



# The role of UK universities as economic drivers in a localisation agenda: A case study of City Deals<sup>☆</sup>

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## ABSTRACT

Universities are important players in city and regional economic growth and prosperity. However, the relationship between ‘town and gown’ has often been criticised as not always being aligned, limiting the potential economic and societal benefits a close relationship might bring to the city and region. As a major policy initiative following the 2008 financial crisis, the UK coalition government introduced City Deals in 2012 to support local economic growth in the city and regions, through a partnership approach between central government and local government working with other major stakeholders to decide on regional priorities with funding from a mix of public and private sources. This paper considers the role of universities as localisation growth enablers through their involvement in City Deals, which is assessed through an initial review of stakeholder analysis and university civic engagement and by a qualitative case study of City Deals in Newcastle, Aberdeen, Belfast, and Stirling. This research concludes that while universities participate in town and gown civic engagement to varying degrees, the ‘third mission’ where universities engage with societal needs and market demands by linking the university’s activity with its own socio-economic context (Pinto et al. 2016) is not a priority for UK universities in comparison with their teaching and research roles. Overall, the evidence points to City Deals providing an opportunity for universities to enhance their town and gown relationships especially through their role in innovation, as a ‘local leader,’ and as an engine for local economic development. However, the degree to which this is being delivered is variable, constrained by the configuration of each deal, the input of the university, and the financial risk/value for money which the university is willing to take.

## 1. Introduction

Historically universities have played an important role in cities that have dominated the economic, social, and political life of countries (Harris and Holley, 2016). These higher education institutions, such as Oxford, Cambridge, Imperial College, and London School of Economics, have played a significant role in the long-term social and economic success of the surrounding areas especially in the context of the knowledge economy whereby universities offer huge potential for improving the economic and social status of the cities in which they are located. Indeed, transferring knowledge to the economy has been described as the ‘third mission’ for universities after teaching and research (Johannes and Menter, 2021).

Over the past century, the rise of the city as a pivotal hub in the global economy (Lizieri, 2009), together with the decline of national

governments and the lack of public funding, has raised the profile of the university in its role as a regional economic driver and as a stable employer (Kempton et al., 2021). Universities offer access to knowledge networks, deliver knowledge to students and workers, up-skilling and re-skilling and improve local business environments thereby influencing the competitiveness of the city or region in which they are located (Brennan and Cochrane (2019).

It is the complex inter-relationship of how higher education institutions operate at both global and local levels that influences the institutional behaviour and activities of universities (McCann et al., 2022). The decline of manufacturing industries, combined with a shift towards a high skill knowledge economy, requires a transition in local economies from a historical focus on industrial manufacturing to large-scale knowledge production. Harris and Holley (2016) seek to explain the current environment of cities and the role of universities in

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improving cities through knowledge networks supporting university-city development through research parks, innovation districts and multi-layered cities.

Competitive regions are those with economies and firms that increase market growth and sustain a high standard of living in such regions, universities are usually highly productive as measured by the value they contribute to the region thereby possessing greater wealth generating capacity than less competitive regions (Kitson et al., 2004; Lehmann, 2015.).

An educated workforce suited for the region's industry needs is vital for the economic and social success of a city region. Universities provide the skilled workforce able to adapt to new industries as existing ones decline, thereby allowing cities to continuously reinvent themselves as new opportunities and levels of human capital interact. In addition, while universities are physically bound to a specific location, the growth of international branch campuses and online presence has fostered global research and trade linkages that often benefit both the university and the city (Marginson, 2010).

Introduced by the UK government in 2012, City Deals are agreements between governments and individual cities which provide cities with the ability and freedom to shape and support economic prosperity in the region and bring the opportunity for a change in the relationship between 'town and gown'. In the context of the localism agenda, the main aim of this paper is to understand the relationship between UK universities and the local communities, and to critically evaluate the engagement of universities with the City Deals introduced by the UK government.

To achieve this aim, we assess the role of universities through an initial review of stakeholder analysis and university civic engagement, before developing a qualitative case study approach of City Deals. There are six key research questions which the research seeks to address:

Research Question 1: Is civic engagement a priority for UK universities?

Research Question 2: What is the nature of the governance arrangements that surround City Deals and what role do universities play in these arrangements and has governance structure changed over time?

Research Question 3: What is the financial scale of the City Deals and who are the funding partners?

Research Question 4: What type of innovative projects are City Deals supporting and how do they relate to the research strengths of the universities?

Research Question 5: What is the role of real estate in the City Deals and have they funded capital spend on the university estate?

Research Question 6: Do City Deals offer value for money for universities?

The focus of the paper will be on the UK and while much of the literature review will reflect on UK experiences, reference will be made to relevant international literature. Currently, there is a gap in knowledge base of the role universities play in City Deals. The results should be of interest to the wider global community as the majority, if not all, governments may at some stage seek to stimulate regional economic growth by capitalising on the financial capital and knowledge base of local communities and their higher education sector. The paper is structured as follows. Section 2 reviews the role of universities in the localism agenda while Section 3 draws evidence from a university stakeholder survey profiling civic engagement and outlines City Deals. Section 4 considers the research design and Section 5 details the evidence gathered from case studies on four City Deals. Section 6 discusses the findings and Section 7 presents our conclusions.

## 2. The role of universities in the localism agenda

In reviewing the literature on the role of UK universities as economic drivers and innovation hubs in the 2000s this section will consider the following themes: the evolution of the town and gown relationship, the localisation agenda, the economics of the university to the local

economy, the changing university estate, the benefits of using a stakeholder approach to evaluate changing relationship between academe and wider society, and the introduction of City Deals in the UK.

### 2.1. The evolution of the town and gown relationship

In the centuries before 1800, university scholarship was focused on the distinct career paths of church, law, and medicine, and while the universities and the town enjoyed a geographically close relationship, aims and objectives were not entirely aligned and the relationship between the students and the townsfolk was not always harmonious and it was described that universities were 'within the city but not of it' (Brockliss, 2000). However, the 19th century saw much better town-gown relationships in the UK with much closer ties between the academic community and the city. Many of the universities established at the end of the 19th century were local institutions set up to support the economic needs of the locale, with broader subject offerings (Brockliss, 2000).

During the second half of the 20th and the early part of the 21st century, local ties between universities and the local community have grown and strengthened, evidenced by the fact that many of the local population are now alumni, out-reach adult education programmes have been developed and corporate engagement is embedded both in the classroom and in collaborative research projects. Moreover, the local community now have much greater access to university libraries and to university sport facilities (see, for example, University of Edinburgh, 2009, and Higgins et al., 2015).

The two-way engagement with industry is particularly noteworthy in the context of this paper. It is now an established feature of UK higher education degrees, particularly in the applied programmes such as the range of business degrees, that experienced local industry practitioners supplement the syllabus with guest lectures and seminars. Moreover, businesses support the student body with internships, by regularly employing the local graduates and by possibly funding research and assisting with its exploration and testing. In that environment, universities seek to attract the best academic and student talent, endeavour to nurture it and promote it with the aim of establishing a strong reputation as leaders in innovation.

Harris and Holley (2016) argue that particularly in the context of the knowledge economy, universities hold tremendous potential for improving the economic and social status of cities. In light of globalisation, they stress the importance of an educated workforce suited for the region's industry needs. The McKinsey Global Institute Report (2012) define modern competitive cities as those that support economic innovation, collaborate with the private sector, enjoy healthy transport infrastructure and strong links between academia and business. Benneworth and Hospers (2007) focus on how cities support regional development, while Huggins and Johnson (2007) contend that universities are influenced by the competitiveness of the city region in which they are located - thus when working well, cities and universities cross fertilise each other. Turok (2004) emphasises that the competitiveness of city regions depends on the successful integration of people, firms, and universities in utilising knowledge. Krugman (1991) comments that understanding local specialisation gives an insight into the drivers for regional growth. In turn, the economic activity within a region may significantly influence the research agenda within a university. Hillier (2016) contends that cities 'create creativity' (p76) due to the influence of social networks. He refers to 'contacts of the right kind' who can make links between ideas and generate new ones. Universities are ideally placed to create networks among experts due to the concentration of talent and the formal and informal contacts that are created, through for example research partnerships and regular attendance at academic conferences.

