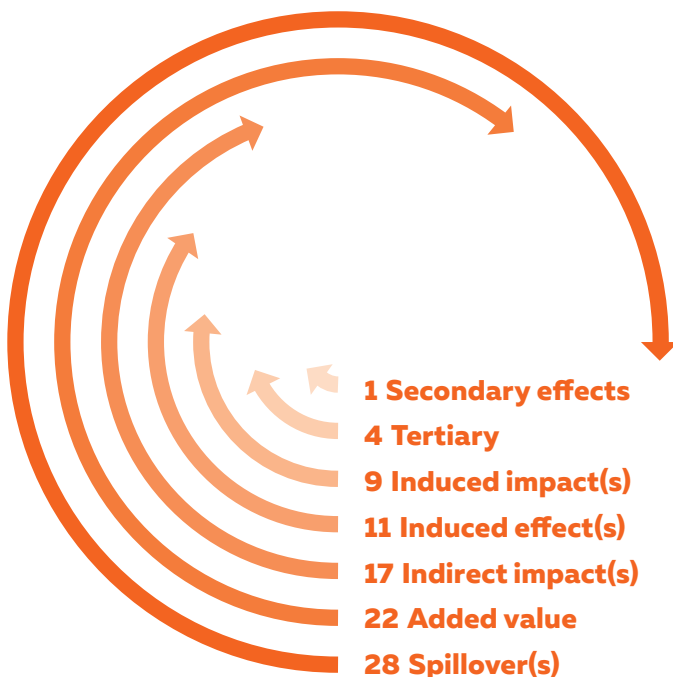


Figure 4. Number of reports that use this terminology (n=92, please note that due to the complexity of translation, six items could not be categorised in the terminology above)

4.2.2 Challenges in reviewing the library

In analysing the evidence library, a thematic approach based on placing spillovers into three types was designed to allow the research team to sift through a considerable amount of material. This has been guided by the desire to adopt an interdisciplinary understanding of the methods of gathering evidence on spillovers. This is particularly vital as spillovers cross boundaries of other disciplines – such as social science, economics, health research, economic geography and urban planning.

One of the main challenges has been the methods used in studies and the language used to frame findings and discussion. The majority of studies in the library do not set out to directly capture 'spillovers' (or a related term such as added value or indirect impact) as the result of a particular intervention or public investment. Studies may refer to the possibility of spillovers occurring but in few cases set out to directly capture spillovers. The term spillovers is still not widely used or applied, or stable in definition. Thus in looking at the library, terms which to a degree overlap with spillovers – such as added value, indirect impacts, indirect outputs and so on – have been interpreted as referring to spillovers.

At other times reports in the library operate within a conceptual framework which restricts them from taking an approach that allows for much consideration of spillovers. Many of the reports restrict themselves to narrower definitions of economic or social impact which don't allow for subsequent or secondary impacts or attempt to further understand the processes which may be at work. Spillovers are often peripheral to the main purpose of studies within the library.

Within the library there is very limited evidence which meets the accepted scientific standards such as Bradford Hill criteria required to prove causality – with only two out of 98 items (Bakshi et al., 2013, and Cuypers et al., 2011) approaching accepted scientific standards. This raises a challenge for us as reviewers exploring the evidence around public investment and spillover effects. For the purposes of this review we do not rule out the evidence within the library, but this observation shapes recommendations on where future research should be focused.

5. Classification of spillover sub-categories

The primary categorisation of the evidence consisted of placing the spillover effects demonstrated in each item of evidence into three broad thematic categories. While these thematic categories hold up well overall, there is considerable overlap and flow between them. The three thematic types are knowledge, industry and network spillovers.

These three types of spillovers have been used in previous studies and date back at least to the report done for the Department for Culture, Media & Sport (England/UK) in 2007 by Frontier Economics, which in itself was based on work from 1996 (Jaffe). Nesta built on this typology in 2008 in their policy report on the creative economy (Bakshi et al., 2008) and in 2010 in their report on clusters and innovation (Chapain et al., 2010), but essentially they use the same three-part framework. For this study, even though we take a broader approach to spillovers, looking beyond only economic impacts, these three types are still the most practical.

5.1 Knowledge spillovers

Knowledge spillovers describes the set of cultural and creative spillovers which relate to **new ideas, innovations and processes** developed within arts organisations and by artists and creative businesses, which then spill over into the wider economy and society. This thematic category also includes the transfer of skills and training (for example, through labour flows), the spillover effects of cultural and creative education on young people's learning, and the increasing integration at a local level of culture into mainstream delivery of public services and governance.

We have then subdivided knowledge spillovers into seven more sub-categories. These were chosen as they were the most coherent and occurred thematically the most often. The knowledge spillovers sub-categories are how culture and creative industries stimulate creativity and encourage potential; how they increase visibility, tolerance and cultural exchange between communities; their role in changing attitudes in participation and openness toward the arts; employability and skills; cross-border cooperation; new forms of management structure, and culture-led innovation.

5.2 Industry spillovers

Industry spillovers relate to outcomes for the economic performance – e.g. where activities in one sector influence performance in another across a value chain between or within sectors (such as on productivity, competitiveness or practice).

They stem from the influence of **dynamic creative industry businesses, artists, arts organisations or artistic events**.

Primarily these are driven by a large or dominant business, arts organisation or artistic event within a specific region, city or cluster.

Industry spillovers are subdivided into five more sub-categories: how culture and creative industries stimulate business cultures and entrepreneurship; property markets; private and foreign investment; productivity, profitability and competitiveness, and innovation and digital technology.

5.3 Network spillovers

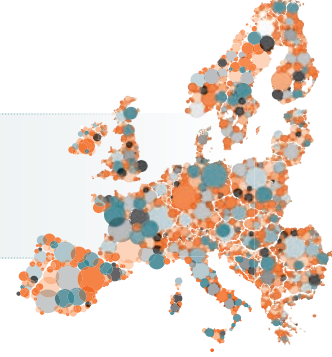
Network spillovers relate to the **impacts and outcomes to the economy and society** that spill over from the presence of a high density of arts and/or creative industries in a specific location (such as a cluster or cultural quarter). The effects seen in these are those associated with clustering (such as the spread of tacit knowledge) and agglomeration, and the benefits are particularly wide, including economic growth and regional attractiveness and identity. Negative outcomes are also common – e.g. exclusive gentrification.

Network spillovers are subdivided into six sub-categories: social cohesion and community integration; health and wellbeing; creating an attractive ecosystem and creative milieu, city-branding and place-making; urban development and infrastructure, and economic impact from clusters and regions.

5.4 How the spillovers relate to each other

Capturing the complexities of how spillovers interrelate and the mechanisms by which they operate is beyond the scope of this review but there are some important observations to note. Firstly, we believe that the model of an 'ecology of culture' (Holden, 2015) is valid in the way it models how the arts, culture and creative industries relate to each other and the wider world. Therefore 'spillovers' should be seen as flows which can occur in multiple directions, involving a complex network of partners, collaborators and co-creators. Spillovers between the elements that make up the ecology are as important as those that flow out from it. As CEBR (2013) make clear, the extent of the flows between arts, culture and creative industries is very significant and more likely to be under- rather than over-estimated:

Over a quarter of the arts and culture industry's supply chain is accounted for by the creative industries, representing almost £2.2bn in 2010... The arts and culture industry in the UK is indirectly a significant source of support for jobs in the commercial creative industries.



This is a point echoed by KEA, in their review of the impact of culture on creativity (KEA, 2009), in which they state that the flows between culture, creative industries and the wider economy are increasing due to changes in consumer sophistication and demand:

Culture-based creativity is a fundamental means for industry and policy decision makers to adopt and implement more user-centred strategies (less about “making things”, more about providing a service)... Culture-based creativity helps to promote well-being, to create lifestyle, to enrich the act of consumption, to stimulate confidence in communities and social cohesion.

Types of spillover	Spillover sub-categories	No of documents in evidence library featuring
Knowledge Spillovers		56
	Stimulating creativity and encouraging potential	9
	Increasing visibility, tolerance and cultural exchange between communities	5
	Changing attitudes in participation and openness toward arts	6
	Increase in employability and skills development in society	14
	Strengthening cross-border and cross-sector collaborations	6
	Testing new forms of organisation and new management structures	5
	Facilitating knowledge exchange and culture-led innovation	11
Industry Spillovers		38
	Improved business culture and boosting entrepreneurship	12
	Impacts on residential and commercial property values	4
	Stimulating private and foreign investment	3
	Improving productivity, profitability and competitiveness	6
	Boosting innovation and digital technology	13
Network Spillovers		87
	Building social cohesion, community development and integration	20
	Improving health and wellbeing	10
	Creating an attractive ecosystem and creative milieu, city-branding and place-making	16
	Stimulating urban development, regeneration and infrastructure	11
	Boosting economic impact form clusters and regions	30

Figure 5. Spillover framework (Please note that the numbers do not add up because there are multiple overlaps between spillover categories)

6. Analysis of the evidence library

This section analyses the evidence library according to three main types of knowledge spillovers, industry spillovers and network spillovers. It selects highlights from the library which examine spillover effects and lists the other documents which contain material relating to the spillover in question.

Short summaries are given at the end of each section which round up key points from the evidence.

6.1 Knowledge spillovers – cities and nations, innovation and economic spillovers, benefits to society

Knowledge spillovers refer to the new ideas, innovations and processes developed within arts organisations and by artists and creative businesses which spill over into the wider economy and society without directly rewarding those who created them.

6.1.1 Stimulating creativity and encouraging potential

The evidence library contains strong examples of how publicly funded arts organisations stimulate and foster creativity in talent of all ages and across different cultural backgrounds. This includes the spillover benefits of engagement with the arts and performance at school and in the workplace. Evidence of causality is limited to those studies which explore engagement over a significant period of time and track a specific cohort.

Examples from the library include an analytical data-driven report on the contribution of the arts and culture to the UK's national economy (CEBR, 2013), which states:

74.4% of arts organisations that are regularly funded through the Arts Council provide some sort of work experience, apprenticeship or internship.

Furthermore, based on evidence supplied by arts organisations, wider effects are delivered which last beyond the term of the activity and through individual careers:

These placements allow graduates to develop the skills required to work in a creative industry and thus to unlock the benefits of their education. Creative Apprenticeships are another important route into the sector that has, in turn, been shown to bestow on their participants a wage premium of between four and 18 per cent.

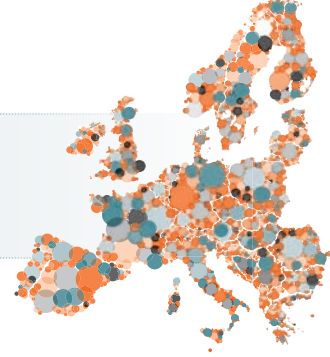
This report goes on to explore the spillover benefits of arts and culture that can improve national productivity. Central to these effects is the importance of engaging with the arts in developing critical thinking, creative problem-solving and communication. It makes the case that creativity is an 'essential pillar' of the knowledge economy, therefore the stimulation of creativity is an important component. Based not on direct evidence but through speculation on the agglomeration of individual effects, it is nonetheless an interesting argument. This report emphasises that researching and exploring spillover effects should be a priority because of the way that cultural organisations interact with the wider economy:

This report has identified some of the ways in which arts and cultural organisations provide support to creative commercial industries, and found some anecdotal evidence for these. Future research could attempt to map these interactions and their outcomes systematically. A survey of creative businesses to identify the extent of such interactions and their perceived benefits could help establish the value of these activities across the sector.

It goes on to posit that the individual effects of the arts taken in aggregate have a positive impact on the effectiveness and flexibility of the workforce, as well as leading to social improvements including better healthcare options and reduced crime. However, importantly, the report also raises the challenge of causality and tracing impact. It is

not a straightforward matter to measure these effects, not least because the benefits to productivity and competitiveness are felt in the long term.

However, there is some evidence of spillovers in the two areas of academic attainment and transferable skills. The same CEBR report cites the findings of an evidence review which found that participation in artistic and cultural activities improved cognitive and transferable skills. It goes on to stress how this points towards long-term engagement between pupils and the arts as having the biggest impact and that schools should focus on developing relationships with arts organisations to deliver this. It also finds some evidence that transferable skills gained through arts- and culture-related education improve employment prospects and can reduce social problems such as offending rates.



Another evidence review (primarily a literature review) into arts and culture's value to people and society (ACE, 2014), finds evidence from the United States that:

Schools that integrate arts across the curriculum in the US have shown consistently higher average reading and mathematics scores compared to similar schools that do not.

This report emphasises though that there is a real evidence gap and problems with proving causality. Larger sample sizes, longitudinal studies and experimental methods will go some way to addressing these issues.

A review of Edinburgh Festivals (BOP, 2011), based on surveys and evidence gathered from performers and organisations, found that there were learning benefits for children, particularly in terms of personal development, imagination and creativity. However it found that these benefits did not spread to attitudes to school learning or peer relationships, mainly due to the short length of engagement that festivals have.

Work-related learning for young people in the creative industries (TFCC, 2008) provides a mix of benefits for learners including raising aspiration, driving entrepreneurship and embedding creativity in the learning process as well as technical and soft skills such as sociability and openness.

As well as stimulating sociability in individuals, publicly funded culture can play a key role in generating social innovation (KEA, 2009) and feelings of belonging in society as a whole:

...participation in cultural activities can emphasise a feeling of belonging in society, which also increases trust in the public realm and public services. Culture can therefore help to bring certain public services closer to their constituents.

These spillover effects were also seen when the arts were brought into businesses and the workplace (Grigoleit et al., 2013). One striking observation in this study is that adopting 'artful ways of working' can help teams and individuals innovate and perform under strain, especially during periods of pressure and ambiguity, with the adoption of artistic formats helping in fermenting trust and new ideas.

