Network of City Endowments Investing in creativity, innovation and invention

Joost Beunderman, Indy Johar, Chloe Treger. December 2019





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Summary

This document outlines our proposal for a network of city endowments for investing in creativity, innovation and invention.

If the UK is to address the urgent economic, social and environmental challenges of our time, it needs to unlock the full innovation potential of its cities. UK cities badly lack 'free' money to invest in their structural innovation capacity to drive the socio-economic and environmental transitions necessary in our time. In this proposal we show how a network of city endowments could help fill this financial and institutional gap, and create a next generation innovation infrastructure to drive inclusive transition in the post-Brexit era.

Unlocking innovation in an urban age

The role of cities as innovation engines is increasingly well understood. Cities are concentrations both of societal challenges and the human and institutional capacity to address them. Against the background of the fourth industrial revolution, decarbonisation of the economy and growing inequalities – innovation in the 21st century is increasingly driven by dynamic ecologies of tangible and intangible assets. The importance of cities' unique combinations of *"imagination, knowledge, initiative and trust"* is only set to grow.

A deficit in discretionary public and private funds

But UK cities are unable to make the most of their potential. The UK's centralised and regionally imbalanced public finance landscape means cities lack discretionary funds to invest in their long term innovative potential. This is entrenching most cities into paths of under-productivity, with only two of the core cities outside of London above average national GVA.

A deficit in long-term investments

This is compounded by the nature of most innovation funding. Most public and private innovation spending is directed towards easy to measure programmes: commercial real estate or innovation parks, large institutional R&D budgets, university-business accelerators or startup financing for entrepreneurs (at certain growth stages and in certain sectors). While these are necessary, they are not sufficient. As previous eras of technological disruption have shown, sustainable growth is the product of a myriad of economic, institutional, spatial, cultural and even physiological conditions – think of the universities and banks, the coffee shops and improved scientific knowledge of 17th century Britain. We need to create new investment capacity to finance a diversity of combined interventions, generating fertile ground for innovation in both the medium and long term.

A deficit in trusted institutions

The rich diversity in the UK's institutional infrastructure has always played a fundamental role in turning technological change into long-term prosperity. It enabled the mobilising of local capital, the re-skilling of people as needed, the agile adaptation of regulation and the governance shifts required to deploy technology more broadly. But this capacity has been eroded, and we argue that the growing deficit in proactive, locally embedded, well-resourced, creative and trusted institutions to drive innovation is one of the UK's biggest strategic risks.

A new response: Unlocking shared wealth for inclusive growth

In the context of austerity and Brexit, a focus on financing long-term, open-ended innovation potential may seem unaffordable. The opposite is true. Not only is it urgently necessary – but the investment capacity we need is already present in our cities.

Our proposal: A national network of city endowments

To unlock this potential, we propose the creation of a national network of city endowments. Connected nationally for peer-to-peer learning and accountability, at the city-level these endowments will be charged with unlocking innovation capacity right across firms, communities and local government. There are numerous options for exploring the means for these to be self-funded (see appendix).

There are numerous options for city endowments to be self-funded, e.g. through sharing in land value uplift



Unlocking innovation in an urban age

The UK is entering a testing time: on top of Brexit we face the many challenges of the fourth industrial revolution, which could threaten wages and jobs in a country already ranking 32nd (out of the 34 OECD states) for wage stagnation.¹ We face an economy structurally underperforming in productivity terms; major demographic shifts, including an ageing population suffering with widespread multi-morbidities; and multiple governance failures that exacerbate plummeting public trust – not to mention the climate breakdown and erosion of the earth's systems that make any of our economy possible.² The UK will need all its human ingenuity, creativity, passion and drive to answer these challenges and transition to a long-term sustainable, inclusive and innovative society.

Not just confined to the UK, these global environmental challenges and socio-economic upheavals of our time are deeply enmeshed with technological change. We now trade more data than goods, with most of that being concentrated into the hands of a few digital monopolies (corporations with value equivalent to the GDP of some states).³ And we are witnessing the growing risk of digital technologies failing to fulfill their democratising promise, instead compounding societal costs.