For the research-intensive universities, research is often supported by Research and Innovation (R&I) departments, that attempt to link researchers with research and business opportunities, whether local or

otherwise, to promote an innovation culture and ‘spaces of interaction’ (Stachowiak et al., 2013, p264). In relation to the design of university buildings, such spaces are created to place different academic disciplines together so that the ‘collision’ of ideas stimulates creativity and fosters innovation (Benyon, 2022). These structures are often both formal and informal as institutions engage at senior level with the plethora of state and industry stakeholders, and the academics themselves create their own network within the business and research community. This relates to the notion of ‘soft spaces’ of governance (Haughton et al., 2013, p217) which exist beyond and in parallel with formal governance structures and which tend to flourish in a neoliberal setting.

While the focus so far has been on connections with the local region, it is important to point out that most of the higher ranked universities see themselves as global players. This perspective is reflected primarily through their research impact and reputation, as well as through the recruitment of large numbers of international students, predominately at postgraduate level, with much of the marketing based on the premise that while the university is UK based, it has global reach – ‘local but global’ often being the tone of the strapline.<sup>1</sup> Interestingly, Lane (2011) suggests that while universities have global aspirations and wish to benefit from international fee income, their actions are limited by the institutional rules, regulations and cultures pertaining in their home market. Moreover, when campuses are opened overseas the layering of home and overseas regulations can be operationally challenging.

While most, if not all, universities in the UK rely heavily on fees from international fee-paying students, Hayter and Cahoy (2018) argue that generating social impact must still be higher education institutions primary responsibility over and above private market opportunities, but in reality, that is difficult to achieve given persistent state funding shortfalls (McCann, 2019).

## 2.2. Localisation

The emergence of civic partnerships promoting innovation and productive relationships between the university and local stakeholders, has been referred to as ‘localisation’ whereby universities, government and businesses engage with each other to influence the direction of city growth (Harris and Holley, 2016). In a similar vein, Turok (1999) examined the promotion of urban regeneration through localisation or adaption of local assets and services via local partnerships of various kinds at a European level in the cities of Glasgow, Dublin, and Duisburg. He discusses broad lessons to be learnt about the circumstances in which mainstream localised initiatives are appropriate, establishing effective local capacity and promoting innovation. Creativity as the generation and application of new ideas is closely linked to innovation. Large metropolitan cities have fostered creativity and innovation to provide amenities and quality of life attractive to what Florida (2002) calls the creative class.

The focus on the creative class highlights the increased realisation that economic success depends on the growth and development of people, in addition to firms and industry. Large cities with vibrant cultural opportunities and a high tolerance for diversity can attract more talented and creative people, who in turn drive innovation, economic growth and promote human capital (Harris and Holley, 2016; Hillier, 2016).

Polese (2009) argues that parallel processes are involved, as highly educated knowledge workers move into, rather than out of, large cities where there are more universities. The knowledge spill-over from universities influences local communities through the flow of knowledge, ideas, money, and people, into and out of the institution.

Higher education’s economic impact is also shown through behaviour of students and staff who are also valuable users of culture and

recreational activities providing a reliable base of consumers of these services. Academic programmes, extracurricular activities, social engagement of staff and students, all serve as significant producers of the cities’ culture (McCann et al., 2020).

In exploring the concept of localisation, Brennan and Cochrane (2019) argue that while universities are located *in* places, they question whether they can be understood to be *of* these places in the way they contribute to learning cities. To answer this question, they examine the regional role of four different universities in four contrasting locations. Rather than identify the four universities directly, the institutions and the urban regions in which they are located have been renamed.<sup>2</sup> Their research highlights the need to understand the complexity of relationships between universities and cities reflecting the distinctive missions and priorities of each. They point to a close interconnection between changes in higher education and wider processes of economic and political change in which universities have become more global in outlook yet at the same time local engagement has also become more significant. Furthermore, they argue that there is no single category of ‘university’ in the same way as there is no single understanding of city or place. Universities play different roles in diverse urban contexts and these roles are shaped by the university’s strategic priorities and perceptions. Consequently, there is a need to examine closely the intersecting and overlapping relationships between universities and the places in which they are located.

Ehlenz (2019) argues that universities now look beyond their campuses to see benefits of their neighbourhoods rather than perceiving them as a liability. The research examines what this means for the neighbourhood by evaluating place-based change in 22 university neighbourhoods which are undergoing regeneration investment. The results show both growth in median home values and rents, and observed upward momentum in the housing market which the authors note significantly alters its trajectory putting it on par with regional trends. However, the research does not confirm if existing communities have benefited from these changes. Drawing on anchor institution literature, she notes a paradigmatic shift in the way universities over the past two decades have incorporated place into their identity through research, community outreach, engagement, physical investment, and expansion in the neighbourhood.

The concept of anchor institutions emerged in the US in the 2000s as part of the discourse on urban regeneration policy and practice and, in particular, for understanding the role that place-based organisations could play in building successful local economies and communities. Smallbone et al. (2015) contend that anchor institutions and small firms can play a critical role in terms of coordination and support of economic activity and their key characteristics include spatial immobility, embeddedness in the local economy and community, and a large resource base that is manifested in local purchasing, employment, and business support. Authors such as Garton (2021) and Harris and Holley (2016) elaborate on the role of universities in particular as anchor institutions.

Place and space are important as a campus can give a university a competitive edge in attracting students and talent. The findings demonstrate how university investment strategies are correlated with neighbourhood change, and that this is particularly marked in cities with strong housing markets and population change. In addition, Ehlenz (2019) views the creation of bigger and better campuses as an ‘amenities arms race’ whereby place is central to a university’s ambitions. Community engagement and social impact has sought to distinguish some universities and created a new dynamic between town and gown (Lazzeroni and Piccaluga, 2015). This has also extended to the realms of physical development and real estate in which universities participate in

<sup>1</sup> For an example see University of Portsmouth website: <https://www.port.ac.uk/global-outlook>

<sup>2</sup> The four universities as renamed as Aspirational, Glocal, Regenerational and Transformational located in the cities of Eastside, Northville, Metrocity and Rivertown respectively.

local authority regeneration initiatives reaching beyond the campus to enhance environmental improvement and quality-of-life in adjacent neighbourhoods.

### 2.3. The changing role of the university in the local economy

A great deal of importance has been placed on universities' contributions to regional development by the UK Government since 1997, leading to a number of studies examining the impact of universities on their host regional economies (see, for example, [Thanki, 1999](#); [Bleaney et al., 1992](#); [Glasson, 2003](#); [Hermannsson, 2014](#)). These studies have contributed to an enhanced appreciation of the impact that universities have on the local economies in which they are located.

Traditionally, the main function of universities was to provide education through teaching ([Watson et al., 2011](#)). However, as a result of cuts in public funding, universities have aimed to position themselves as "engines of economic growth" ([Potter, 2003](#)), placing themselves as major players in the local economy and also as collaborators with private sector industries with a view to accessing a new stream of funding ([Thanki, 1999](#)), although based on the level of funding received to date this has not materialised. Indicative of the importance that universities place on this, almost two-thirds of universities highlighted that supporting the economic development of the region that they were located, was a "high priority" within their mission statements ([CURDS \(Centre for Urban and Regional Development Studies\), 2001](#)). To this end, universities have conducted impact studies which highlight how the university affects and influences regional factors including local housing markets and urban regeneration (see [MacIntyre, 2003](#); [Potter, 2003](#)). Consistent with this, [Goldstein and Renault \(2004\)](#) examine the contributions of research universities to regional economic development and find that the role of the university has changed since the 1980s. Whilst [Goldstein and Renault \(2004\)](#) do not find that research universities contribute significantly to regional economic development between 1969 and 1986, they do find that this was the case between 1986 and 1998, indicative of universities having taken on the task of facilitating economic development during this period.

[Goldstein et al. \(1995\)](#) review the extant literature and identify ways in which universities can impact their local region economies and contribute to economic development including (i) being primary public creators of knowledge, (ii) undertaking knowledge exchange, (iii) contributing to technological innovation, (iv) assisting in knowledge infrastructure production and (vi) providing capital investment.