In terms of causality and the connection between culture and personal impact, one study, primarily a literature review, on impact evaluations in museums and libraries (Goodlad et al., 2002), makes an interesting case that the most compelling evidence of social impacts was to be found in personal impacts

because the immediate outcomes are more easily identified and less problematic in terms of establishing causality.

This study, using a mix of surveys and structured interviews, cites engagement in the arts and culture sectors as a source of enjoyment and personal satisfaction alongside the acquisition of skills, trying new experiences, increased confidence and self-esteem, changed or challenged attitudes, developing creativity, cultural awareness, communication and memory.

Reports in the library which relate to this area:

ACE, 2014; BOP, 2011; CEBR, 2013; Goodlad et al., 2002; Grigoleit et al., 2013; Interact, 2002; KEA, 2009; Krynicia, 2012, and TFCC, 2008.

Summary conclusions

- More research is needed to understand how experiencing and practising 'creativity' in one sphere translates into bringing a more creative approach to other spheres of activity.
- More research is required to explore why long-term engagement seems so important in delivering change, not least because it is so often expensive and complicated to achieve.
- It is necessary to develop better methods, including standardised surveys and questions formats, for the above named research focus, especially for personal impacts which capture how creativity can be stimulated.

6.1.2 Increasing visibility, tolerance and cultural exchange between communities

The evidence library contains evidence of the spillover benefits of arts, culture and creative industries in increasing visibility, tolerance and cultural exchange between communities. Intercultural dialogue is cited in the evidence library as one of the spillovers from public investment in arts and cultural projects. Several reports in the evidence library look at the impact of the arts, culture and creative industries on wider social cohesion, including the role they play in tackling ingrained social problems (KEA, 2009). These reports are mainly reviews of evidence and literature.

Core to the evidence of spillover effects to social cohesion is the role of culture as a developer of social capital

...as a system of values and references that can foster communication among different groups.

(OECD, 2005)

A study by EENC (Dümcke/Gnedovsky, 2013) points to the valuable role of heritage in connecting communities and mobilising interaction:

The social impact of cultural heritage becomes particularly graphic in the cases where heritage is used for stimulating a dialogue between different cultural groups. Fostering intercultural dialogue, cultural and social inclusion and creating an atmosphere of tolerance through heritage projects or heritage institutions form part of a contemporary agenda discussed by many authors.

One study from Sweden offers a practical example of the effect that culture can have on social cohesion (ECF, n.d. (b)). It features the example of Megafonem, a non-government organisation (NGO) working with the 'voiceless immigrant suburbs' in Stockholm during a period of civil unrest and disturbance. It confidently asserts that the work of this NGO was partly responsible for ensuring that disturbances did not cause fires in the Alby area because local youth were engaged in their cultural projects. It is only a small case study and the lack of further compelling examples in the library points to the area of social cohesion as one ripe for further research.

Reports in the library which relate to this area:

ECF, n.d. (b); Dümcke/Gnedovsky, 2013; Interact, 2014; KEA, 2009, and OECD, 2005.

Summary conclusions

- More research is needed on the relationship between the arts, culture and the creative industries and the multiplicity of programmes and initiatives designed to tackle societal challenges. In particular, more evidence is needed of the value that culture and heritage can bring in terms of social cohesion. Dümcke/Gnedovsky (2013) call for 'comparative cross-border studies, on a macro level, of the economic impact of heritage sector across Europe, especially involving countries where no relevant data has been gathered so far'.
- New guidelines around measurement are needed to help explore how public funding can best be directed towards the generation of arts and cultural activities which stimulate social capital. These include the impact of volunteering, which is particularly strong in generating social capital (Impacts 08, n.d.).

6.1.3 Changing attitudes in participation and openness toward the arts

A study of European Capitals of Culture, with a detailed review of evaluations and literature (Palmer/Rae, 2004), stresses how publicly funded arts and cultural activity can lead to new types of participation with culture as well as greater openness in the public. In particular, the study emphasises the value of bringing culture to public spaces – e.g. in terms of influencing behaviour and receiving attention from the public and media.

One of the most important conclusions of the evidence review study into the URBACT programme of urban regeneration projects (Rutten, 2006) is that large-scale cultural projects not only reinforce senses of belonging but that they can go further in stimulating creativity for all regardless of 'economic, education or media achievements'. This same report evocatively sums up the impact of culture in stimulating attitudinal change as '(T)hat which appeared frozen is moving again'. The study also affirms that cultural activity itself can be viewed as a new form of participatory democracy, providing additional forums for citizens to express themselves.

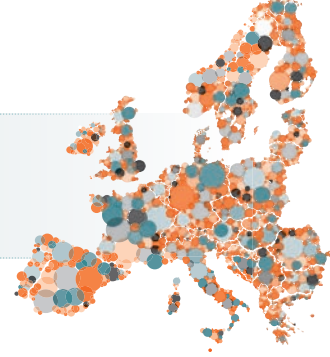
The evaluation of the Cultural Rucksack programme in Norway (ACN, 2015), a national programme of arts and cultural activity for primary and secondary school pupils, stresses the importance of the encounter between artists and students. It discusses how artists not only open students' eyes to culture, but they 'can enable students to deal with reality independently and freely'. This large-scale evaluation observed over 100 productions as well as qualitative interviews with teachers and participants and a survey of headteachers.

Reports in the library which relate to this area:

ACN, 2015; BOP, 2011; Grigoleit et al., 2013; Palmer Rae, 2004; Renz/Mandel, 2011, and Rutten, 2006.

Summary conclusions:

- Further research is needed into the unique spillovers that large-scale cultural activities have on cities and communities, especially given the increasing popularity of such events. This could include the use of effective counter-factuals as well as studies based on effective baselines.
- More research (through surveys) is needed to explore the extent to which active participation (through taking part in an activity) as opposed to passive participation (through being the member of an audience) affects the spillover benefits of outdoor events.



6.1.4 Increase in employability and skills development in society

The belief that engagement with the arts increases employability and skills development in people of all ages is commonly held and much promulgated. The library contains some evidence to support this.

The impact of the arts on the professional development of individuals and the acquisition of professional skills is captured in several ways. The evaluation of Edinburgh Festivals (BOP, 2011) makes the interesting case for festivals as reinforcers of individual artistic capital: it captures the contribution that festivals can have on the professional development of artists, their reputation and the inspiration they need to develop new work. BOP established this by including cohorts of performers and journalists among the wider stakeholders surveyed.

Another commonly cited justification for the public subsidy of the arts is that the purely commercial sector gains spillover benefits. Here the library has some meaningful evidence. Spillovers in terms of the mobility of workers between publicly funded and commercial culture as well as between the arts and the wider creative industries are captured in several studies. A survey-based study into the role of publicly funded arts as an R&D (research and development) lab for the creative industries (Albert et al., n.d.) finds that there is high labour mobility between subsidised and commercial theatre, with individuals moving in both directions. Importantly, it finds only a small minority of people (12 per cent) had worked only in the commercial sector, emphasising the importance of the relationship between the two.

An Estonian study into creative spillovers (Tafel Viia et al., 2011) expands this discussion of labour mobility through stressing the importance of cross-sector knowledge exchange and transfer. In its discussion of how to capture spillovers, it describes what it believes may be occurring and should be captured:

Creative professionals such as designers, advertisers, software developers, but also professionals in film and television industries may be employed outside the creative industries, bringing with them new techniques, ideas and ways of working. Or, they may start spin-off companies in a different sector.

In this report they later set out how they believe a framework for capturing these spillovers can be developed:

However, we may define the general logic of the process of measuring spillover: (a) Identifying the existence of touch points

between a given CI branch, quarter or event and other sectors; (b) Assessing the existence of influence of a CI branch and quarter; (c) Identifying the benefits from the relationship with a CI branch or quarter; (d) Evaluating the nature and scope of the impact (spillover).

Reports in the library which relate to this area:

ACE, 2007; ACE, 2014; Albert et al., n.d.; Antal/Strauss, 2013; BOP, 2011; BOP, 2014; CEBR, 2013; Goodlad et al., 2002; Interact, 2014; Johnson et al., 2011; Tafel Viia et al., 2011; TFCC, 2008; TSRC, 2011, and Wavell et al., 2002.

Summary conclusions

- There is a need to examine further the relationship between the publicly subsidised and commercial sectors, especially cross-disciplines and cross-sectors.
- Further research should consider the transferable skills that training in the arts brings and their application in other careers beyond the creative industries.
- As suggested by Tafel Viia et al. (2011), capturing spillovers between sectors involves understanding the touchpoints between sectors and then developing case study approaches which explore these.

6.1.5 Strengthening cross-border and cross-sector collaborations

The role of the arts and culture in helping to establish cross-border and cross-sector collaborations is explored in several studies. As a key component of European funding is based on the benefits of co-operation, this is unsurprising. One of the main spillovers cited within the review of European Territorial Cooperation projects, based on project evaluations (Interact, 2014), focuses on CCIs and their role

in stimulating cultural entrepreneurship and encouraging spill-over effects between cultural activities and industries, new and more competitive markets flourish in border regions.

This report, which analyses 583 creative and cultural industry projects, stresses the important role of cross-border networks in allowing experts from different countries to exchange knowledge and skills. It goes further by expressing the value of multiple-country input into making tourist attractions more appealing and local products more innovative. Border countries themselves could be a key area for further research more broadly into their role as stimulators

of spillover effects – not least due to the increase in mobility across borders and the challenges and opportunities this generates for Europe.

This study finds that Europe's border regions spend 11 per cent of the available co-operation budget on culture and creativity projects rather than, for example on other infrastructure needs, such as new roads or alternative energy sources. They articulate the main reasons for this as hinging on the role of cultural projects in facilitating knowledge exchange and transfer and stimulating entrepreneurship: a process they believe otherwise 'tends to stop at borders'. An example of the type of programme which delivers this is CCAIps (Creative Companies in Alpine Space):

This connected enterprises, carriers of ideas, producers, policy makers and universities to create a European network of institutions committed to helping creative industries in the Alpine region to reach their highest potential. All participants in the network had the possibility to promote and realise innovative pilot projects (Creative Camps) and new policies for their growth.

The Interact report positions culture as a resource – 'like the environment' – which can be carefully 'mined' to achieve differing policy objectives. It emphasises the potential that arts and culture have to impact on sectors such as tourism and fashion which integrate content, creative skills and aesthetics through their value chains. It believes it is at a local and regional level that the impact of culture is best observed:

Cities, regions and their respective identities play a vital role in fostering jobs, businesses and urban beautification through culture and creative industries (CCIs). Also, cities are historically the place where innovation takes off. They play a key role in stimulating interactions between local stakeholders and contributing to triggering spillover effects from CCIs into traditional economic fields.

Reports in the library which relate to this area:

ACN, 2012; Antal/Strauss, 2013; FM, 2014; Impacts 08, n.d.; Interact, 2014, and Tafel Via et al., 2011.

Summary conclusions

- Further exploration is needed into whether spillover effects are more pronounced in cities and urban areas or whether

it is an effect of these areas being more closely researched and observed. Methods here include qualitative analysis (interviews, case studies) and longitudinal survey analysis.

- Because of the importance of growing cross-border co-operation, we anticipate that there will be a need to explore the specific spillover benefits of cross-border projects and what can be done to enhance them in further projects.
- Need to build in measures including baseline analysis to capture spillover effects of cross-border projects.

6.1.6 Testing new forms of organisation and management structure

Arts, culture and the creative industries have long been associated with new ways of working and new forms of organisation. How arts and cultural organisations and creative businesses can lead the way when it comes to innovating new forms of structure, governance and working are widely recognised in the evidence library. One of the key findings of the evaluation of Liverpool's year as European Capital of Culture (ECoC) was that it pioneered new ways of working in the city (Impacts 08, n.d.):

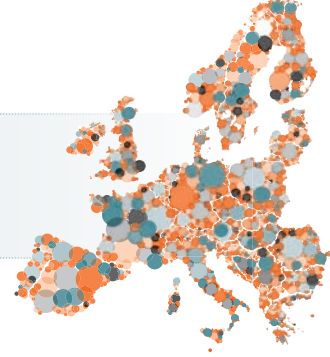
One of the key features of the governance and process of delivering the Liverpool ECoC was the involvement of stakeholders, both structurally and less formally, and the development of partnerships.

The review of the Forum d'Avignon Ruhr (ecce 2013) describes the way that creative work is now organised and how it absorbs the impact of new technology:

In highly productive segments routine activities are decreasing, are outsourced or automated. "Projectification" is the key term, meaning that managing the exception is becoming the general rule. The way in which film teams, theatre ensembles, or mountaineering expeditions work and are organised is being copied by ever growing parts of the economy. As a result, corporate boundaries are becoming more permeable and new value added networks, for example with suppliers, evolve.

Reports in the library which relate to this area:

ecce, 2013; Impacts 08, n.d.; Interact, 2014; OCE, 2014, and Palmer/Rae, 2004.



Summary conclusions

- Need for greater exploration on how arts and cultural organisations can connect new ways of working, to new business models and new ways of reaching audiences and the spillover effects this has. The role of public investment in incentivising the creation and adoption of innovative new approaches needs analysis here.
- Need for further research into the economic and innovation benefits of adopting models from the arts sector into the creative and wider economy and how these spillovers can be encouraged by public investment.

6.1.7 Facilitating knowledge exchange and culture-led innovation

The role of cultural organisations and creative businesses in helping the transition of Europe to a more knowledge-based economy is recognised by a number of reports. There are three main ways in which arts, culture and creative industries are seen as delivering this through spillover outcomes:

- Through the widely understood (but not always proven) linkage between culture, the creative industries and innovation. One report concentrating on urban regeneration (Rutten, 2006) makes the general case for this (a case which increasing globalisation and the results of the financial upheaval since 2008 has only hastened):

As Europe's international competitiveness and the wellbeing of citizens must increasingly be built upon knowledge and innovation, rather than on low cost manufacturing and services; cultural activities, and the creative industries, can help Europe progress toward its future role as a knowledge based economy.