Universities as promoters of knowledge transfer via the sharing or disseminating of knowledge is recognised universally as a means of adding value to their local economy. Research in the United States demonstrates how knowledge transfer from the university to industry ([Varga, 1997](#)) can materialise in various ways ranging from research seminars and publications to more practical routes such as science parks and spin off companies ([Parker and Zilberman, 1993](#)). In the United Kingdom Knowledge Transfer Partnerships (more commonly referred to as KTPs) promote innovation. Knowledge transfer can take many forms, ranging from attracting private research and development close to the university campus, or spatial proximity, to university research having a positive effect on regional innovation. [Jaffe \(1989\)](#), for example, reports a positive relation between university research and innovation in US states, measured by patent registrations, and evidence consistent with universities attracting private research and development to the region. Some examples of successful Knowledge Transfer Partnerships (KTPs) include Newcastle University's KTP with Siemens, the University of Stirling's KTP with Pulcea, the University of Aberdeen's KTP with Aberdeen City Council, the University of Strathclyde's KTP with Mersen UK and Oxford University's KTP with the National Trust.<sup>3</sup>

Whilst universities can add to the economy of the region by means of

knowledge transfer and capital investment, they can also provide other non-monetary benefits to a region. For example, [Blundell et al. \(2005\)](#) show that universities help to stimulate local regions by means of improving the skills of the labour force. In a similar vein, [Johannes and Menter \(2021\)](#) argue that while the economic impact of universities is well known, the social influence is less so. Based on survey data they show that universities positively affect firms' social engagement mainly through teaching activities which they regard as a lever for social change, increased social awareness and a reorientation of the third university mission toward social needs. Other non-monetary impacts include improved health and lower crime rates ([Hermannsson et al., 2010b](#)). One good example of a successful societal Knowledge Exchange Partnership (KTP) would be the partnership between Inspire Workplaces and Ulster University. The Knowledge Exchange Partnership was set up with the objective of developing a platform to support the mental health of employees who were at risk of suffering from acute mental trauma and stress as a consequence of having to deal with harrowing digital media as part of their employment. Whilst the platform was intended only to be used by the employees of specific companies, due to its success the platform, Wellbeing Identification and Support Platform, known as WISP, was rolled out and now has a potential user base of 800,000 people in Northern Ireland ([Knowledge Transfer Partnerships, 2021](#)). Another example of a societal Knowledge Exchange Partnership would be the Knowledge Exchange Partnership between Cardiff University and St David's Children Society which created a successful best practice model for the process of adopting children.<sup>4</sup>

Through their roles of knowledge transfer via teaching and research in local economies, universities are enhancing their agenda as "key economic assets in every major UK city" ([RSA City Growth Commission, 2014](#)), roles that are now pervasive at national and international levels.

The impact of universities spending on their local regional economies has been estimated by various studies. [Hermannsson et al. \(2010b\)](#) estimates that in 2006 Scottish universities directly or indirectly generated output of £4 billion and 55,135 full time equivalent jobs, equating to 2.28% and 2.76% of the Scottish output and employment totals, respectively. Other studies have looked at the impact on individual universities. [Battu et al. \(1998\)](#) looked at the impact of the University of Aberdeen and reported an income multiplier of 1.46 on spending within the region (an additional 46p per £1 spent) and an employment multiplier of 1.61 (generating 61% additional jobs to the region out with those directly employed by the university). [Kelly et al. \(2004\)](#) examined the impact of Strathclyde University on Scotland reporting an output multiplier of 1.63 implying that a unit increase in the demand of the university leads to an economy-wide change in gross output of 1.63, and an employment multiplier of 1.38 (generating 38% additional jobs to Scotland out with those directly employed by the university).

In England, [Harris \(1997\)](#) examined the University of Portsmouth reporting an employment multiplier in the region of 1.55 and 1.79 and an output multiplier of between 1.24 and 1.73. [Glasson \(2003\)](#) similarly looks at the impact of university spending and employment on Sunderland University.

The international perspective of how universities impact on local economies is explored by [Valero and Van Reenen \(2019\)](#) who using a UNESCO dataset examined 15,000 universities in circa 1500 regions across 78 countries. Their results show that a 10% increase in the number of universities produces 0.4% enhanced future growth in GDP per capita in the region. They further argue that the relationship between universities and economic growth is not simply due to direct spending of staff and students, but is also driven by an increased supply of human capital and innovation.

[The Times Higher Education University Impact Rankings \(2019\)](#)

<sup>3</sup> For the Knowledge Transfer Partnership see: <https://www.ktp-uk.org/>

<sup>4</sup> <https://www.cardiff.ac.uk/news/view/2570475-adopting-together-wins-top-uk-award>

attempts to measure the social and economic impact of universities on society based on 11 of the 17 United Nations' Sustainable Development Goals. On this measure the top 10 global universities in order comprise: Auckland, McMaster, British Columbia, Kings College London, Gothenburg, KTH, Montreal, Bologna and Hong Kong.

However, based on a case study in China, [Chen \(2020\)](#) reminds us of the economic displacement and social impacts that could take place when a university wishes to upgrade its offering and existing staff are insufficiently skilled and lose out in the restructuring of the academy.

#### 2.4. Real estate as an enabler and the university estate

In physical terms, as student populations have grown, universities have expanded both their academic and student resident facilities within a city ([McCann et al., 2020](#)) or in the case of the new universities founded in 1960s, in a campus style development on the edge of the city such as Warwick (1961) and Stirling (1967). The physical presence of buildings creates a sense of place within a local community which can bring both positive and negative externalities ([Adams and Tiesdell, 2013](#)). The design and footprint of university buildings impact on both the style and tone of an area. [Maciel de Brito Soares \(2022\)](#) is critical of many university campuses, finding that often the public spaces 'are perceived and experienced as neglected, undermanaged and overlooked' (p244). [Soares et al. \(2020\)](#) study the spatial configuration of a university campus in the Netherlands and emphasise the importance of the interface between the built environment and people to facilitate creativity and a 'sense of place', supporting the earlier work of [Hillier \(2016\)](#).

While the universities play a role in the local community as an employer, a source of employees for local business and work for those businesses servicing the estate, the influx into residential neighbourhoods of large numbers of students for approximately 40 weeks of the year can cause resentment among permanent residents who resent the increase in noise, litter and other anti-social behaviour often associated with the student body ([Oliver, 2018](#)).

While the focus of this paper is on the impact of City Deals, with the emphasis on the partnership between institutions operating in geographically fixed locations, it should not be forgotten that the last 50 years has witnessed the formation of virtual campuses with milestone events including the founding of the Open University in London, UK, in 1969, the introduction of Massive Open Online Courses, more commonly referred to as MOOCs, in 2008 and the significant development of online educational offerings by most UK universities over the last decade. Such outreach activity impacts locales far beyond any notional headquarters of the educational provider. Given the relative success of the virtual classroom during the COVID-19 pandemic, it is likely that there will be an acceleration in the development of these virtual offerings where it is found to be revenue generating.

Another aspect of higher education and city interaction is in the realm of real estate development. New campus development in the form of modern educational facilities and purpose-built student accommodation is one of the principal ways a university can enhance its profile, brand, and visibility within the urban area ([McCann et al., 2019, 2020](#)).

While some universities in the past were more interested in isolating the campus from deteriorating neighbourhoods, in contrast today many universities are keen to build civic relationships with communities and municipalities, and they are indeed encouraged to do this by the Government as demonstrated by the Civic University Commission ([UPP Foundation, 2019](#)).

While such university campus development impinges on the real estate process, it is not seen as mainstream activity in real estate research or thought ([D'Arcy and Keogh, 1998](#)). [Keogh and D'Arcy \(2000\)](#) examine Graaskamp's thinking on real estate from a new institutional economics viewpoint as an alternative to the competitive neo-classical economics model. [Ball et al. \(1998\)](#) contend that it offers a richer perspective complementing the established economic approach.

Real estate outcomes are a series of interactions between three groups of market participants namely, users, producers (developers and suppliers of capital), and a public infrastructure group (providers of public goods and regulators of the land market) ([Adams and Tiesdell, 2013](#)). It is the role of universities as users, producers and in some cases public infrastructure providers that this research is also seeking to explore within an institutional context of city stakeholder engagement through the City Deals mechanism to foster innovation and economic development.

Summarising the literature, UK universities as key urban stakeholders and generators of knowledge transfer and innovation are evolving in their adaptation as local economic drivers whilst maintaining a global reach attractive to both international students and staff. In this context, it is unclear if civic engagement is a priority in the evolution of town and gown relationships. The emergence of City Deals presents an opportunity for augmenting university innovation, civic governance, finance, and campus real estate through an enhanced localism agenda. In the following section a university stakeholder survey is utilised to evaluate the priority universities attach to civic engagement and localism as a precursor to the consideration of their participation in the City Deals programmes.

### 3. Stakeholder analysis and City Deals

The evaluation of the localism agenda draws evidence from a university stakeholder survey profiling civic engagement, the income from these activities relative to teaching and research and case studies of university participation in the City Deals programme.

#### 3.1. Stakeholders and knowledge exchange

To understand the interconnectedness between city regions and universities, [Jongbloed et al. \(2008\)](#) adopt stakeholder analysis. Based on the earlier work of [Freeman \(1984\)](#), stakeholder theory is a useful tool in evaluating the affect that individuals or groups of individuals, within or outside an organisation, have on institutional behaviour or who are affected themselves by institutional behaviour. Key stakeholders of UK universities include central government, devolved administrations, local government, and its various department including town planning, staff, the Office for Students, NUS (National Union of Students), registered students, alumni, businesses, research foundations, investors, lenders, donors, USS (Universities Superannuation Scheme), and the local residential community. [Wolfe and Putler \(2002\)](#) suggest that there is often significant heterogeneity in the views, roles, and influence of the various stakeholders and this requires different approaches to be adopted by the university in their stakeholder interactions. [Harris and Holley \(2016\)](#) reference [Folke et al. \(2005\)](#) in emphasising that where there are heterogeneity of interests, bridging organisations can play an important role in helping to reduce barriers to ensure that different interests can be aligned with city-region priorities. City Deals and their supporting frameworks are perhaps an example of bridging organisations and in this paper their role will be investigated through a stakeholder lens.

Over the last 20 years, the UK Higher Education sector has experienced a significant change to its funding base with a shift away from government funding, to operating within a highly competitive marketised environment, and as result the sector has witnessed a shift in the relative influence of the various stakeholders that it engages with. [McCann et al. \(2022\)](#) surveyed 22 university secretaries in the UK and calibrated both stakeholder influence and importance in the Higher Education sector. They interpreted influence as both formal power and authority and the informal way in which stakeholders effect the attitudes and opinions of those involved in Higher Education policy making. Their definition of importance sought to rank those who while not influential in Higher Education policy formation, were viewed as being essential to maintaining a working relationship to ensure the efficient

operation of the university.

Table 1 clearly illustrates that while 'local' external stakeholders - residents, councils, and business - do form part of the mix of stakeholders that influence universities, their absolute score, all beneath 3 out of 5 and their relative position, 10th or below out of 17, show relatively low levels of influence. This research suggests that while much has been made about the important 'third mission' of universities as economic and social drivers in their locations, the influence of those externals involved may be in fact be low. The position is likely nuanced, and the overall average might well hide differences between the academic departments, with for example local business and chambers of commerce likely to have more influence and importance to a business school than, say, a theology department.

However, levels of influence are not the same as the value of the knowledge exchange outcomes and as we are reminded by Rossi and Rosli (2015), Knowledge exchange activities exist in many different categories including, for example, collaborative research with public funding, contract research, consultancy, continuing professional development, number of patents, spin-off activities, regeneration income,

**Table 1**  
Ranking of Stakeholder Influence and Importance.

	Influence on HE Policy		Importance to operation of HE	
	Average Ranking	Position	Average Ranking	Position
<b>Panel A: Internal Stakeholders</b>				
Academic staff	4.41	1 =	4.91	1
Undergraduate Home Students	4.41	1 =	4.32	3
Postgraduate Taught	4.09	3	4.23	4 =
International students				
Undergraduate International students	4.00	4	4.18	6
Postgraduate Taught Home students	3.95	5	4.05	7
Postgraduate Research Home students	3.86	6 =	3.91	8
Postgraduate Research International students	3.86	6 =	4.23	4 =
Support staff	3.64	8	4.64	2
<b>Panel B: External Stakeholders</b>				
UK Government	4.64	1	4.50	1
Devolved governments	4.00	2	4.00	4
UK Research & Innovation (UKRI)	3.86	3	4.09	3
University & College Union (UCU) + other campus unions	3.68	4	4.18	2
Office for Students	3.59	5	3.55	8 =
Universities Superannuation Scheme (USS) or other pension providers	3.36	6	3.50	10
National Health Service (NHS)	3.23	7	3.55	8 =
Charity research foundations	3.14	8	3.77	7
Lenders	3.09	9	3.23	13
Local Residents - community	2.91	10	3.45	11
Local Authorities	2.86	11 =	3.00	14
Alumni	2.86	11 =	3.82	6
Donors	2.86	11 =	3.86	5
Investors	2.59	14	3.27	12
Local Business	2.45	15	2.73	15
Student bed providers	2.36	16	2.64	17
Chamber of Commerce	2.00	17	2.67	16

Source: Adapted from Tables 4 and 7, McCann et al. (2022) Calibration of stakeholder influence in the UK higher education sector", *Studies in Higher Education*, 47(7), 1502–1523.

Table 1 presents the average ranking of stakeholder influence and importance for each stakeholder, ranked from most influential to least influential from a survey of 22 UK university secretaries by McCann et al. (2022) in 2020. Ratings are based on a scale of very high influence (5) to negligible influence (1). Panel A presents the results for internal stakeholders. Panel B presents the results for external stakeholders.

public lectures, performance arts and exhibitions. These knowledge exchange activities are captured in the HESA Higher Education – Business and Community Interaction (HE-BCI) survey considered below.

de la Torre et al. (2019) show that universities with different institutional resources, undertake different sets of activities, and prioritise their engagement with certain stakeholder groups to maximise their fit. Analysing data across all UK universities, a consistent pattern of results grouped universities into four discrete clusters. Cluster one included 'science-based highly research intensive' universities, cluster 2 'mixed profile research intensive' universities, cluster 3 'professional teaching intensive' universities and cluster 4 'arts and humanities-based teaching intensive' universities (de la Torre et al., 2019, p2172). Evidence that resources shape priorities, which then determines the activity.

The importance of knowledge exchange to the government is demonstrated by the introduction of the Knowledge Exchange Framework (KEF)<sup>5</sup> in 2020 in England (Johnson, 2020), with the first results released in March 2021.<sup>6</sup> In the Knowledge Exchange Framework, the universities are divided into clusters with, for example, Newcastle University in Cluster V (very large, very research-intensive universities) assessed as being in the top 10% for working with the public and third sector and bottom 30% for skills, enterprise, and entrepreneurship, in that cluster. The Knowledge Exchange Framework sits alongside the Teaching Excellence Framework (TEF) and Research Excellence Framework (REF) as Research England's 'third pillar of University assessment'.

The HESA Higher Education Business and Community Interaction (HE-BCI) Survey publishes data from UK universities on civic engagement.<sup>7</sup> The income received from activities such as Continuing Professional Development (CPD) and Regeneration, 2% and 1% respectively in 2018/19 is minute compared with teaching income (49%), research income (16%) and funding body grants (13%) as shown in Fig. 1. HESA data from 2019/20 onwards does not provide distinct information on income from regeneration and income from Continuing Professional Development (CPD), including these income sources under the category of other income. Given that a broadly similar pattern in terms of income from regeneration and income from Continuing Professional Development (CPD) is evident between 2015/16 and 2017/18, and that the income figures are now included in other sources, it is assumed that the percentage income streams from these sources continue to be low.

A similar pattern is found across each of the individual countries in the UK, although universities in Wales receive higher regeneration income compared with those in England, Scotland, and Northern Ireland. Overall, these statistics relating to the third mission in universities appear to reinforce the relatively low level of influence of civic engagement activity, found in the stakeholder survey, relative to core university functions of teaching and research. Such a perspective reinforces the clusters identified by de la Torre et al. (2019).