- Through the importance of arts- and culture-driven creativity to the post-industrial economy in adding value and enabling differentiation in the marketplace – as the policy handbook on strategic use of EU structural funds makes clear (EU, 2012):

A firm needs more than an efficient manufacturing process, cost-control and a good technological base to remain competitive. It also requires a strong brand, motivated staff and a management that respects creativity and understands its process. It also needs the development

of products and services that meet citizens' expectations or that create these expectations. Culture-based creativity can be very helpful in this respect.

- In helping firms from the wider economy deliver new types of experiential services (Tafel Viia et al., 2011). This explores how businesses are increasingly seeking to look beyond mere product or service delivery and to focus instead on the whole customer experience of interaction. This is a point amplified at a regional level by the summary of the Krynica Forum (Krynica, 2012) which broadens the theme beyond individual businesses to a spatial level. It stresses the importance of considering the cultural capital contained within places and regions:

There is no innovation without creativity. And creativity is on the other hand to a great degree dependent on widely understood culture and the knowledge of its influence on economic and social processes. How to recognize and make use of the innovative character of cultural capital of countries and regions? How to use these resources for development?

With changing business models and customer demands, the role of the arts, culture and creative industries in shaping those demands and then in enabling companies to deliver is not yet sufficiently explored. In increasingly sophisticated markets where differentiation and insight are key, the role for creative industries in meeting demands is likely to increase. The Krynica report (2012) cites Greg Urban and his theory of 'metacultures' as evidence for this:

The essence of modernity is endless production of novelties, starting from culture constantly increasing production of contents, through education systematically increasing the cognitive effort, to the economy driven by successive innovations.

Reports in the library which relate to this area:

BOP, 2013; Chapain et al., 2010; ECF, n.d. (a); EFF, n.d. (d); EU, 2012; FM, 2014; KEA, 2009; Krynica, 2012; OCE, 2014; Rutten, 2006, and Tafel Viia et al., 2011.

Summary conclusions

- Need for further exploration of the innovation impact through spillovers of arts and culture on the economy, especially on the Europe-wide transformation to a knowledge-based economy. In particular understanding the value of public investment in support for the sector as a means of increasing the speed of growth of the knowledge economy in areas which lag behind.
- Just as we increasingly understand the role of design in the process of manufacture, it would be highly beneficial to explore the wider role of creativity across the value chain. This becomes more critical as convergence continues to accelerate and previously separate sectors come together or merge. Detailed case studies and a control group of creative interventions (based by public investments) would be of value here.

6.2 Industry spillovers – cities and nations, innovation and economic spillovers, benefits to society

By industry spillovers, we refer to the vertical value chain and horizontal cross-sector benefits to the economy and society in terms of productivity and innovation that stem from the influence of a dynamic creative industry businesses, artists, arts organisations or artistic events.

6.2.1 Improved business culture and boosting entrepreneurship

Two studies within the library make the case for the role of cultural and creative spillovers in improving business cultures and greater entrepreneurship. Antal/Strauss's 2012 review of artistic intervention in organisations found that one of the most compelling ways that businesses benefitted was from the improvement they experienced in 'internal relationships', with 37 per cent of the texts they analysed mentioning this impact on 'socialisation' more than once. Employees not only

expand their social network at work but also develop a stronger team spirit or sense of connectedness beyond their unit.

The importance of culture in improving the environment for business, especially in border regions, is made in the review of European Territorial Co-operation (ETC) projects Inspiring Creativity (Interact, 2014). This states that,

by stimulating cultural entrepreneurship and encouraging spillover effects between cultural activities and industries, new and more competitive markets flourish in border regions.

One of the key propositions in this study, based on analysis of ETC projects, is that almost all the activities financed by the European Regional Development Fund (ERDF) to support the creative industries in ETC projects encouraged spillover effects between 'culture-based creativity' and 'productive economic sectors':

Three Hungarian and five Austrian project partners increased the innovation and competitiveness potential of several companies supporting individuals temporarily in need of support and employment.

The study also makes clear that there is also a reverse spillover of innovative new techniques back into the creative industries that then increases competitiveness. In addition, stimulating entrepreneurship is either a key focus or spillover of many projects, including the development of creative clusters.

Reports in the library which relate to this area:

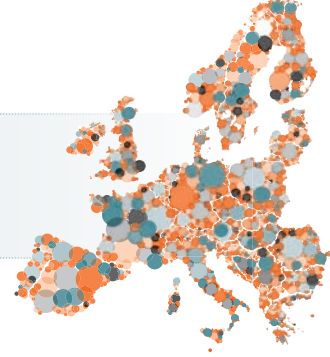
ACN, 2009; Antal/Strauss, 2012; Bakshi et al., 2008; CAN, n.d.; Chapain et al., 2010; ECF, n.d. (a); ECF, n.d. (c); Interact, 2014; OCE, 2014; Rutten, 2006; Tafel Viia et al., 2011, and TFCC, 2008.

Summary conclusions

- It would be valuable to have more evidence of the two-way spillover relationship between culture and the wider economy in terms of entrepreneurship and innovation; in particular understanding how co-location and clustering can drive more interplay between the two.
- It is necessary here to test different methodologies – such as in-depth case studies of creative clusters and longitudinal analysis of career paths for practitioners from the cultural sector and the creative industries – to explore connections and interdependencies.

6.2.2 Impacts on residential and commercial property values

The evidence library demonstrates mixed outcomes regarding the effect on property prices from cultural and creative spillovers. There are examples of the often observed effect when cultural regeneration leads to gentrification. A UK study into culture-led regeneration (DCMS, 2004) describes the effect in Hoxton (a historically poorer and industrialised area of East London) which, since the 1980s, has been 'colonised by artists'. This led to new funding and new cultural infrastructure opening in the area. However, the negative spillover of this 'colonisation' and the failure of it to provide significant economic or



social value to local people was already apparent in 2004, in what can now be said to be a classic case study of how regeneration can fail to deliver for large numbers of local people:

...although 1,000 local jobs a year have been created, the local unemployment levels have not changed. Hoxton's success has led to soaring land values, often forcing locals who work there to move outside the area. The impoverished artists credited with leading Hoxton's regeneration have also moved on as squats and low-cost accommodation have been replaced by expensive loft-style living.

However, other studies describe how culture-led regeneration can deliver benefits without such obviously negative spillovers. One study (Slach/Boruta, 2013) into culture-led regeneration in post-Socialist cities in the Czech Republic, uses three contrasting areas within the city of Ostrava to show the benefits of culture and creative industries in the regeneration of a place which had been in steep decline with a falling inner-city population. One street, Stoldolni Street, is described as an example of 'theory in practice' in the context of post-Socialist times where minimal state intervention took place: 'artists-led regeneration, followed property-led regeneration, up to consumption-led regeneration.' It is now a thriving centre of nightlife and creative activity.

Another area in the city, the Black Meadow is an example of a top-down 'flagship cultural' project where the construction of anchor buildings (including a symphony hall, a city gallery and a cultural management college) were supposed to lead to the regeneration of a brownfield site through the development of a cultural cluster. This approach 'failed' because the city was unsuccessful in gaining European Capital of Culture status, which was due to underpin much of the spending. This area in turn was usurped by the Lower Vitkovice area, a mix of brownfield and industrial buildings. Here a new centre for production, FACTORY, is being established by 'young non-conformist' artists in informal and formal partnership with a private developer. FACTORY will provide an 'artist hotspot' through the establishment of a café, bar, gallery, music club, studios and more. What the study as a whole makes clear is that the varied nature of districts within cities means that there is no simple approach that works and that drawing parallels between cities in different contexts is a challenge.

Other studies paint a less nuanced picture, focusing more purely on the positive benefits of culture-led regeneration and its positive impact (Rutten, 2006):

...if consumption and production are happily mixed. Cultural development supports economic development thanks to clusters mixing cultural and economic products (example "fashion and design district"). By developing creative tourism activity a contribution can be made to urban heritage, and real estate market.

This study then completes the circle by linking this to a Richard Florida-esque summary of the importance of attracting the creative class:

The role of creative people is an important asset for the city's attractiveness. They bring tax potential, participation in the citizen life, social mix.

A very sober assessment of the impact of major sporting and cultural events is made by a UK evidence review (WWC, 2014) that considered over 550 policy reviews and evaluations. Judging the available evidence against its strict quality standards, it came to the conclusion that there is very little evidence that high-profile projects (such as the London 2012 Olympics and Paralympics) impact on a local economy in the medium or long term; especially in terms of wages. However, it does very modestly conclude that improved facilities may have a positive impact on property prices and that

...policy makers should consider the distributional effects of these property market changes (who are the likely winners and losers).

Reports in the library which relate to this area:

DCMS, 2004; Rutten, 2006; Slach/Boruta, 2013, and WWC, 2014.

Summary conclusions

- The dis-benefits of gentrification would seem to be one of the clearest examples of negative spillovers from arts- and culture-led regeneration. More analysis is needed to understand the full picture of outcomes (both positive and negative) in cultural-led regeneration. The role of public investment in leveraging private investment that has a gentrifying impact needs more investigation.
- The increased focus on liveability and happiness and urban environments presents a good opportunity to explore cultural and creative spillovers through new lenses and in a wider context.

6.2.3 Stimulating private and foreign investment

To what extent can investment in arts, culture and creative industries encourage investment from the private sector? CEBR's 2013 study into the contribution of arts and culture to the national economy in the UK makes a strong case for the way that public investment in culture 'steps in' where private investors perceive too much risk in exploring ideas and innovative projects. The idea that public subsidy is needed to pump-prime innovation is not of course limited to the arts, with similar arguments made continually for funding in others areas such as scientific research. This study uses the example of the play and film *War Horse* to illustrate the relationship that can flourish:

Inspired by puppetry on show at Battersea Arts Centre, this National Theatre production went on to win numerous awards at home and abroad, have sell-out runs on Broadway and in Toronto, inspire a hit film and is currently touring Australia and Germany.

As the abstract for a piece of ongoing research (ACE, n.d.) makes clear, unpicking the relationship between the two spheres and understanding how value is created, where it is created and for whom, is not simple. This is because the pathways followed by spillovers between the public and commercial sectors are not easily captured:

The consequences of subsidy may reach well beyond the point of its application, while its effects in the reduction of risk makes possible the creation and performance of works that may not otherwise have reached the stage. It is therefore likely that the interlacing of public and private funds produces results unquantifiable by simple arithmetical calculation.

The impact of public subsidy in the creative industries is captured in the brief case study of the film and TV sector in Bulgaria (OCE, 2014). This notes that the partially subsidised film and TV cluster has economic spillover effects into other industries and areas of the economy:

The increased economic importance of the cluster stimulated collaborations and cross-fertilisation of goods and services with other support industries, such as the media industries and the television in particular, as well as with other sectors.

Reports in the library which relate to this area:

ACE, n.d.; CEBR, 2013, and OCE, 2014.

Summary conclusions

- There is interest and value in researching and exploring the spillover process at work between the subsidised and commercial creative sectors. In particular, further research on the role of the public sector in stimulating innovation and encouraging risk should be encouraged, as this is purported to bring the widest set of benefits.
- The spillover effects of public investment via tax breaks in sectors (especially film) need to be further studied in relation to foreign and private investment. This should be delivered through detailed surveying and case studies of 'beneficiary' businesses.

6.2.4 Improving productivity, profitability and competitiveness

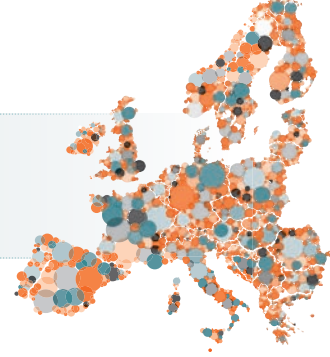
Can public investment in arts, culture and the creative industries have a positive impact on productivity, profitability and competitiveness?

This is a very difficult area to find causal evidence in, but the library does include some attempts. For example, KEA (2012) seeks to address the key outputs of arts culture and creative industries investment. The 'multiplier' – the standard way of understanding and calculating economic impact from all forms of public investment as it ripples through an economy, city, region or country – is well understood and generally accepted as a concept or term (while at the same time, the mechanics of application are fiercely contested). In terms of cultural and creative spillovers, the arguments around how multipliers can be applied are particularly contested, especially when it comes to the impacts on markets, productivity and competitiveness.

In this study examining how to justify investment in cultural and creative assets, a 'benchmarking raster' (a set of commonly shared indicators) is proposed to help city and regional governments across Europe assess policy around arts, culture and the creative industries. It suggests that there should be five main evaluation criteria for investment programmes: relevance, efficiency, effectiveness, impact and sustainability.

Yet despite confidently asserting a comprehensive set of criteria covering the key measures of success, the authors stop short of addressing 'indirect' impacts, however important they may be:

Public measures of support investment in cultural amenities (i.e. cultural subsidies to cultural institutions such as opera, orchestra, museums, theatres) or branding (e.g. 'creative city' labels) are not in the scope of this report.



These measures are part of a communication, social or cultural strategy which primarily aims at making a city attractive and to contribute to social cohesion and quality of life.

It could be argued that by not seeking to capture beyond the direct, this rather misses much of the economic and social 'added value' that investing in the sector delivers and draws an artificial distinction based on what is readily possible to capture rather than what is desirable to capture. It is exactly those spillovers between the sectors, wider society and the rest of the economy which makes the impact of investment in the sector potentially different to that of others.

Other studies do attempt to capture these spillovers across a wide spectrum. A study of the extent and development of the cultural and creative sector in the Stockholm- Mälardalen region (Sternö/Nielsén, 2013) captures the effects that investing in design can have on companies, putting the difference at an increase in turnover of 50 per cent for those that do invest. An Estonia report (Tafel Viia et al., 2011) articulates the vital spillovers between sectors within the creative economy:

Market making spillovers or inter-market spillovers – the development of a product in one market develops a new market for other products. One example of this kind of spillover can be illustrated with the impact of the designer fashion industry on high street retail.

In their 2013 study on the contribution of the arts and culture to the national economy in the UK, CEBR extend these spillovers to wages and productivity. Again the fashion industry – as ever existing in its hybrid between arts and commerce – is used as an example of how capturing the impacts of investment in culture and the creative industries needs to be widened if we are to fully understand impact. It starts by considering the impact on wages and productivity before looking at the process at work:

Recent evidence from academic research suggests that proximity to arts and culture can translate into higher wages and productivity. This might be explained by, among other things, the diffusion of innovative content and ideas from arts and culture to the commercial creative industries.

The importance of this is illustrated by the fact that many fashion designers, for example, draw upon the Victoria and Albert Museum's archives as a source of inspiration.

Reports in the library which relate to this area:

CEBR, 2013; ESSnet, 2013; KEA, 2012; Sternö/Nielsén, 2013; Tafel Viia et al., 2011, and TFCC, 2008.

Summary conclusions

- Unsurprisingly, the strongest evidence is from particular sectors where interventions can be traced – such as in the use of design by businesses.
- Other areas, such as the impact of cultural clusters on wages and productivity more generally, are being researched in the US and UK, and these will be particularly valuable in developing a more comprehensive knowledge base going forward.
- There is also a need to develop new measurement tools here – e.g. to codify the types of impact through consultation with the sector.

6.2.5 Boosting innovation and digital technology

One of the spillovers between the creative industries, culture and other sectors most often commented on is seen in the use of digital technology. Studies within the library explain that the relationship between content producers and platforms is vital. A KEA study in 2006 (written before the launch of smartphones but anticipating their arrival) describes this process:

Indeed, the development of new technology depends to a large extent on the attractiveness of content:

- Sales of DVDs, recordable devices, MP3 devices, home cinema systems, set-top boxes and flat screen TVs dependent on the availability of attractive content (games, films, music).
- The development of mobile telephony and networks is based on the availability of attractive value-added services that will incorporate creative content.

The URBACT report (Rutten, 2006) on the role of cultural and creative industries in the regeneration of cities, goes further, explaining that

...in their capacity as content provider for new media, cultural activities and creative industries can be a driving force for innovation in the broader economy.

The spillover is definitely not just one-way, with increasing mergers between previously underconnected sectors. Nesta explore creative clusters and innovation uses in Cardiff, Wales, as an example of technology-driven industry spillovers in action (Chapain et al., 2010)

Reciprocally, creative industries' strong demand for technology and digital services supports the growth of local digital clusters: in Cardiff, the high levels of collaboration between TV production companies and Digital Media firms are blurring the boundaries between both sectors. Firms in the Wycombe and Slough Software cluster often sell their services to regional advertising companies.

Several studies within the evidence library have looked more broadly at the innovation role of the creative industries. The ESSnet final report (2013) establishes a framework for understanding the spillover flows between culture, creative industries and the wider economy, positioning it within mainstream economic theory:

Creative industries highlight not just the economic value of creativity and origination, for example entrepreneurial artistry and vice versa, but also the significant economic value created from the re-use of ideas in general and copyrighted material in particular. This argument is underlined by the modern economic growth theory and the spillovers from new ideas (Montgomery, Potts, 2007, 11). On the other hand, the creative industries are also identified as early adopters of innovation – this also has potential to "spillover" to other industries.

These studies are among the best evidence we have of spillover effects in the library, as capturing innovation flows between business sectors is something that lends itself to experimental study. Nesta's (Bakshi et al., 2013) study Creative credits a randomized controlled industrial policy experiment, in which non-creative SMEs in Manchester, England, were awarded credits of £4,000 to spend on creative services from local businesses, found that:

Creative Credits created genuinely new relationships between SMEs and creative businesses, with the award of a Creative Credit increasing the likelihood that firms would undertake an innovation project with a creative business they had not previously worked with by at least 84 per cent.

Yet while the innovation effect lasts for at least six months in companies awarded credits (as opposed to the control group who received none), after a year the difference between the two groups is no longer statistically significant.

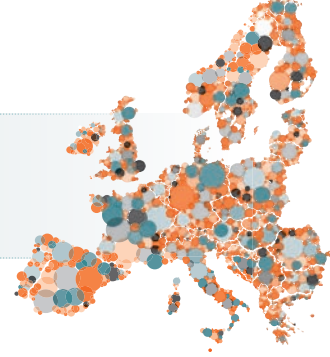
An empirical study of over 2,000 businesses in Austria examining the role of creative industries in industrial innovation (Schopen et al., 2008) describes these spillovers as having been driven by the triple-role that creative industries have in stimulating innovation. Firstly they do this by being a major source of new ideas which then lead to the generation of new products and services; secondly they offer services

which may be inputs to innovative activities of other enterprises and organisations;

and thirdly they do this through their role as intensive users of technology. They often

demand adaptations and new developments of technology, providing innovation impulses to technology producers.

This study sets the innovation role of creative industries within the broader context of open innovation in other sectors, which has led to businesses seeking a wider range of external inputs (as described in Chesbrough's famous Open Innovation Funnel). The report also highlights the importance of the network effect in helping creative industries overcome the 'liabilities of smallness' through co-operation and collaboration (and the benefits of being in a cluster). They draw a distinction between 'stable and



established networks' and 'flexible ad hoc networks' and state confidently that those with more stable networks are more likely to be innovative in terms of process and products. Interestingly though, networks had no effect on the degree to which businesses innovated in terms of market novelties or R&D. Availability and mobility of workforces is equally important.

This study also finds that over a quarter of creative businesses offer innovation support to other sectors, rising to 45 per cent in the case of advertising. The paper argues that innovation policy must consider the role of creative industries:

Creative enterprises are thus the more attractive as partners in innovation projects the more they can offer creative inputs that are novel. Secondly, networking among creative enterprises clearly helps to support innovation in the wider economy. Networking here means to purchase creative input from other creative enterprises and to develop, produce and deliver products and services jointly with other creative enterprises.

A Swedish study into the Stockholm-Mälardalen region (Sternö/Nielsén, 2013) shares these findings, stating that:

Businesses strategically or process oriented with design are five times more likely to introduce a new product compared to business who do not work with design.

The 2012 EU Policy Handbook on the use of structural funds captures a further spillover role for the creative industries in making technology more user-friendly and increasing consumer sophistication:

Digital technologies play an important role in this intangible economy as they provide new forms of social exchanges and contribute significantly to new expressions of creativity. Of course cultural production (such as music, publishing and movies) makes new technology more relevant to consumers, enables the development of new markets and contributes to digital literacy.

The Krynica Forum (Krynica, 2012) makes a valid and cautionary point that we should not confuse technology

with innovation and that it is vital we consider the underlying factors. In particular, the argument is made that clusters are the vital driver:

...innovation is basically the result of social ties and interactions, rather than technical and technological solutions themselves. It is stimulated by social standards, institutions and media rather than by the technical infrastructure itself. This implies the fundamental importance of cultural competence including the skills of active and autonomous communication.

Reports in the library which relate to this area:

Bakshi et al., 2008; Bakshi et al., 2013; Chapain et al., 2010; ECF, n.d. (a); ESSnet, 2013; EU, 2012; KEA, 2006; Krynica, 2012; OECD, 2005; Rutten, 2006; Schopen et al., 2008; Sternö/Nielsén, 2013, and Tafel Viia et al., 2011.

Summary conclusions

- As traditional boundaries between sectors continue to blur, the role of the creative industries in relation to innovation will evolve even further. It is vital that measures are developed to capture this process.
- While there is a growing evidence base for spillovers based on proximity and clustering, developing ways of capturing the spillover effects that occur between the creative industries and other sectors which occur remotely is vital.
- The role of social media networks in promoting innovation across sectors needs to be captured.
- The role of crowd-sourcing and crowd-funding needs detailed analysis – e.g. on the impacts for practice, business models and growth. The EU is set to commission a major study on this.

6.3 Network spillovers – cities and nations, innovation and economic spillovers, benefits to society

Network spillovers relate to the impacts and outcomes to the economy and society that spill over from the presence of a high density of arts and/or creative industries in a specific location (such as a cluster or cultural quarter). The effects seen in these are those associated with clustering (such as the spread of tacit knowledge) and agglomeration, and the benefits are particularly wide including economic growth and regional attractiveness and identity. Negative outcomes are also common – e.g. exclusive gentrification (as discussed in 7.2).

6.3.1 Building social cohesion, community development and integration

Does public investment in the arts, culture and creative industries have an impact on social cohesion, community development and integration?

Cultural and creative spillovers which deliver outcomes on social cohesion and community development are well captured in the library. The study into the impact of culture on creativity (KEA, 2009) sets out some of the key ways that spillovers occur:

Culture-based creativity helps to promote well-being, to create lifestyle, to enrich the act of consumption, to stimulate confidence in communities and social cohesion.

In an evaluation of Edinburgh Festivals (BOP, 2011), the extent to which certain social impacts can be correctly described as spillovers are described – particularly when it comes to social cohesion:

Achieving social outcomes is not the primary aim of any of the Festivals. Nevertheless, our research shows that the Festivals do have a number of social impacts, in addition to promoting local pride and a sense of belonging. From this perspective, there is evidence that the Festivals help to build social connections between people – whether between family members, or between people from both similar and different communities.

The European Expert Network on Culture literature review (Dümcke/Gnedovsky, 2013) on the value of cultural heritage makes a well-argued case for the need to view social and economic spillover effects holistically as the two are very much linked, especially in terms of heritage:

On the one hand, economic growth brings prosperity and well-being to a territory. On the other hand, social harmony – community cohesion, absence of conflicts, tolerance, etc – is a prerequisite to economic development. Thus the ability of heritage to provide distinctiveness of a place is seen as

an advantage both for tourist development and for the well-being of local communities. Improvement of the social climate also leads to the enhancement of the investment climate.

The authors also argue that community cohesion is one of the strongest spillover effects that heritage can have, delivering a 'particularly graphic' impact

...where heritage is used for stimulating a dialogue between different cultural groups. Fostering intercultural dialogue, cultural and social inclusion and creating an atmosphere of tolerance through heritage projects.

The report into arts and social inclusion in Scotland (Goodlad et al., 2002) sets out a useful framework for understanding how the process of social inclusion occurs across four parameters.

Firstly the arts offer

a focus for community participation, the potential benefits of which for the community can be summarised as improved social networks, a strengthened civic culture, stronger community cohesion, greater trust in fellow citizens and the institutions of government and more responsive governance

Secondly they deliver

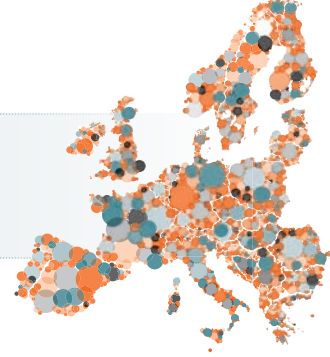
a way of securing individual benefits of skills, self-confidence, self-esteem and well-being.

Thirdly they offer

a means to the end of improved life chances in spheres such as employment, access to welfare, public and private services and better family relationships.

And finally (and critically) they offer

a means of expression.



This last point is one taken up by the NESF in its 2007 report on the arts, cultural and social inclusion in Ireland. They extend the issue of expression into that of intellectual and emotional stimulation and meaning at key junctures in life:

They are able to symbolise aspects of the world, and provide a shared means of doing so. The arts also mark significant events in life (such as marriage, funerals), and express communal meanings.

Reports in the library which relate to this area:

ACE, 2014; Alexe/Tapardel, 2013; Anstiftung, n.d.; BOP, 2011; BOP, 2014; Dümcke/Gnedovsky, 2013; Evans, 2005; FA, 2014; Goodlad et al., 2002; ICC, 2010; Impacts 08, n.d.; Interact, 2014; KEA, 2009; Krynica, 2012; Marbarschaften, n.d.; NESF, 2007; Paiola, 2008; Renz/Mandel, 2011; Schwegmann, 2015, and Wavell et al., 2002.

Summary conclusions

- The widespread impacts of culture on social cohesion and communities are well documented (KEA, 2009) but the mechanism by which culture-based creativity delivers these spillovers is less clear. Further research which explores the processes by which culture-based creativity causes these effects is required.
- As the Goodlad et al. (2002) report explores, the arts can have a positive impact on social inclusion, but as this report makes clear, further long-term studies are required to understand the individual impacts of the arts – such as those undertaken by the Warwick Commission in the UK, which, with a long-term and multi-method approach, sourced many expert perspectives.

6.3.2 Improving health and wellbeing

Cultural and creative spillovers relating to health and wellbeing are well covered in the evidence library. Primarily these impacts are related to the benefits of engagement (through participation or being an audience member) in activity and the set of individual benefits (such as improved social capital, confidence, sense of worth and value) that stem from it. Fujiwara, in his 2013 data-driven study on museums and happiness in the UK, is confident enough in the individual benefits of museum visiting to claim:

Visiting museums has a positive impact on happiness and self-reported health after controlling for a large range of other determinants.

Fujiwara adopts a Wellbeing Valuation approach. This approach estimates monetary values by looking at how a good or service impacts on a person's wellbeing and finding the monetary equivalent of this impact. The value of visiting museums is said to be £3,200 per year to each individual, participating in the arts £1,500 and being in an audience to the arts £2,000. Out of interest, the value of participating in sport is also £1,500. These figures are derived from the amount of money people would in theory give up in order to undertake the activity and is related to the concept of 'willingness to pay'. The reason why museums are valued so highly?

We can speculate that this figure may include a value that people place on the existence of museums as well as any value they derive from physically visiting museums (what economists call "existence value").