### 3.2. City Deals

Returning to the theme of localisation, City Deals were introduced in the UK in 2011 by the Conservative and Liberal Democrat coalition government to boost regional economic growth following the financial crisis in 2008. Providing a bespoke package of funding and decision-making powers negotiated between central government and local authorities/other bodies (House of Commons Library, 2020), City Deals were promoted on an ambition for enhanced decentralisation 'to give cities greater freedoms to invest in growth; the power to drive critical

<sup>5</sup> For a full explanation see: <https://re.ukri.org/knowledge-exchange/knowledge-exchange-framework/>. Research England intends to publish the KEF metrics of all HE providers in receipt of their Knowledge Exchange funding.

<sup>6</sup> <https://kef.ac.uk/dashboard>

<sup>7</sup> HESA is the Higher Education Statistics Agency who collects, analyses and disseminates data about the UK Higher Education sector.

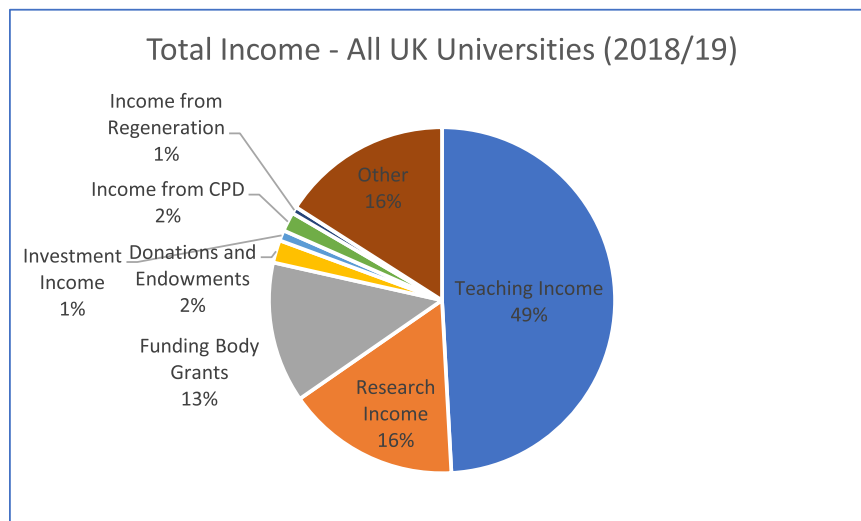


Fig. 1. Total UK University Income 2018/19  
Source: HESA.

infrastructure development; and new tools to help people to get the skills and jobs they need' (Cabinet Office, 2011, p2.). Under the scheme local authorities are urged to work in partnership with all the those involved in economic development, including universities and the private sector, to decide on regional priorities, key projects, and timescales in order to enact change and attract investment and growth. Universities as centres of research excellence are seen as fundamental to the City Deals concept of research and innovation clusters, groups of organisations located in the same place with a shared focus on research and development in a particular field, as a means of increasing investment in research and development (R&D) and to ensure that the benefits of this investment are more widely felt across the UK (The Royal Society, 2020).

In the period July 2012 to July 2020, 31 City Deals were successfully negotiated.<sup>8</sup> The first wave, completed in July 2012 covered the 8 largest English cities outside London; the second wave, completed in July 2014 covered the next 14 largest English cities and their wider areas, as well as the next 6 English cities and areas with the highest population growth between 2001 and 2010. In 2014, Glasgow and the Clyde Valley became the first area outside England to agree a deal, while in 2016, deals were agreed with Aberdeen, Cardiff, and Inverness. In 2017, deals were agreed with the Swansea Bay area, Edinburgh and South East Scotland and in 2018, a deal for Stirling and Clackmannanshire was finalised and funding confirmed for deals in Tayside and the Belfast City Region (House of Commons Library, 2020).<sup>9</sup>

Given the staggered start of the City Deals and the timeframe of many of the projects, it is far too early to judge the overall success of this initiative, however O'Brien and Pike (2019) question whether in fact the decentralisation of power has taken place, rather arguing that while local government has been offered more powers, they are tightly controlled within the 'UK's highly centralised governance system' (O'Brien and Pike, 2019, p1470) and they question the transparency of the decision making which surrounds the deals.

#### 4. Research design

We employ a qualitative case study approach with the investigation

<sup>8</sup> For the full listing: <https://commonslibrary.parliament.uk/research-briefings/sn07158/>

<sup>9</sup> London Enterprise Panel (2014), under the then Mayor Boris Johnston, submitted a proposal for a Growth Deal to central government but this was not successful, and all City Deals are focussed on UK regions outside of the capital.

of four City Deals. In choosing which City Deals to investigate, the desire was to have representation from across the UK, include both large and smaller scale financial deals, cover different time periods and stages of project maturity and include a wide range of innovation ideas. To that end the Newcastle (2012, £1bn), Aberdeen (2016, £826m) Belfast (2019, £850m) and Stirling (2020, £214m) City Deals were chosen as the case studies. The authors recognise that is difficult to make generalisations across the piece on evidence from only four City Deals, but given the complexities of each deal, the sample lifts the lid on some of the existing practice.

The research involved a series of six semi-structured interviews with senior university representatives and those close to the City Deals during the summer and autumn of 2020, supplemented by an examination of both Government and local Government/City documentation on individual City Deals such as bespoke city deals websites and annual reports, in addition to further internet searches of relevant documentation. All interviews were held online via MS Teams due to restrictions imposed by the pandemic.

Each interview was attended by at least two authors and the notes from each interview were transcribed immediately after the interviews had taken place. The transcripts were subsequently reviewed to ensure accuracy and then sent to those interviewed, asking them to read over the transcriptions and note any inaccuracies.<sup>10</sup> Once all interviewees had confirmed that our interview interpretations were accurate, each author independently reviewed and analysed the interview transcripts to develop a thorough understanding of the content of the data and to identify the main themes that emerged in the discussions. Following this, the authors met to discuss their observations of the data and to confirm the broad themes surrounding City Deals that would be explored within our analysis: i) background, ii), governance, iii) financing, iv) innovation, v) real estate and vi) value for money.

Six universities were involved in this study. With respect to the clusters outlined by de la Torre et al. (2019), five of the universities - Aberdeen, Newcastle, Stirling, Queen's, and Ulster (both Belfast) - were in cluster 2 'mixed profile research intensive' universities, while The Robert Gordon University (Aberdeen) was in cluster 3 as a 'professional teaching intensive' university. Table 2 provides a brief overview of the

<sup>10</sup> The authors asked those interviewed to review the transcripts because they were cognisant that their own views and knowledge of the City Deals that their universities were involved in could potentially, but unintentionally, exhibit a personal bias and influence on the results with regards to prospective reflexivity

**Table 2**  
University Statistics for universities in our 4 City Deals Case Studies.

Panel A: Number of UK universities by devolved nation <sup>a</sup>		Number	Percentage				
England		108	81.20%				
Scotland		15	11.28%				
Northern Ireland		2	1.50%				
Wales		8	6.02%				
Total		133	100.00%				
Panel B: Student numbers for universities in our 4 City Deals Case studies							
	Sector	University of Aberdeen	Robert Gordon University	University of Stirling	Queen's University Belfast	Ulster University	Newcastle University
Students	Total						
- Undergraduate (FTE)	1646,040	9560	8405	7840	15695	16,080	20,995
- Postgraduate Taught (FTE)	438,335	3450	1475	2120	4500	3595	5925
- International (FTE)	486,250	8155	8705	7755	16,495	17,540	19,505
- Home (FTE)	1598,125	4855	1775	2205	3700	2135	7415
Total number of students	2084,375	13,010	10,480	9960	20,195	19,675	26,920
Panel C: Income and expenditure for universities in our 4 City Deals Case studies							
	Sector Average	University of Aberdeen	Robert Gordon University	University of Stirling	Queen's University Belfast	Ulster University	Newcastle University
Income							
- Tuition Fees (£000 s)	148,720	62,613	31,778	38,772	115,508	80,779	264,476
- Research Income (£000 s)	47,838	5240	3092	11,915	91,691	29,054	108,676
- Funding Body Grants (£000 s)	39,091	77,618	44,542	45,923	101,298	89,536	71,939
- Investment Income (£000 s)	2470	1975	3092	427	3894	1461	2504
- Donations and Endowments (£000 s)	6085	596	1359	230	2524	920	5,968
- Other income (£000 s)	56,594	31,482	10,575	28,734	57,351	16,568	117,043
Total Income (£000 s)	371,744	228,494	91,943	126,001	372,266	218,318	570,606
Expenditure (£000 s)	262,597	199,984	100,078	108,728	322,159	196,604	485968

Source: HESA

<sup>a</sup> We use the list of recognised universities on the [UK Government \(2020\)](https://www.gov.uk/check-university-award-degree) website to form our sample of 133 universities (see <https://www.gov.uk/check-university-award-degree>).