Fujiwara believes the benefits to overall health are a spillover from improvements to mental health in the case of arts and physical health in the case of sport.

A Norwegian study (Cuypers et al., 2011) into the association between cultural activity and perceived health, anxiety, depression and satisfaction with life provides a longitudinal population-based study of a large cohort of more than 50,000 participants. The survey-based study found that activities associated with 'satisfaction with life' (SWL) varied according to gender:

In women, the following creative cultural activities were statistically associated with high SWL: participation in association meeting, music, singing, theatre, outdoor activity, dance, and working out/sports. Men who participated actively in association meeting, outdoor activity, dance, workout and sports reported a significantly good SWL.

The study also found that various cultural activities (including visiting museums and outdoor activities) were associated with low anxiety scores. In terms of depression:

Attendance for each individual receptive cultural activity was significantly associated with low depression scores in women. In men, three receptive cultural activities (been to museum/exhibition, been to concert, theatre, film and sports event) were associated with low depression scores.

While the study does seem to provide some evidence, in its conclusion it is clear that there are limitations which need to be further explored:

The results indicate that the use of cultural activities in health promotion and healthcare may be justified. On the other hand, the limitations of this study implicate that further longitudinal and experimental studies are warranted to establish the cause-effect relationship.'

A Liverpool study into the therapeutic benefits of shared reading in relation to depression and wellbeing (Billington, 2010) found that patients experienced a statistically significant improvement over 12 months. This study provides a useful framework for how it is that participation (in this case in a shared reading programme) impacts on individual wellbeing. It

helped patients suffering from depression in terms of: their social well-being, by increasing personal confidence, reducing social isolation, fostering a sense of community and encouraging communication skills; their mental well-being, by improving powers of concentration, fostering an interest in new learning or new ways of understanding, and extending their capacity for thought, verbalised and internalised; their emotional and psychological well-being, by increasing self-awareness, enhancing the ability to articulate profound issues of being, and making possible a shift in internal paradigms (or the telling 'of a new story') in relation to self and identity.

A major evidence review of the value of arts and culture to people and society (ACE, 2014) finds plenty of examples of spillovers. Most strikingly:

Those who had attended a cultural place or event in the previous 12 months were almost 60 per cent more likely to report good health compared to those who had not, and theatre-goers were almost 25 per cent more likely to report good health.

The UK Parliament report on wellbeing (UKParl, 2014) makes a well-intentioned case for wellbeing as an effective measure of the impact that the arts can have. It makes the case that wellbeing analysis, because it does not focus on markets or cost-benefit analysis, offers a meaningful and viable alternative approach to evaluating public investment. This report makes a reasonable case that using wellbeing analysis can help us move on from the often sterile and polarised argument on how to measure the value of the arts:

Wellbeing analysis provides a way of capturing the value that arts and culture have for human lives – an alternative to assessment based on instrumental benefits on the one hand, and 'art for art's sake' on the other. It is therefore a particularly useful tool for assessing public subsidy of arts and culture. It can also help to set strategic priorities for that subsidy – for example, evidence suggests that participatory (as opposed to purely spectator) activities are particularly beneficial for wellbeing.'

Furthermore, the authors assert that by taking a wellbeing approach, it will also help policymakers in tackling wellbeing inequalities and the impact of public subsidy to ensure that the

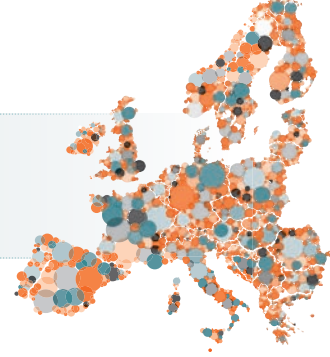
benefits of this spending are spread to those with lower wellbeing, including disadvantaged and under represented groups.

Reports in the library which relate to this area:

ACE, 2007; ACE, 2014; Billington, 2010; BOP, 2014; CASE, 2011; Cuyper et al., 2011; Fujiwara, 2013; Ornamo, 2013; SSGR, 2013, and UKParl, 2014.

Summary conclusions

- Further research into the causality between arts and health is much needed. Other methods beyond expensive longitudinal studies need to be developed. This is critical if we are to grasp the role of public investment and how public policy can open up the greatest opportunity for productive outcomes – such as through strategic commissioning.
- The complex relationship between arts, culture and wellbeing is particularly important to study as wellbeing is growing in strategic (and political) significance. Aligning arts and culture to other elements which contribute to wellbeing for research purposes is vital.



6.3.3 Creating an attractive ecosystem and creative milieu, city-branding and place-making

The spillover effects to cities via cultural and creative quarters, the attraction of the 'creative class' and the phenomenon of the creative city as a brand are frequently explored in the evidence library. The URBACT study (Rutten, 2006) gives a useful overview of where contemporary discourse on the creative city (and the spillover effects that operate within) has emerged from and the key areas it covers:

The creative city is an ecosystem favourable to the development of creativity. A creative city is a city which is defined by citizenship, cultural openness, respect, and tolerance, the support of innovation, initiative and the creation of activity. This ecosystem attracts creative people who create a favourable ecosystem.

Other studies, such as the Grigoleit et al. review of the art project 2–3 Streets – part of Ruhr ECOC 2010 and where the artist Jochen Gerz selected 78 participants to live rent-free in three streets in return for participating in an internet writing-process – unpick this ecosystem. This 2013 study is as much a commentary and critique on the nature of creative cities as it is about anything else. In particular, it explores the unsustainable nature of creative cities and the dichotomous relationship between 'creatives' and 'natives':

With his 2–3 Streets project Jochen Gerz wanted to test the possibility of an immaterial structural change: it doesn't arise through new buildings and infrastructures, but through cognitive processes, the change of semiotic systems; art interventions as catalyst for new social interactions and a creative unfolding of the residents in public and common spaces

As the authors of the report note, it is unclear how far the organisers of 2–3 Streets intended the project as a critique on the 'creative class'. However the project does stimulate debate on how the cultural capital of artists, while helping transform areas, brings with it the ever-present threat of gentrification and the displacement of incumbent communities through property development.

Place branding, a concept which seems on the surface less problematic (though open to similar criticism in terms of competition), is examined in other studies. An examination of the role of festivals in Romania sums up much current cultural tourism policy and thinking:

Building a good image of a city or state so as to differentiate it and to make it unique in tourists' minds is a vital condition nowadays, in a world of global competition. This image may be created by taking advantage of local culture and values' promotion or by organizing festivals and special events.

The importance of culture is not confined to cities though as a review of culture in Poland 20 years after the fall of Communism (ICC, 2010) is quick to point out:

Culture has reinforced its role in local cohesion, identity and pride, as a vehicle of self-celebration in rural communities.

The upstream impact of this focus on the importance of culture to place attractiveness is to be found in the impact of culture on one of the world's biggest industries: tourism. As ESSnet-Culture (ESSnet, 2013) points out:

Culture is a main driving force for tourism, one of Europe's most successful industries representing 5.5% of the EU GDP and where Europe holds a 55% of the global market share. Europe is the most-visited destination in the world. In 2005, the continent recorded 443.9 million international arrivals.

The 'creative milieu effect' is perhaps the most reported of all cultural and creative spillovers. The 2014 report on CURE – an EU-funded project which aimed to trigger growth of the creative economy in rundown urban areas in medium-sized cities in North West Europe – contains a description of how a creative milieu can be created and some of the reasons why it works in rundown areas of cities with plenty of affordable space to rent:

Creative entrepreneurs – often in their start-up phase – are looking for low-cost working spaces. Perhaps these cultural entrepreneurs do not make much money. Yet they create interesting activities, organize events, exhibitions, they attract people to an area, build social networks, exchange new and innovative ideas. And they do not mind adopting "bohemian lifestyles". They treasure places that are "different", with a specific cultural identity.

The spillover effects of culture to tourism are well captured in the 2013 CEBR report on the contribution of the arts and culture to the UK national economy. This macroeconomic study finds that 103,000 visitors came to the UK solely because of arts and culture, spending a healthy £38 million. This is based on a very strict interpretation of additionality, accounting for just 0.2 per cent of all inbound tourist expenditure traceable to those who only visited because of cultural activity. The wider contribution of culture to tourism is much bigger, accounting for 27.2 per cent of all activity undertaken by tourists (by comparison 57 per cent of tourists went shopping and 45 per cent went to pubs and bars). Importantly, this study finds that culture plays a more significant factor in attracting visitors from further afield, with culture a bigger draw for Americans and Asian visitors than Europeans.

At a smaller level, the impact of ECoC and festivals on visitor number is explored. The Impacts 08 evaluation of the Liverpool ECoC found tourism to be one of the main winners with an estimated 27.7 million visits to Liverpool when it was Capital of Culture, a 34 per cent rise on the previous year.

Reports in the library which relate to this area:

Alexe/Tapardel, 2013; CEBR, 2013; CSES, 2010; CURE, 2014; ESSnet, 2013; FDA, 2014; Grigoleit et al., 2013; Hodne, 2014; ICC, 2010; Impacts 08, n.d.; KEA, 2006; KEA, 2009; Nielsen et al., 2013; Palmer/Rae, 2004; Popescu et al., 2012, and Rutten, 2006.

Summary conclusions

- An ecology approach to understanding the interplay between culture and other forces at work in place attractiveness appears to be useful in understanding complex systems. Case studies may be the most effective method for this.
- Cultural and creative tourism is increasingly an important driver for visitors, but there is often a gap in the baseline and understanding of the multiple reasons behind individual visitor decisions.

6.3.4 Stimulating urban development, regeneration and infrastructure

The evidence library shows that the ECoC programme delivers much more than a tourist offer. It

offers unprecedented opportunities for acting as a catalyst for city change.

(Palmer/Rae, 2004)

Urban development and investment in cultural infrastructure are closely intertwined, as Palmer/Rae state:

For most ECOC the significance of buildings and infrastructure developments for which the designation was a catalyst, if not the cause, has created for each city legacies and impacts that may not be quantifiable, but have been none the less important in the development of each city.

The spillover effects of cultural and creative industries in terms of physical development stretch much further than new infrastructural development. As the Forum d'Avignon Ruhr (ecce, 2013) describe, there is an important innovation function from the sectors to urban development:

...culture and the creative sectors have a kind of impulse function: by investigating unexplored territory, discovering vacant urban spaces, operating with spatial possibilities and introducing utopian material into deadlocks. They can help to develop alternative solutions

Investments in grassroots-led development is all too often overlooked, with public investors focused on what they understand and are comfortable with, as a study on Poland 20 years after Communism explains (Krakow, 2010):

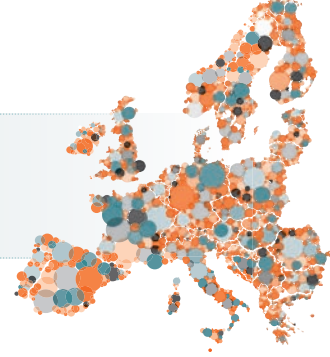
In attempts to use culture for urban regeneration, the role of the independent creative sector is usually underestimated and resources are directed mainly toward improving traditional infrastructure (museums, libraries, theatres, concert halls, etc.)'

Reports in the library which relate to this area:

ecce, 2013; Evans, 2005; ICC, 2010; Kea, 2009; Krakow, 2010; Krynica, 2012; Palmer/Rae, 2004; Rutten, 2006; Schwegmann, 2015; Slach/Boruta, 2013, and Sternö/Nielsén, 2013.

Summary conclusions

- Longitudinal evaluation is required to understand the legacy and sustainability of cultural investment spillovers in physical infrastructure.
- Capturing the 'cultural fringe' – the independent sector – which itself is a spillover effect of public investment in culture is vital.
- The spillover impacts of individuals and cultural entrepreneurs need to be captured alongside that of major programmes and investments.



6.3.5 Boosting economic impact from clusters and regions

The ACE literature review of 2014 into the value of arts and culture to people and society presents a useful framework for understanding the impact that arts and culture have on local economies. It outlines five key ways that culture boosts economies:

- attracting visitors,
- creating jobs and developing skills,
- attracting and retaining businesses,
- revitalising places, and
- developing talent.

Each of these has been explored elsewhere in this review, but there are some impacts where the spillover effects of culture are more disputed but potentially equally important. Nesta's econometric analysis of the relationship between arts and cultural clusters, wages and the creative economy in English cities (Bakshi et al., 2014) explores the impact of cultural clusters on the productivity of English cities using employment, occupational and institutional measures.

This paper tries to test whether the assumption that culture boosts productivity in other sectors works in a European context. The results are not clear cut when it comes to wages:

Our analysis reveals a negative link between cultural clustering and wages, which we interpret as evidence of a compensating differential (skilled workers sacrifice higher salaries to live in places with vibrant cultural scenes). However, when we consider interactions between cultural clustering and salaries in creative industries and occupations, we find some evidence that creative workers in cities with high levels of cultural clustering enjoy a wage premium, which suggests that not-for-profit arts and cultural sectors may be generating knowledge spillovers into the commercial creative economy.

Yet the authors accept the need to interrogate

... "the black box" of (creative) economic development by examining the relative significance and magnitude of the different mechanisms through which Arts and Cultural clusters may contribute to urban growth.

To some extent the authors contribute to this and advance the argument that arts, culture and the creative industries do contribute (through spillovers) in ways that have been previously overlooked and/or misunderstood. In particular they believe that arts and cultural clusters could have deeper impacts on the economy of cities than previously thought:

Firstly, by attracting individuals for lower wages, as the "compensating differentials" that we have identified suggest. Secondly, by forming an active part of local ecosystem of creativity where their intangible investments in skills, organisational and social capital and new ideas, make an economic contribution in the shape of innovation spillovers to for profit creative firms.