UK Higher Education Sector and the six universities involved in this study.

## 5. City Deals

When evaluating the City Deals, the interviews and desk-based research focused on six main themes: (i) background to the deal, (ii) governance, (iii) finance, (iv) innovation, (v) real estate and (vi) value for money. [Table 3](#) summarises our findings under these categories in panels A-F, respectively.

### 5.1. Analysis

Panel A of [Table 3](#) provides a general background overview to each of the four City Deals we examine. The evidence from our four case studies, suggests that the governance arrangements (outlined in Panel B of [Table 3](#)) have evolved over time, with less tiers of governance in the earlier Newcastle City Deals (2012) than found in the later Aberdeen (2016), Belfast (2019) and Stirling (2020) deals. However, the numerous tiers of control led [O'Brien and Pike \(2019\)](#) to challenge whether decentralisation of power has in fact taken place, given the managerialist approach adopted by central government.

Although the Belfast and Stirling City Deals have seen the local universities at the heart of the governance arrangements this is not universally true, although this may be the result of whether the regional priorities are closely aligned with the university strategy and research expertise. The strength of the town and gown relationship at the time of deal origination and the leadership profile of the university's senior team in the local leader group, is an important factor in determining the shape and extent of the university's involvement. Whatever the formal governance arrangements, the research found evidence that the City

Deals require regular meetings between universities and other stakeholders on various project boards which have helped to bridge the divide and improve relationships.

The capital contribution from the universities (outlined in Panel C of [Table 3](#)) has varied but has been relatively small compared to the overall City Deals spend. That said, any contribution from a university, at a time of financial pressures, is not insignificant but, by making a financial contribution, the university gains 'a seat at the table' and sends an important signal of willingness to be involved in partnership and shared endeavours. The City Deals have provided capital for new university buildings, with the universities sharing the subsequent revenue stream risk – a risk which is seen as particularly prominent in the Belfast deal. This creates its own issues in relation to financially sustaining the new infrastructure. The UK government has required the universities to underwrite the operational costs, a transfer of risk which some have questioned, given that City Deals are a government initiative.

The innovation projects have played directly into the hands of the research strengths of the universities and thus helped to meet one of the key strategic objectives of the sector. These are outlined in Panel D of [Table 3](#). The projects act as a bridge between universities, local businesses and entrepreneurs, and are on the cutting edge of current thinking – not 'ivory tower' research where the research is inconsequential or unimportant to the region or those living or working within the region - but rather grounded in current demand for knowledge and understanding, demonstrating relevant focus and the applied nature of university research. Moreover, given their budgets the City Deals innovation projects are of a sufficient size and scale to be meaningful.

Panel E of [Table 3](#) discusses issues surrounding real estate. Major real estate spend has figured prominently in the Newcastle deal (smart data capture), Aberdeen deal (harbour expansion and transport) and Belfast deal (transport). As mentioned above, the universities have benefited



**Table 3**  
Key characteristics of the selected City Deals.

	Newcastle City Region City Deal	Aberdeen City Region Deal	Belfast Region City Deal	Stirling and Clackmannanshire City Region Deal
<b>Panel A: Background</b>				
<i>Date signed</i>	July 2012	November 2016	March 2019 (Heads of Terms signed)	February 2020
<i>Tenure</i>	25 years	10 years	15 years	10 years
<i>Main partners</i>	Newcastle City Council and Gateshead Council as driving forces.	UK and Scottish Governments; Aberdeen City and Aberdeenshire Councils; Universities; Private Sector parties; other economic partners.	UK Treasury; NI Executive; Private Sector parties; Universities; six local authorities: Antrim and Newtownabbey Borough Council; Ards and North Down Borough Council; Belfast City Council; Lisburn and Castlereagh City Council; Mid and East Antrim Borough Council; and Newry, Mourne and Down District Council	The UK Government and Scottish Governments; Stirling Council and Clackmannanshire Council; Universities.
<i>Universities involved</i>	Newcastle University but only indirectly, as one of the four Accelerated Development Zones identified in the City Deals was a joint venture with the city council.	Robert Gordon University; University of Aberdeen	Queens University Belfast; Ulster University. Colleges include Belfast Metropolitan College, Northern Regional College, South Eastern Regional College and the Southern Regional College.	University of Stirling. Colleges include Forth Valley College.
<i>Major themes within deal</i>	Five key themes: (i) Newcastle and Gateshead Accelerated Development Zone; (ii) Energy, Marine and Low Carbon; (iii) Employability and Skills; (iv) Housing; (v) Connectivity and Transport.	Six key themes: (i) Oil and Gas Technology Centre (OG TC), (ii) Biotherapeutics Hub for Innovation, (iii) Food Hub (Seedpod), (iv) Digital Theme, (v) Strategic Transport Appraisal and (vi) Aberdeen Harbour Expansion	Four key themes: (i) innovation and digital, (ii) tourism and regeneration, (iii) infrastructure and (iv) employability and skills.	Seven key themes: (i) innovation; (ii) digital; (iii) cultural, heritage and tourism; (iv) capital fund for Clackmannanshire; (v) transport, connectivity, and low carbon; (vi) infrastructure; and (vii) skills and inclusion.
<b>Panel B: Governance (relating to research question 2)</b>				
<i>General overview of governance</i>	Activity is overseen by the Gateshead/Newcastle Partnership, a Joint Committee comprising the Leaders and senior Cabinet members of the two Councils, as well as regular officer contact across the two Councils. (From our investigations, the governance arrangements are not fully transparent.)	The governance structure comprises four tiers. Tier one comprises a Joint Committee involving the local authorities and Opportunity North East, which drives and governs the implementation of the City Deals programme. Beneath this committee is the Programme Board which oversees the operation of the City Deals and the Programme Management Office which meets quarterly with the Scottish Government to discuss progress. Below this structure there are working groups for each of the themes.	Belfast City Council provides executive leadership to the Belfast Region City Deals and is the accountable body. A Joint Council Panel and an Executive Board supported by Steering Groups is tasked with developing coherent, integrated programmes in each of the Investment Pillars. The formal governance structures are supported by wider engagement with local, regional, and national partners, across all sectors. The governance structures seek to provide clear lines of accountability for expenditure of public funds and demonstrate how local decision making will drive economic growth across the Belfast Region.	The governance structure comprises three tiers. Tier one comprises a Joint Committee involving the University of Stirling and local authorities, which drives and governs the implementation of the City Deals programme. Beneath this committee is the Chief Officers Group. Below this structure is a series of thematic and advisory groups, including a Chief Finance Officers Group, a Regional Economic Advisory Board, a Regional Enterprise Forum, a Culture and Heritage Programme Board, and an Innovation Programme Board.
<i>University input into governance</i>	University only indirectly, through fortnightly meetings between the university Vice Chancellor and the city council Chief Executive; and through the Science City Partnership Board, a previously existing contractual committee comprising representatives of both the university and the city council to oversee and steer the development of Science City (the Helix), one of the ADZs.	The University of Aberdeen and the Robert Gordon University (RGU) are not involved at the top of this governance structure but have influence through Opportunity North East and have representatives on the various working groups.	Queen's and Ulster universities are involved at all levels of governance through the Innovation Pillar Board and up to the Executive Board.	As signatories of the SCRDP, The University of Stirling is a member of the Tier One Joint Committee. The University is also a member of the Chief Officers Group and is represented on all of the thematic and working groups.
<b>Panel C: Finance (relating to research question 3)</b>				
<i>Total Investment</i>	£ 1bn	£ 826.2 m	£ 850 m	£ 214 m
<i>Investment of different parties including the universities</i>	ADZ for Science City was a pre-existing contractual and financial investment. Originally, a third party, One North East RDA was involved, but they were removed upon their abolition in 2011. Amount of university input unclear.	UK and Scottish Governments (£250 m); Aberdeen City and Aberdeenshire Councils (£20 m); Universities (£23.5 m); Private Sector (£485.45 m); other economic partners (£47.25 m).	UK Treasury (£350 m); NI Executive (£350 m); Others (£150 m) comprising private sector, six local authorities and universities (£30 m). Target delivery of almost £ 1bn of private sector leverage to create 20,000 jobs (Belfast Region City Deal, 2021).	The UK Government and Scottish Government (£90.2 m); Stirling Council, Clackmannanshire Council and The University of Stirling (£123.8 m)
<b>Panel D: Innovation (relating to research question 4)</b>				