The authors suggest that future research should be directed to understanding

why Arts and Culture clusters do not manage to capture all the external benefits they generate – that is, why there are market failures in local ecosystems of creativity.

Reports in the library which relate to this area:

ACE, 2014; ACN, 2009; ACN, 2014; Bakshi et al., 2014; BOP, 2010; BOP, 2011; BOP, 2013; Comescu/Dudau, 2014.; CSES, 2010; DCR, 2012; Espelien/Gran, 2011; ESSsnet, 2012; EU, 2012; FA, 2014; Greffe, 2004; ICC, 2010; Johde, n.d.; Kar, 2012; KEA, 2006; KEA, 2012; Koszarek, n.d.; Mossig, 2011; Paiola, 2008; Palmer/Rae, 2004; Piekkola et al., 2013; Popescu et al., 2012; Rutten, 2006; Sternö/Nielsén, 2013; TSRC, 2011, and Wedemeier, 2010.

Summary conclusions

- Understanding the mechanisms by which culture and creativity contribute to economic development is vital. More research is needed to understand the complex forces at work and the impacts that occur.
- More focus needs to be given to developing methodologies which meet the evidence standard for causality in this area because it is such a strategically important area for governments at all levels. The only way this can realistically be achieved is through a blend of longitudinal studies and in-depth, targeted case studies and surveys.

7. Main findings from the evidence

7.1 Evidence of spillovers – summary conclusions

What evidence does the evidence library present on a Europe-wide level on the spillover effects of public investment? In terms of the three types of knowledge, industry and network spillovers, the library captures and discusses spillover effects across the 17 sub-categories, but what quality of evidence of spillover effects does it present?

As has been noted before, the library of evidence is only a snapshot and what follows is an interpretation of an interpretation of what has been presented in the evidence library generated for this review. Therefore, it is only a preliminary snapshot and not a presentation of the complete picture for spillovers in Europe.

Knowledge spillovers

Evidence is most persuasive, but still just falling short of proving causality to scientifically accepted standards due to limitations in study design around the benefits to individuals of long-term engagement with arts organisations (CEBR, 2013, and Cuypers et al., 2011), the role of culture in developing social capital (OECD, 2005), the wide impact of large-scale cultural events (Rutten, 2006), the spillover between publicly funded and commercially funded arts (Albert et al., n.d., and Tafel Viia et al., 2011), the importance of culture in improving cross-border co-operation (Interact, 2014) and the linkages between culture, creative industries and innovation (Rutten, 2006).

Evidence is more moderate, meaning that it falls short of proving causality but offers a clear argument while promoting the need for further research, of the role of arts and culture in improving national productivity (CEBR, 2013), in the role of culture in boosting transferable skills (CEBR, 2013) and social innovation (KEA, 2009), the importance of heritage in connecting communities (Dümcke/Gnedovsky, 2013), the role for festivals in boosting professional development (BOP, 2011) and the importance of arts and cultural organisations in innovating new forms of organisation and ways of working (ecce, 2013).

Also in the same category falls the role of culture in boosting academic attainment (CEBR, 2013, and ACE, 2014), the role of culture in promoting social cohesion (ECF, n.d. (b)), the importance of culture as a form of participatory democracy (Rutten, 2006), the importance of cross-sector knowledge exchange as a driver for innovation (Tafel Viia et al., 2011) and the importance of the cultural capital of place (Krynica, 2012).

Analysis of the library suggests that evidence of knowledge spillovers would be improved through more research into how experiencing and practising 'creativity' in one sphere translates into bringing a more creative approach to other spheres of activity. Furthermore, as long-term engagement with the arts seems to be so important in delivering personal impacts, studies which allow for this to be tracked would help fill in current gaps. Other key areas for examination include

the role of volunteering in developing social capital, the special impact and value of large-scale cultural events, the value of cross-border networks, and the impact of creativity throughout the value chain and beyond manufacturing.

Industry spillovers

The strongest evidence of industry spillovers is that communications within organisations can be boosted (Antal/ Strauss, 2012), culture-led regeneration has a positive impact (Rutten, 2006), cross-fertilisation occurs between commercial and non-commercial sectors (OCE, 2014), investment in design makes an impact (Sternö/Nielsén, 2013), spillovers play a role in boosting uptake of new technology (KEA, 2006) and networks are important in spreading innovation (Schopen et al., 2008).

Evidence of the importance of culture in stimulating competitive markets in border regions is present but less clearly articulated (Interact, 2014), as it is in the case of the positive role that improved facilities can have on the property market (WWC, 2014), in the reciprocal connection between technology and creative clusters (Chapain et al., 2010) and in the role of creative industries in the innovation process (Schopen et al., 2008).

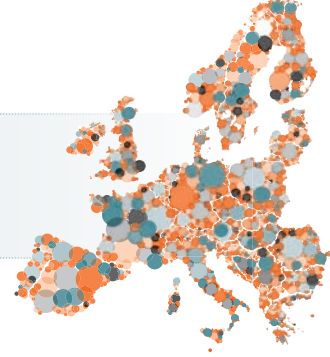
There is weaker evidence of reverse spillovers between productive industries and creative industries (Interact, 2014), of the negative impacts of culture-led regeneration (Evans, 2005, and Slach/Boruta, 2013), of the impact of large-scale events on the local economy (WWC, 2014) and of the pathways that exist for spillovers between public and commercial culture (ACE, n.d.).

Examination of the library suggests that the evidence of industry spillovers would be improved if there was more analysis of the two-way relationship between culture and the wider economy in terms of innovation and entrepreneurship. Further research in the value of public sector investment in stimulating risk-taking would be valuable as would be exploring the role of social media and spillover effects that occur without the benefits of physical proximity through clusters.

Network spillovers

The most compelling and clearly articulated and developed evidence of network spillovers is found in the impact of culture on social cohesion (KEA, 2009, and BOP, 2011) and community cohesion (Dümcke/Gnedovsky, 2013), on the way that the process of social cohesion occurs (Goodlad et al., 2002), on the individual benefits of visiting museums (Fujiwara, 2013) and the association between cultural activity and perceived health and satisfaction with life (Cuypers et al., 2011, and Billington, 2010), on the role of culture in place-making and city-branding (ICC, 2010, and Rutten, 2006), the 'creative milieu' effect and the importance of creative entrepreneurs (CURE, 2014).

More moderate evidence is to be found of the spillover effects of boosting individual expression (NESF, 2007), the



importance of cultural activity for wellbeing (UKParl, 2014), the role of culture in boosting tourism through festivals (Impacts 08, n.d.), the connection between culture and urban innovation (FRA, 2013), the importance of considering the independent creative sector in regeneration (Krakow, 2010) and the (negative) impact of cultural clusters on wages (Bakshi et al., 2014).

There is weaker evidence of the way that festivals build relationships between family members (BOP, 2011), of the sustainability of creative cities and of the value of artists' individual cultural capital in regeneration (Grigoleit et al., 2013)

Reviewing the library indicates that evidence of industry spillovers would be improved by further research into the complex relationship between arts, culture and wellbeing, and taking an ecological approach to analysing the interplay of complex factors supports also understanding the role that culture plays in place attractiveness.

7.2 Negative spillovers

Negative effects and impacts are not often captured in reports featured in the evidence library. In part this is because they are often rarely considered in evaluation frameworks. BOP in their 2011 evaluation of Edinburgh Festivals do consider negative impacts in terms of the environment and the impact of festival congestion on local businesses. They also examine the issue of 'positive response bias' in surveys and the need to balance this with negative keyed statements.

There are significant but isolated examples within the library of negative spillovers, such as the negative impact on wages caused by cultural clustering in UK cities (Bakshi et al., 2014), but for the most part studies deal with positive externalities. The major exception to this is in terms of culture and regeneration. Graeme Evans, in his evaluation of culture's contribution to regeneration in 2005, examines what he believes are the three different ways culture is part of the process of regeneration as a player, driver or catalyst: culture-led regeneration, cultural regeneration, and culture and regeneration. For each of these he finds that there are negative as well as positive impacts. For culture-led regeneration, typified by the building of a flagship cultural facility, he finds:

Regenerative effects, in distributive and sustainable terms, on the other hand may be low particularly where economic leakage is high and regeneration activity and economies lack diversity.

These are exasperated by the resistance of or bypassing of local communities. In terms of cultural regeneration,

where culture is integrated in an area's activity, he cites the example of the regeneration El Poblenou district in Barcelona. He quotes Gdaniec (Gdaniec, 2001):

Urban regeneration combining culture can result in fragmented and unreal spaces, as well as contested space and culture... in Poblenou, speculation and quasi-exclusion of locals from the new housing.

Evans is clear that capturing what occurs during regeneration – positive and negative impacts – requires a detailed understanding of complex interplays between the community and culture, these include

the impact of cultural activity on the culture of a community, its codes of conduct, its identity – and notions of citizenship, participation and diversity.

One of the reasons why we may lack more evidence of the negative spillovers is given by Evans, namely that the way we capture impacts is inadequate. In particular culture is

not generally recognised in urban policy or environmental and quality of life indicators (such as health, education, employment, crime) and therefore is absent from regeneration measurement criteria.

For Evans, the challenge in capturing the 'externalities of culture' in regeneration are wrapped up in a general failure to develop proper evaluative systems which would help practitioners, researchers, community groups and policymakers really understand the spectrum of impacts that occur.

Reviewing the library suggests that stronger evidence could be gathered if culture was included in wider regeneration measurement criteria.

7.3 Evidence of causality in spillovers

If one applies strict Bradford Hill criteria to causality (Bradford Hill, 1965) then there are very few studies in the evidence library which get anywhere near to fulfilling the eight tests he established to demonstrate when an observed association is likely to be causal. In terms of health and wellbeing, the reports within the library including Fujiwara (2003), Cuyppers et al. (2011) and Billington (2010) discuss how they do not provide the evidence necessary to demonstrate causality. In the case of Billington, there are several limitations within the study methodology including the absence of a control

group and, in the case of Cuypers, the cross-sectional nature of the study means it is not possible to state how the relationship between participation and effect flows. Both these reports make the case for further research to address these challenges, believing that their work lays down a good basis for further study. As Billington describes:

Being cross-sectional, this study cannot determine causal relationships. Further longitudinal and experimental design studies would be required to explore causality. Further cross-sectional research could also be carried out on the effect of frequency of participation in culture and sport on quality of life measures.

As this study explains, large-scale longitudinal studies may be required if we are to achieve the scale of evidence required within health.

In other areas beyond health and wellbeing, the challenge of proving causality is no less difficult. The What Works Network was established in the UK by the government to provide evidence-based reviews of policy in eight areas responsible for £200 billion of government expenditure including local economic growth. Their study into culture and sport (WWC, 2014), part of the evidence library, demonstrates the challenge.

They apply strict criteria based on the Maryland Scientific Methods Scale. This is a five-point scale that allows for the ranking of different evidence: from one, for evaluations based on simple cross-sectional correlations, to five, for randomised control trials. They found that out of 550 studies of sporting and cultural events, not a single study scored a four or five out of five – that is none used randomised control trials or quasi-random sources of variation to identify policy impacts. Three of 36 studies that met the minimum standard they set looked at cultural events or facilities as opposed to sport. They found no robust evidence of the economic impacts of smaller projects (including arts centres or festivals). They found no high-quality evidence of the events and facilities on visitor numbers or any evidence of the recurring events.

The Nesta study on creative credits (Bakshi et al., 2013) is unique in the library as it does establish a randomised control trial to test the impact of giving credits to SMEs to spend with creative businesses. This report starts with harsh words for the business support sector:

Vast amounts of public money are spent supporting businesses around the world. Much of this may do good – helping firms to adopt new technologies or to sharpen up

their strategies or marketing. But the truth is that nobody knows whether it's having any real impact. Officials don't know. Ministers don't know. And the businesses themselves don't know. They don't know because, in stark contrast with fields like medicine, new approaches are introduced without testing.

The report makes a passionate plea that its robust methodological approach should be more widely taken up within the field of innovation:

The evaluation approach that we adopted in this project combined three elements – randomized allocation of Creative Credits, longitudinal data collection, and the use of mixed methods. This has proven to be a powerful methodology, and we argue that it should be used much more widely by the Government and other agencies in developing new innovation support policies.

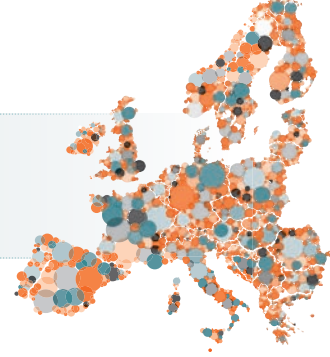
Based on the evidence of the library, causality is not systematically evaluated in the cultural and creative sectors with scientific standards such as Bradford Hill criteria. Out of the library of 98 documents, only two approach the standards needed for causality (Bakshi et al., 2013) and (Cuypers et al., 2011) but they discuss their own weaknesses.

More methods derived from the social sciences, especially those that test hypotheses using qualitative research methods, would be beneficial in advancing the case. These include:

- Experimental studies which test cause-effect relationships in a controlled setting, separating the cause from the effect in time using treatment and control groups.
- Action research, where hypotheses are tested through the introduction of interventions into complex social phenomena where the researcher is embedded in the social context or ethnographical techniques including immersion over a period of time.

7.4 Methodologies to capture spillovers

We can pull out several important findings regarding the methodologies for capturing and measuring spillovers in relation to public investment, including an indication of where there are gaps currently in knowledge and techniques.



The approach of the Estonian Institute for Future Studies (ElffS)

Tafel Viia et al. (2011) (ElffS), which reviews existing approaches to creative industry spillovers and sets out a useful and thorough framework for future capturing, contains the most detailed discussion in the library on developing indicators for spillovers.