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Table 3 (continued)

	Newcastle City Region City Deal	Aberdeen City Region Deal	Belfast Region City Deal	Stirling and Clackmannanshire City Region Deal
<i>Projects that the universities are involved with</i>	ADZ for Science City, later the Helix, involved the university seeking to develop one third of the entire site. This manifested itself in three Treasury funded National Innovation Centres for ageing science, smart data and innovation totalling approx. £ 40 m external funding matched by the university after 2014. The site also comprises several extension or new buildings for the university including the Urban Sciences Building £ 65 m, the Catalyst (home of the NICs), the Frederick Douglass Building £ 35 m, The Core (owned by the CC and leased out initially on several floors to the university), and an EV filling station. Lately, both the university and the city council are shareholders in the Community Interest Company Future Homes housing site on the Helix for 66 units.	The universities are involved in 4 innovation projects: Oil and Gas Technology Centre (AU and RGU), Agri-Food and Nutrition Hub for Innovation (AU), Bio-Therapeutic Hub for Innovation (AU) and Digital Connectivity (RGU).	The five Innovation projects being led by Ulster University and Queen's University Belfast: Advanced Manufacturing Innovation Centre (AMIC) (led by QUB with UU); Centre for Digital Healthcare Technology (CDHT) (UU); Screen Media Innovation Lab (SMIL) (UU); Global Innovation Institute (GII) (QUB); Institute for Research Excellence in Advanced Clinical Healthcare (i-REACH) (QUB).	The University of Stirling intends to develop 3 innovation hubs: the National Aquaculture Technology and Innovation Hub, Scotland's International Environment Centre, and the Intergenerational Living Innovation Hub.
<i>Overview of non-university projects</i>	Non-university projects include Newcastle/Gateshead Accelerated Development Zone, (ii) Employability and Skills, (iii) Housing and (iv) Connectivity and Transport.	Non-university projects include the Aberdeen Harbour extension which is a major infrastructure project designed to allow the largest vessels to berth in a new South Harbour, benefitting businesses involved in decommissioning and the tourist industry with a string focus on the cruise ship market.	Non-university projects include (i) boosting tourism and regeneration, (ii) infrastructure and (iii) employability and skills.	As the university are key signatories to the deal, they are involved in all aspects of the city deal. However, projects which are not innovation based that the university are not driving include (i) digital; (ii) cultural, heritage and tourism; (iii) capital fund for Clackmannanshire; (iv) transport, connectivity, and low carbon; (v) infrastructure; and (vi) skills and inclusion.
<b>Panel E: Real Estate (relating to research question 5)</b>				
<i>Type of real estate – digital v physical</i>	Infrastructure and innovation, including site of the Urban Observatory smart data capture for the whole of the city and region through university owned but Treasury funded sensors (over 500 of them) in the city centre alone.	Infrastructure/Real estate figures prominently in the ACRD, particularly for the non-university-based projects with the Aberdeen Harbour extension and transport links amounting to just under half of the planned expenditure.	Infrastructure plays a prominent role in the Belfast Region City Deals particularly for the non-university projects two of which are under review: Newry Southern Relief Road and extending the Belfast Rapid Transit Network. New buildings for the universities include: AMIC £ 98 m, CDHT £ 43 m, SMIL £ 68 m, GII £ 58 m and i-REACH £ 47 m.	There is no construction of new buildings within the SCRD.
<i>University benefits /involvement in infrastructure</i>	Research development, application of UKRI funding to test bed sites and labs to capture change in situ, dissemination of spatial intelligence to governance agencies.	While the three main innovation centres have or will receive the balance of the funding, their focus has not been on physical infrastructure but on leveraging the intellectual capital of the region on energy transition, life sciences and food and drink. While the centres have required accommodation, in which respect the universities and SRUC have been involved through the gift of land, construction of facilities or leasing of space, it is the powerful combination of industry knowledge with the research expertise of the academic community which is underpinning much of the success of the City Deal.	While the innovation centres that the universities are involved in have or will receive the balance of the funding, their focus has not been on physical infrastructure but on leveraging the intellectual capital by means of supporting inclusive economic growth and delivering a step change in the local economy. SMIL for example, promotes widening participation and building an ecosystem through immersive/games development reaching out to young people in disadvantaged locations and by promoting skills.	Investment within the innovation hubs is first going to be focused on developing the activity, with new builds following.
<b>Panel F: Value for money (relating to research question 6)</b>				
<i>Has the deal offered value for money for the universities?</i>	Difficult to judge, but possibly for the leverage value alone for further publicly funded initiatives and eventual investment by developers in the rest of the site. Many projects within the City Deals have barely seen a return and it is observed that there was competing visions and agendas, very much the	The capital commitment of the universities in Aberdeen has been a relatively modest £ 23.5 m, with some of that commitment in kind. Set against this benchmark the outcome to date has represented good value in strictly financial terms. Moreover, greater returns are likely to emerge from continuing research, specialised	The Belfast Region City Deals has provided additional capital resource for both universities but not revenue. Universities do not deliver economic benefits directly and consequently there is a very high financial risk for each university as a facilitator of industry. For example, new	The core strategies within the SCRD marry well with the University of Stirling's own objectives. The University views the SCRD as an opportunity to leverage a step change in their innovation and enterprise programme and forms a key part of their business and regional engagement plan. In terms of a

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Table 3 (continued)

Newcastle City Region City Deal	Aberdeen City Region Deal	Belfast Region City Deal	Stirling and Clackmannanshire City Region Deal
<p>preserve of the City Council and other major public policies in city. Looking at individual projects within the deal, the subsea engineering initiative at the mouth of the Tyne was originally envisaged as being a competitor to Aberdeen for support vessels for offshore renewables, but this initiative has not turned out as intended. Helix has been successful but whether it could be directly attributed to the City Deals is questionable. Overall, it is considered that the degree to which you can draw a linear line between the City Deals and what has gone on the ground is highly questionable.</p>	<p>postgraduate programmes and CPD events. Moreover, the City Deals has facilitated a great deal more cross institutional discussions across the city, resulting in a more collaborative approach to economic planning across the region.</p>	<p>academic programmes will be expected to be delivered as the industry wants a pipeline of talent, yet City Deals are not funding training and talent development.</p>	<p>financial commitment, the University of Stirling will be required to commit £ 6 million of its own funds. While not a large sum of money in relative terms, upfront funding of such amounts nevertheless has caused challenges in a pandemic environment. However, given the significantly larger sum which will be invested through the 10-year life of the City Deals on research activity, new build developments and partnering with industry, the SCRD is likely to offer significant value for money for the university. While the university has had a long-standing relationship with Stirling Council, the SCRD has opened up the opportunity for fruitful engagement with Clackmannanshire Council and Falkirk Council and it is expected that the deal will be an excellent platform on which to build business engagement.</p>

Sources: Interviews with senior university representatives, Government City Deals Policy Papers ([www.gov.uk/government/collections/city-deals](http://www.gov.uk/government/collections/city-deals)), university websites, City Deals annual reports, City Deals websites

from securing some new buildings with funding from the deals, thus reducing the need for allocating capital and reducing risk. That said, from a university perspective the City Deals have been more focused on leveraging intellectual capital, than financing physical infrastructure.

Our research has provided evidence that in strictly financial terms, the universities are likely to significantly leverage their investment and thus the deals should offer value for money. This is outlined for each deal in Panel F of Table 3. However, there is no guarantee that all the projects within a City Deals will offer a satisfactory return to the public, private, and HE sector, as there is significant capital and revenue risk attached to some of the initiatives. Financial benefits to the Higher Education sector are likely to emerge through improved research performance, higher success in grant applications, growing teaching income from new programmes and through better understanding by industry of the research expertise within universities.

However, when evaluating the benefit of the deals, they should not be judged purely in cashflow and monetary returns but also from the perspective of reputational gains from improved formal and informal contacts with industry and local government. By being part of 'joint endeavours' the senior management team of a university can cement their place as part of the 'local leaders' group and play an important role in local economic development post pandemic.

## 6. Discussion

Before reaching our conclusions, it is worth reflecting on the impact of two seismic events which have impacted the UK Higher Education sector in recent years - the COVID-19 pandemic and Brexit. This research was conducted during the pandemic which significantly disrupted City Deals implementation plans. The pandemic resulted in delays to City Deals construction projects and a loss of momentum as the economy recovered from lockdowns. More significantly, universities found their traditional face-to-face teaching model disrupted, with a move to blended learning required and found access to international student recruitment markets restricted. While some of the original predictions of a catastrophic fall in international students did not materialise income from international students across the sector was down by 10% for 2020/21 (House of Commons, 2021).

While all UK universities have been impacted, reductions in international fee income particularly hits universities in Scotland and Northern Ireland where home and EU teaching is substantially

underfunded, due to a cap on the student fee, and is cross subsidised from the fee income from non-EU international students (Universities UK, 2020). The surplus from international postgraduate taught students helps to support essential activities such as research, which are often loss making. The disruption to campus-based teaching over 2020–2022 accelerated a trend towards blended learning on the back of digitisation and communication advances which have spawned new teaching strategies, including the 'flipped' classroom. Newell et al. (2019) argue that such a change will lead to a demand for a revised real estate offering based around excellent IT infrastructure and a revised configuration with, for example, less requirement for large lecture theatres and more demand for smaller breakout rooms. Furthermore, they recommend that business schools would be best located in what they describe as 'vertical campuses,' occupying floors in major office developments located in the central business district. Physical proximity of the university within the business community being seen as a unique selling point (USP) – reconnecting town with gown. Indeed, the COVID-19 pandemic may well be seen in the future as a watershed moment in university building design with changing teaching pedagogies requiring different space usage and when this is coupled with less demand for staff offices, (as academics work from home) different building configurations will emerge.

There is much direct politics which surround the university sector in the UK as evidenced by the debates over student fees, the cap on student numbers, government grant to the universities, student loans and levels of research funding. However, the political decision to leave the European Union (EU) has had serious repercussions for the sector. Data from the Higher Education Statistics Agency (HESA, 2023) confirms that the number of EU students choosing to study in the UK has dropped by more than half since Brexit: enrolments by EU nationals dropped by 53%: from 64,120 students in 2020/21 to just 31,400 in 2021/22. This has not only reduced enrolment numbers but diminished the level of cultural exchange which added welcome diversity to the campus experience. This decision has also had implications for enrolment at European universities following lower student migration to the UK. Politics continues to impact the sector as recently the UK government announced that from January 2024, international students will not be permitted to bring family members with them while they study in the UK, unless they are embarking on a PhD. Given the importance of international students to university finances, such a move further impacts on a key revenue stream and is a decision not based on educational criteria, but on

appeasing immigration concerns. These comments are relevant to this paper as City Deals are another example of government intervention, on this occasion in regional markets, seeking to promote economic growth with the universities central to this initiative. The decision on which cities are selected for support is a political decision.

While recognising that the research covered only a sample of six UK universities in four cities, care must be taken in making any generalised comments on any enabling strategies or common themes. Common themes emerge focussing on capturing the benefits of an innovation driven knowledge economy reflecting the core purpose of City Deals and reduction of risk through investment in areas of established research strengths in partner universities. In this regard, such an outcome could be considered as a welcome strategy for the universities as it bolsters their research real estate infrastructure, has the potential to raise reputation and thus attract more fee-paying international students, at a reduced capital cost delivered through the City Deals partnership.

However, what is clear is that early participation in the origination stage of a City Deals is an advantage, as it helps to secure a seat at the decision-making table and gives the university an opportunity to shape the agenda and to promote their strengths in research and innovation. Moreover, there is evidence of universities wishing to reduce their risk and exposure by limiting their capital input and seeking leveraged returns on the back of major public investment.

Risk is not shared equally across the public, private and university sector partners. City Deals offer additional capital resource for universities thereby reducing the costs and risks of replacing ageing real estate. However, universities bear the risk of generating the revenue for activities that will take place in the new or refurbished buildings. Universities do not deliver economic benefits directly and consequently there is a very high financial risk for each university as a facilitator of industry. As outlined in the Belfast Region City Deal, new academic programmes will be expected to be delivered as the industry wants a pipeline of talent, yet City Deals are not funding training and talent development.

## 7. Conclusions

At the outset we identified six key research questions which required to be addressed and while acknowledging the limitations of our sample, our conclusions are as follows. While universities participate in town and gown civic engagement to varying degrees, the evidence points to the third mission not being a priority for UK universities in comparison with their teaching and research roles (Research Question 1). However, the City Deals initiative provides an opportunity for university senior management to have closer connections with leaders of both local authorities and businesses as evidenced by participation in the executive partnership governance model. There are also differences in governance arrangements between the City Deals as clearly evidenced by the Newcastle and Stirling City Deals. Universities are leading in research and innovation but in some cases are not leading in governance which is controlled by local authority/public sector agency reflecting public sector funding of City Deals (Research Question 2).

The financial scale of the City Deals varied significantly with the predominant sources of finance being from central and local government in partnership with the private sector, with university capital commitments much more modest (Research Question 3).

There is similarity in the objective of City Deals, namely to capitalise on the research excellence of each university through knowledge transfer to promote local innovation, industrial and economic development in each city or region. Differences exist relating to each university's areas of research excellence and innovation which are translated into the City Deals through a competitive selection process for each of the projects in the City Deal. Hence in the case of Ulster, projects considered to be most viable namely, Digital Healthcare Technology and Screen Media Innovation have been selected as the preferred projects together with Advanced Manufacturing Innovation, a project jointly

with Queen's University Belfast. We are witnessing a natural outworking of competitive funding of research excellence which has stimulated and honed the primary focus on research excellence by universities with the civic contribution a supporting consideration, but one which government is seeking to influence through an increasing contribution of impact in the research funding evolution (Research Question 4).

Through access to capital funding, the City Deals initiative has enabled universities to enhance their research and innovation capacity through investment in new or improved real estate facilities. Such capital funding represents short term value for money directly in the provision of these facilities and indirectly in the enhanced marketing profile and brand for both local and international audiences. What is not clear, however, is whether the revenue funding these facilities will be sufficient and thus in the long term whether the projects will represent value for money. This is particularly relevant given the current pressures on university finances. Further research is needed to evaluate the financial outcomes over an extended period (Research Questions 5 & 6).

These outcomes have relevance to an international audience as governments across the world seek to stimulate regional growth by the synergistic capture of knowledge and innovation supported by public and private capital. For example, in 2017, it was announced that the Australian Government would begin modelling City Deals in Australian cities based on the UK City Deals model ([Australian Housing and Urban Research Institute, 2017](#)).

Given that the City Deals are long term and continue to be originated, the projects will be operational well into the 2030s and regular monitoring of their performance as a policy tool to stimulate regional growth, is a priority for future research.

## CRediT authorship contribution statement

**Laura McCann:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. **Norman Hutchison:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. **Alastair Adair:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing.

## Declaration of Competing Interest

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome. We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed. We further confirm that the order of authors listed in the manuscript has been approved by all of us. We confirm that we have given due consideration to the protection of intellectual property associated with this work and that there are no impediments to publication, including the timing of publication, with respect to intellectual property. In so doing we confirm that we have followed the regulations of our institutions concerning intellectual property. We further confirm that any aspect of the work covered in this manuscript that has involved either experimental animals or human patients has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript. We understand that the Corresponding Author is the sole contact for the Editorial process (including Editorial Manager and direct communications with the office). He/she is responsible for communicating with the other authors about progress, submissions of revisions and final approval of proofs. We confirm that we have provided a current, correct email address which is accessible by the Corresponding Author.

## Data Availability

The data that has been used is confidential.

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