It starts from the position that measuring spillovers exactly is inherently difficult because spillovers are often intangible and that capturing them requires proxies. Tafel Viia et al. (2011) propose a systematic approach. It outlines two routes for understanding the process by which spillovers occur. Firstly, identifying 'chains of impacts' based on the assumption that spillover effects occur due to the interdependencies between creative industries and other sectors and, secondly, exploring local creative industry 'hubs' where the actors connected by spillovers are related via a 'common space'. While accepting that there are challenges in making generalisations from specific and localised data it proposes a set of indicators.

- Spillovers can be examined regionally at a macro level through capturing the aggregated impact that the creative industries has on demand and supply either within a country or across countries. The parameters here include employment, turnover and impact of visitor spend.
- A meso-level approach done through sectors or comparatively that examines areas including labour mobility and creative industry influence on new products and services.
- A case-specific micro-level approach focusing on clusters, changes in prices to real estate due to the proximity of a CI cluster, events and visitors. Within each of these areas it discusses the challenges posed by subjective data capture, resource requirements and time intensiveness.

Tafel Viia et al. (2011) do not however address how causality can be proved to scientific standards, such as Bradford Hill criteria.

The role of public investment in stimulating spillovers across the economy

In terms of capturing spillovers and public investment, there is useful discussion in the policy handbook on the strategic use of EU support programmes and spillover effects in the wider economy (EU, 2012). This contains analysis of the strategic integration, structures and programmes which are needed to encourage more spillovers. It focuses on cultural and creative industries and innovation, tourism, branding and regional attractiveness, social policy, innovation and lifelong learning as well as environmental sustainability. In each area, it highlights examples of public investment it believes to have been successful. Rather than focusing on methodologies for capture, this document describes a top-down framework for investigating where spillover effects are expected to be found and what is needed in terms of public support to unlock them. However this is still useful in considering publicly

funded programmes specifically designed to test hypotheses around spillovers.

The need to measure causality through in-depth and longitudinal research

Within knowledge spillovers, there are strong appeals within the library for further research which can prove the causal link between arts, culture and individual health. Several studies (including Fuijwara, 2013, Cuyppers et al., 2011, and Goodlad et al., 2002) present strong evidence of the individual impacts of culture in areas such as easing anxiety, tackling depression and satisfaction with life. However they each suggest that for causality to be proved, further research is needed which overcomes the limitations of their study. More broadly the value of understanding spillovers within a 'wellbeing' framework (UKParl, 2014, and Evans, 2005) is discussed. This framework would help in the understanding of the pathways through which the arts and culture have a positive impact on mental health, social capital, individual confidence and aspiration. It also aligns spillovers within a wider means of capturing the impact of public investment across fields.

There is a need to understand the knowledge spillovers that occur in skills development stemming from long-term, short-term or one-off projects. Artistic activity is constantly evolving, with ever more variety, and crossover between sectors is constantly increasing, but the impact this has on knowledge spillovers is not well understood. If certain project types are less optimal in terms of generating knowledge spillover, there may be implications for types of public investment which place a premium on delivering spillovers.

The need for new tools and approaches

In terms of industry spillovers, three areas in particular stand out as requiring further investigation with new methodologies. In turn this generates a challenge to policymakers and researchers – to co-ordinate, collaborate and act long term. Unpicking the role that arts and cultural clusters play in place attractiveness (Bakshi et al., 2014) will require greater understanding of the way that cities and places operate as complex systems and the multiple factors at play in place attractiveness. This will require approaches which allow for data from multiple sources to be analysed, perhaps using a wellbeing framework as a starting point. As Bakshi et al. (2014) state, there is a considerable challenge in gathering the right kind of data which will allow for this:

Our findings should be interpreted with caution, however, given the cross-sectional nature of our data, with the ensuing risk of reverse causality between our relevant variables (in particular creative worker wages and Arts and Cultural clustering). We also need to bear in mind those unobservable individual characteristics such as 'creativity' or

'entrepreneurialism' which may lead workers to select between different types of cities, and bias our results. Addressing these weaknesses with longitudinal data is a high priority for further research.

In terms of cultural organisations the 'R&D' role that public investment in arts and culture plays in relation to commercial cultural sector and wider economy needs further investigation. Within this, the early adopter and first mover role of cultural organisations in new ways of working and the use of platforms and new forms of technology in relation to the growth of the knowledge economy is of real interest. The role of culture in the continued rise of the 'experience economy' driven by consumer sophistication and product differentiation (ESSnet, 2013, and CENR, 2013) is of equal importance. Tafel Viia et al. (2011) suggests that inserting new questions into the EU-wide Community Innovation Survey (CIS) would help across these areas. It proposes a formulation which it believes would help capture the vital R&D role that culture and the creative industries play:

Share of new products and services that: (a) are based on the knowledge/invention of CI sector (knowledge spillover) (b) are produced due to the new services and products in CI sector (product spillover) (c) are produced due to the increased demand which is induced by CI sector (demand spillover) divided by the total number of new products and services; the sum multiplied by 100.

The role that spillovers play in relation to large cultural events (WWC, 2014, Impacts 08, n.d., and BOP, 2011) and their legacy requires higher quality evaluation than has previously been the norm. In particular the intergenerational nature of these events and the way that participation influences impact is complicated to capture and methods that go beyond surveys of individuals are required, including methods that utilise new technology and are able to work from a pre-defined baseline. In particular methodologies which use established social science methodologies, including establishing counter-factuals and trend/expectation analysis, are needed.

For network spillovers, the areas where new methodologies would be particularly worth investigating include the impact of grassroots developments beyond traditional cultural infrastructure (Krakow, 2010). This means capturing the wider role of culture within the regeneration process, something that will require culture to be included within

wider quality of life data collection such as health, wellbeing and environmental factors. The role of cultural and creative spillovers in driving innovation in cities and places and the role of cultural milieus (ecce, 2013) would also be an area of real interest to investigate further as part of the process of urban and social development. Again this would require large-scale studies which include a mixture of qualitative and quantitative data capturing the range of complex processes at work.

7.5 Public funding and spillovers

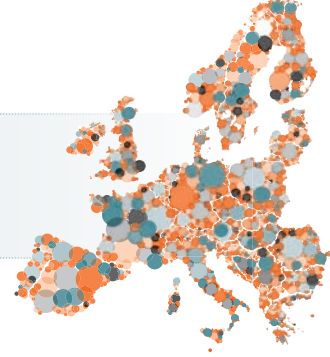
Although we've noted the challenges elsewhere of isolating the causal pathway between public investment and spillovers, and the challenges of using methodology to capture spillover effects of investment, the evidence library contains only one specific and explicit discussion of public funding and spillovers, including how best they can be captured (though it does contain other documents with recommendations on evidence capture). This is found in KEA 2009, a report examining the contribution that culture and the creative industries make to the wider economy, and features a series of recommendations on the better integration of creativity into EU-wide strategy and policy. In terms of public investment, they propose the goal of

a Europe that stimulates and encourages creativity and provides individuals, society, public institutions and enterprises with incentives to use culture as a tool for social and economic development.

That it remains the only report to specifically explore spillovers shows the need for a more co-ordinated and focused approach going forward. Their main recommendations around spillovers include the need for better holistic evidence capture

with a view to better grasping the socio-economic importance of arts and the sector as well as to give more value to intangible assets.

They propose establishing a European Culture-based Creativity Index which would highlight the potential of including culture-based indicators in existing frameworks related to creativity, innovation and socio-economic development. This framework contains indicators grouped across what they define as the 'six pillars' of creativity (human capital, institutional environment, openness and diversity, creative outputs, social environment, and technology). This would seem to have merit as a way of implementing indicators for the proposed ecology approach within which spillovers occur.



In terms of public investment in stimulating spillovers, this report is replete with recommendations. However, these are based on assumptions drawn from the research and not on a clear analysis of causality. In terms of innovation, it suggests countering the 'bias' towards technology- and science-driven innovation:

There is too strong a bias towards R&D, technology and science driven innovation. R&D focused policy should embrace creativity and contribute to foster multi-disciplinarity and interactions between art, sciences and businesses.

Suggestions include clustering research centres in art and design schools and better support for entrepreneurs and small businesses. In terms of social policy, they recommend encouraging local, regional and national agencies deploy cultural resources in social and public services. They include within this a recommendation to:

Commission a series of longitudinal studies (possibly linked to EU funded projects), examining the impact of cultural activity in key social areas such as social cohesion and civic renewal.

In terms of education, they recommend further research on the impact of increased exposure to art and culture to highlight best practices. They also make recommendations around other EU policy areas including in environmental policy (mobilising creativity through a competition) and internal markets (integration of cultural diversity as a competitive asset). In terms of public investment among other areas, they advocate focusing on creative entrepreneurs, social innovation, territories using culture for development and cultural cooperation. Specific spillovers proposals range from establishing innovation vouchers at a national level and raising awareness of public procurement as a means of stimulating creativity through to the connecting of trade fairs to creative projects.

A further study which emphasises spillover effects in all but name is Dümcke/Gnedovsky (2013), a literature review of the social and economic value of cultural heritage for the European Expert Network on Culture. This includes a set of recommendations which could be conducted within the framework of the Europe 2020 strategy. They believe it is vital to move beyond economic and social impact, to ensure that the wider spillover benefits (though they don't use the term) of cultural heritage are

given due consideration in other sectors such as regional planning, environment, agriculture, and last but not least local and regional innovation policies.

At a macro level this means comparative cross-border studies on economic impact, especially involving countries where no relevant data has been gathered. At a micro level it means developing guidelines and toolkits for the economic impact of heritage institutions and sites. It also calls for the 'analysis of best practice' in social impact in areas including heritage-based intercultural dialogue, interpretation of recent, especially difficult or controversial, heritage and intangible heritage. Its final recommendation is for the:

Development of guidelines for heritage-based strategies, on the regional and local level, aimed at smart, inclusive and sustainable growth in urban and rural settings across Europe.

In conclusion

With such a diversity of approaches to measuring and/or commenting on spillover effects, it is clear that there are three key missing or underdeveloped elements overall. The challenge going forward will be to devise tools and co-ordinate partnership and investment able to:

- develop genuine longitudinal research (at least three years) and embed a comparative approach to give a much clearer overview on the links between public investment and spillovers across a diversity of contexts,
- focus on causality and use in-depth qualitative research to illicit this as a priority – e.g. through larger sample sizes for surveys and in-depth longitudinal case studies, and
- collaborate – a shared approach to defining and measuring will give a set of outcomes for which there is a consistent methodology and thus consensus-based approach to analysis and the policy and investment implications of this.

8. Conclusions and recommendations

This preliminary methodological review demonstrates that, despite being increasingly used in policy lexicon, little of the research and evaluation across Europe reviewed has been able to demonstrate causality. The lack of longitudinal research coupled with inconsistent approaches to defining and measuring outcomes means it is difficult to truly understand the cause and spillover effects of public investment in the arts, culture and creative industries. This isn't to say there aren't some strong and often compelling studies, and that a picture of the types of spillover effects generated by public investment isn't emerging. This review makes this clear. Furthermore, the report puts forward a challenge to policymakers and partners to coordinate, collaborate and act over the long term to focus on causality.

While the arts, culture and the creative industries contribute in a multi-dimensional holistic manner to society (Sacco, 2011), research and evaluation of the full spectrum of spillover effects, as demonstrated in this review, is still not based on a holistic evaluation approach. Thus, the widespread scepticism of evaluation by cultural and creative stakeholders and policymakers is not a surprise. This preliminary methodological review demonstrates that, despite being increasingly used in policy lexicon, little of the research and evaluation across Europe reviewed has been able to demonstrate causality. For example, only two studies in the review used methodology robust enough to demonstrate scientific proof of causality.

Recommendations 8.1 to 8.3 are methodological and research recommendations. 8.4 is a policy recommendation written by the partners based on an analysis of the recommendations and addressed to a diverse audience of policymakers and other stakeholders.

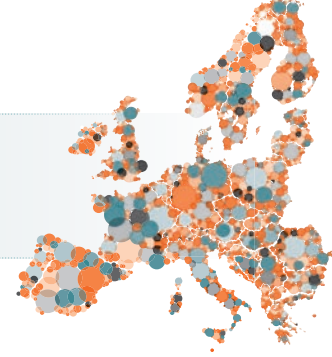
8.1 Develop the next generation of methodologies for measuring spillovers

Analysis of the evidence library suggests several ways for measuring spillovers in the arts, culture and the creative industries and how they could be developed, adapted and improved. A particular challenge has been to isolate the value of public investment and to evidence claims that it supports risk and innovation in the arts and culture, the creative industries and beyond. This cannot be fully captured through pure economic measurements of growth and employment. Striking a balance of quantitative and qualitative evaluation is not new to other research areas but there is no widely agreed way to qualitatively and quantitatively capture impact and to test the causality of public investment in the arts, culture and the creative industries.

As an overall observation, these should balance quantitative and qualitative methods to ensure a balance of testimony and data. Without developing the evidence base, quantitative evidence alone will not provide a strong base for making public investment decisions or for better understanding how

public funds can be further optimised for delivering spillovers. There should be a balance of quantitative and qualitative methods. In terms of developing methodologies which will allow for greater understanding of the value of public investment, analysis of the library suggests that the following interdisciplinary approaches which learn from good practice in the social sciences should be investigated:

- **Long-term comparative intervention studies:** Improving academic attainment of young people and improving their creativity (KEA, 2009, CEBR, 2013, and ACE, 2014) and suitability for a changing world of work are both crucial areas and more longer-term studies of the benefits of engagement in cultural activity would help build the evidence base. To strengthen evidence to the point of proving causality is difficult because of the range of confounding factors. Studies should test the benefits of cultural engagement against other forms of intervention, and the inter-relationships between culture, creativity and individual performance would be beneficial in advancing the evidence case.
- **The value of networks: learning from social impact research and pan-European studies:** With the increasing interest in networks as a means of supporting the growth of the culture and creative industries, more research studying networks and their role in promoting innovation within business and organisations and to the wider economy would be advantageous (Schopen et al., 2008). Methodologies which capture the benefits of physical and virtual networking, including examining more deeply the benefits of proximity and of networking across borders (Interact, 2014) would be especially interesting. This is supported by the evidence library – which has been co-created by a network of European partners, each keen to develop a more networked approach. Methodologies which would deliver this include working with the Community Innovation Survey (a pan-European series of business surveys which take place approximately every two years). In addition, borrowing from the lessons of social impact research (including social return on investment) could offer useful 'proxies' for understanding the value that networks bring to individuals and organisations.
- **Longitudinal intervention studies based on best practice from social science:** Developing longer-term studies of the benefits for individuals of engagement in culture and the creative industries by people of all ages. Studies which last beyond the life of a particular programme would be especially beneficial as the effects of cultural participation and engagement may be felt over a longer term. Using established measures from social sciences, including the use of control groups (Cuypers et al., 2011, and Billington, 2010) would produce a richer evidence base.
- **Testing innovation hypotheses through experiment:** Testing hypotheses around the process and means by which cultural and creative spillovers drive innovation in



places, in the wider economy and in social innovation would be beneficial (CEBR, 2013). Current knowledge gaps could be addressed by developing more experimental pilots, for example, utilising effective counter-factuals to test how innovation is stimulated by the arts, culture and the creative industries. Examples to build on include Nesta in its study of creative credits (Bakshi et al., 2013), which explores the means by which knowledge exchange occurs and the short-, medium- and long-term effects it has or interactive and participatory observations used by ecce in its Ruhr study (ecce, 2013). Tafel Viia et al. (2011) contains useful frameworks for understanding the different macro, meso and micro levels across which this could be achieved.

- **Consumer analysis utilising new technology:** In terms of demand and needs, and given the general context of the user-driven as well as user-active development of society, understanding culture's role in driving the experience economy is important. This could utilise new technology along with existing qualitative research methods in ways which allow for deeper and broader understanding.
- **Developing a holistic set of tools across the 17 sub-categories of spillovers:** Building, for example, on the work of Tafel Viia et al. (2011) in developing a multi-level framework or of KEA (2009) in developing a European culture-based Creativity Index that could work across different levels of government would provide a starting point to shaping a set of commonly agreed tools.

8.2 Greater understanding of spillover effects and public investment

Analysis of the library shows that there are several ways that developing a better understanding of public investment and spillover effects could be achieved. It must be acknowledged at a policy level that spillover effects cannot always be predetermined and that only through a holistic approach can the wide spectrum of spillovers be captured. The establishment of a coherent and co-created methodology for measurement of spillovers is complicated by the constantly shifting strategic agendas which govern public investment decisions. In addition, the value chain relationships through which spillovers arise is constantly evolving and changing through new types of cross-sector collaboration and international co-operation.

The framework for understanding how spillover effects occur, from the policy handbook on the strategic use of EU funds and spillovers (EU, 2012), provides a useful lens for examining spillovers and large-scale public programmes. In particular, it's simple framework for understanding spillover effects between culture and creative industries, the rest of society and the economy is useful:

The six categories of spillover it describes fit well with the increasing cross-sector priorities of governments, and it is useful in enabling the better alignment of culture and creativity with parallel policy areas in education, urban renewal, the environment and so on. Using this framework together with, for example, the recommendations of Tafel Viia et al. (2011) on developing indicators for capturing spillovers, could provide a good starting point for understanding firstly causality and secondly methods of evidence capture of spillover effects that could be adapted by local, regional and national governments at the different levels of complexity they each require. This is especially important when types of spillover generated cannot always be predetermined.

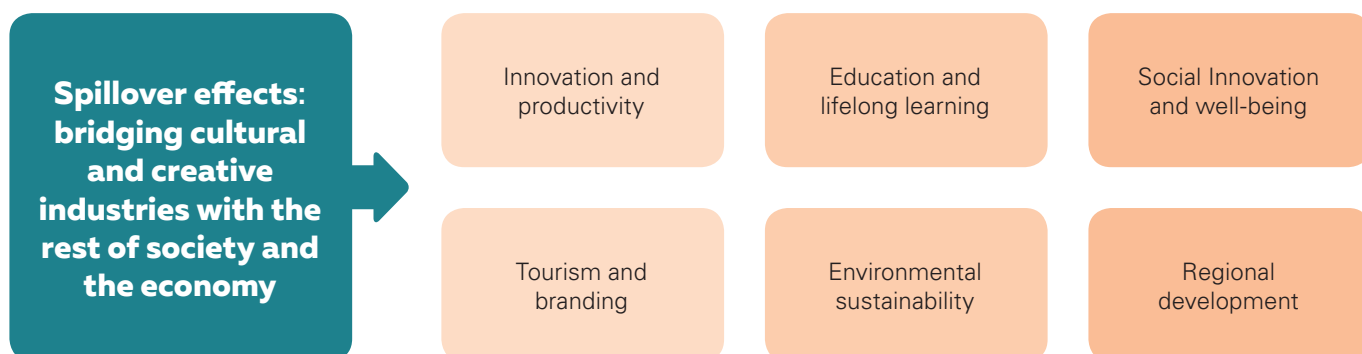


Figure 6. Spillover effects and the wider economy and society (EU, 2012)

At a more detailed level, evaluation processes and methodologies should be planned that use approaches which can capture spillover effects. Theory of change methodologies which allow for the testing of underlying assumptions and test causal pathways (Goodlad et al., 2002) which are established before the programme or initiative which is being evaluated are important here. Trying to capture spillovers in an ad hoc fashion ex post facto does not provide the level of or quality of evidence required by policymakers. Therefore it is important that studies based on established social science methodologies are established with clearly defined research hypotheses before artistic interventions occur.

8.3 Recommendations for future research

From the evidence library, we can draw out a range of areas where future research programmes would be particularly valuable. These include:

- Research into incentivised programmes. These can include targeted commissions and tools such as creative credits, creative milieu investments or resources increasing access to artists and cultural organisations. This could be researched through establishing pilots and appropriate counter-factuals as part of long-term analysis.
- Research into hybrid and cross-sector spaces and places which allow for collaboration and co-operation across sector to greater understand how spillovers occur between culture and the creative industries. These include creative hubs, co-working spaces, networking activities, creative and knowledge-driven festivals, interdisciplinary research programmes, and technology-/knowledge-transfer projects which connect businesses from different sectors and cultural organisations.
- Research into incentivised spillover-generating actions such as technology-/knowledge-exchange programmes that connect the arts and cultural sectors to universities and technology businesses.
- Embedding spillover research into mapping and evaluation tools which track and identify spillover outcomes as part of the overall outcome proposition for public funding programmes in areas including urban regeneration, social inclusion and public health.
- Research into strategic commissioning for arts, health and wellbeing and how spillover effects can be facilitated and captured. A greater emphasis on understanding the role of interculturalism and diversity as an enabler of (social) innovation and spillovers. This can be through testing the effects of mobilising active participation and accelerating organisational development.

8.4 Policymakers taking the lead for a new agenda for cultural and creative research

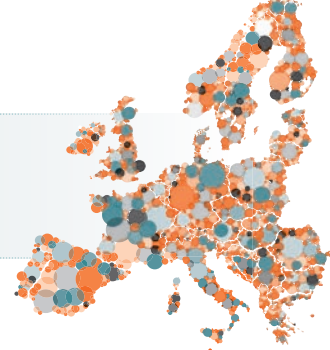
Our primary policy recommendation is the creation of the first holistic agenda for cultural and creative research. This envisions the Joint Research Centre as a key player to innovate research methods in the cultural and creative industries, and to drive research into spillovers in the arts, culture and the creative industries within the context of Agenda 2020.

To launch a new holistic approach to cultural and creative research, we recommend that the European Commission takes the lead as change-maker by:

- Dedicating a small proportion (e.g. five per cent) of all Creative Europe-and Horizon 2020-funded projects in the cultural and creative sectors for holistic evaluation that balances qualitative and quantitative evidence capture.
- Creating a new programme for the development and progression of qualitative methods and indicators in the cultural and creative industries, to be led by the Joint Research Centre of the European Union.
- Calling for the co-ordination of national research agendas in the cultural and creative sectors by an Open Method of Coordination (OMC) group. This group will be tasked with strengthening and testing new qualitative methods as part of a balanced quantitative and qualitative research agenda.

Without a new holistic research agenda, cultural and creative policies will not be able to innovate, unleash and capture the wider economic and social value of the arts, culture and the creative industries across Europe.

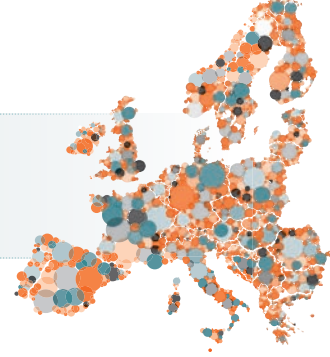
Appendices



Appendix 1: The evidence library

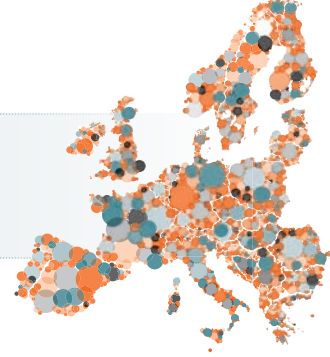
ACE, 2007	Arts Council England (2007) <i>A prospectus for arts and health</i>
ACE, 2014	Arts Council England (2014) <i>The value of arts and culture to people and society – An evidence review</i>
ACE, n.d.	Arts Council England (n.d.) <i>Assessing the interdependence of public and private finance in the performing arts</i>
ACN, 2009	Agedal, O., Egeland, H., Villa, M. (2009) <i>Changes in local cultural activities</i> Arts Council Norway
ACN, 2012	Forss, K., Kaya, Z., Kruse, S., Larsen, H. (2012) <i>Knowledge and learning in Norwegian music industry. An evaluation of Arts Council Norway's support to regional networks for professional development</i> Arts Council Norway
ACN, 2014	Meyhoff, K., Krohn, C., Sjøvold, J. (2014) <i>The Norwegian music and literature industry</i> Arts Council Norway
ACN, 2015	Christophersen, C., Breivik, J-K., Homme, A., Rykkla, L.H. (2015) <i>The Cultural Rucksack</i> Arts Council Norway
ACN, n.d. (a)	Arts Council Norway (n.d.) <i>Literature in a digital environment</i>
ACN, n.d. (b)	Arts Council Norway (n.d.) <i>Church music in Norway</i>
Albert et al., n.d.	Albert, A., Bakshi, H., Mitchell, S., Smithies, R. (n.d.) <i>Publicly funded arts as an R&D lab for the creative industries</i> Creative & Cultural Skills
Alexe/Tapardel, 2013	Alexe, F-A., Tapardel, A-C. (2013) <i>Case study: The impact of organizing the George Enescu International Festival on the branding and promotion of Bucharest city</i> International Journal of Economics, Finance and Management Science
Antal/Strauss, 2013	Antal, A., Strauss, A. (2013) <i>Artistic interventions in organizations: Finding evidence of value-added</i> Creative Clash
Antstiftung, n.d.	Anstiftung (n.d.) <i>Urbanität & Interkultur</i>
Bakshi et al., 2008	Bakshi, H., McVittie, E., Simmie, J. (2008) <i>Creating innovation: Do the creative industries support innovation in the wider economy?</i> Nesta
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Billington, 2010	Billington, J. (2010) <i>An investigation into the therapeutic benefits of reading in relation to depression and well-being</i> University of Liverpool
Boix et al., 2013	Boix, R., Herrás-Oliver, J., de Miguel-Molina, B. (2013) <i>"I want creative neighbours". Do creative service industries spillover cross regional boundaries?</i>
BOP, 2010	BOP (2010) <i>AV Festival 2010 evaluation</i> AV Festival
BOP, 2011	BOP (2011) <i>Edinburgh Festivals impact study</i> Festivals Forum
BOP, 2013	BOP (2013) <i>The economic, social and cultural impact of the City arts and culture cluster</i> City of London Corporation
BOP, 2014	BOP (2014) <i>Evidence review of the economic contribution of libraries</i> Arts Council England
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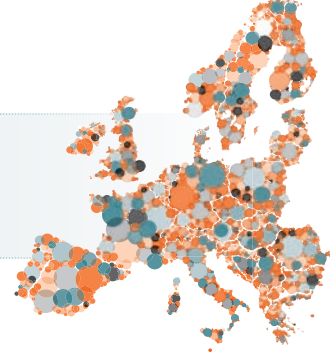


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Appendix 3: Typology used to inform evidence library creation

Funding and delivery context

- state or publicly funded (at any level – local, regional, national, European or other) investments
- not-for-profit and privately funded (e.g. charitable, and through trusts and foundations) investments
- a mix of public and private investment

Programme and project context

- varying drivers (e.g. government-led, culture-led, tech-led, user-led)
- temporary or long-term interventions/programmes
- investment into a wide range of cultural or creative art forms
- varying stakeholders who distribute public money in the arts and cultural sector and CCIs; ranging from arts and cultural organisations, charitable foundations, commercial, not-for-profit and community/social interest companies

Geographical context

- geographical diversity of impacts and outcomes (e.g. impacting on rural, urban; local, regional)
- research within the existing EU 28 and candidate/accession countries

Methodological contexts

- research methods from all disciplines
- mixed methods research
- purely quantitative or qualitative research

Assumed spillover relationships or hypotheses explored

- positive, negative or mixed impacts
- intentional or unintentional impacts or outcomes
- research that attempts to investigate causality and direct impact of public funding
- research with specific hypotheses about the nature and extent of spillovers
- research that attempts to investigate causality and direct impact of public funding

<http://ccspillovers.wikispaces.com/>
Please join the conversation.