Cities are where many of our shared challenges are deeply felt and where – thanks to their concentration of human, social and cultural capital – fresh solutions originate. The physicist Geoffrey West has shown the effects of growing agglomeration, finding that whenever cities double in size, they become around 15 per cent more productive, efficient and innovative per capita. From peer-to-peer lending and AI-powered drug discovery in Oxford to circular economy car-trading in Manchester⁴ and digitised house-building in the Midlands – it is our cities that drive innovation.⁵ The well developed literature on innovation and places shows that 'geography is far from dead': the physical proximity and opportunities of face-to-face interactions with collaborators, suppliers or just people to bounce ideas off matters hugely. As Edward Glaeser said: "We are a social species that gets smarter by being around other smart people, and that's why cities thrive."⁶

It is more important than ever to invest strategically in the creative capacity of cities. Public investment – from better schools to broadband, and from fundamental research to the procurement of practical new solutions – has always played a decisive role in driving and supporting innovation.⁷

In these emerging urban milieus new intersections of social capital, entrepreneurship, knowledge sharing, knowledge-based networks and innovation are at the forefront of society. However, innovation is no longer about a technology base or a financial investment. It is more about time, imagination, knowledge, initiative and trust.[®]

Carrillo, Francisco and Yigitcanlar, Tan and Garcia, Blanca and Lönnqvist, Antti. Knowledge and the City **MERYCF**

2. UK cities struggle with three deficits



Innovation projects often fail because the resources are spent on the wrong kind of innovation. Too much money is spent on attentiongrabbing activities that are straightforward to do, like hiring new people, procuring new technologies, and buying more facilities.

Harvard Business Review 2018 The Right Way to Spend Your Innovation Budget⁹

If the pace of institutional change lags behind economic transformation, this is likely to slow development and reinforce technological lock-in.

Nesta, History Matters: Unlocking innovation in British cities and regions¹⁰

The current economic trajectory of cities in the UK looks uneven. Though cities across the UK have been driving job growth, all but two of the core cities outside London have a below average national productivity per head.¹¹

At the same time it is important to take note of the fundamental shift that is happening in our economic landscape – the rise of 'intangible' investment in *"ideas, in knowledge, in aesthetic content, in software, in brands, in networks and relationships."*¹² In their book *Capital without Capitalism* Jonathan Haskel and Stian Westlake outline how, while tangible and intangible investments have always supported each other, tangible investments (in plant, machinery, vehicles etc.) have been outpaced by those in intangibles.

Haskel and Westlake recognise a series of specific characteristics of intangible assets: they have synergies – where the combined effect of investments is greater than the sum of its parts – and spillovers – where benefits from expenditure tend to spill over from wherever the initial expense was. This means that they favour high density environments, where there are plenty of opportunities for exchanging ideas and know-how.

This places our cities increasingly in demand – strengthening their innovative potential, but also leading to a paradox: the rising importance of intangible assets leads to a rising importance of place and consequent rising in value of perhaps the most 'tangible' of all assets: land and real estate. This begins to answer why household land has doubled its proportion of total net wealth since 1995.¹³ Another interesting corollary is that those who are best placed to realise those synergies and make the most of spill-overs, are those leading firms that have access to the data or algorithms to understand them. In our intangible-rich economy, data and the knowledge and insights it affords is key.

All this means that in an intangible-intensive economy, the ability to make good the problem of spillovers becomes very important... calls for more living (investing) together in cities.¹⁴

We need to recognise this new structural relationship emerging between the investment in innovation and places. This relationship requires us to explore how cities invest for strategic innovation – beyond the existing instruments and targets, to focus on long-term and systemic financing, which embraces the spillover-rich and entangled nature of an intangible economy. We've identified three key linked deficits which inhibit cities' ability to embrace these. The first two concern the availability of discretionary funding for city regions and for investing in the conditions for creativity and innovation. The third, and we argue most important deficit, is the lack of institutions that could steer as well as raise funds towards these context-specific, long-term investments.



A deficit in public discretionary spend

Investment in innovation is centralised and regionally imbalanced. This means that spending tends to overlook the variance of different city region needs, creating inefficient and competitive processes and entrenching historic regional imbalances. London and the South-East received £1.06 billion of Government and research council funding in 2016 – versus Wales' £15 million.¹⁵ And applicants – whether firms, research centres, cities, communities or individuals – need to spend much of their time and energy fitting their ideas and challenges into a predefined national agenda and frameworks.

Furthermore, UK cities typically control only five to seven per cent of their total tax base – the OECD average is five times that. In the context of severe budget pressures, local spending has to focus on statutory duties and maintaining other core services. For example, inflation-adjusted spending on culture has dropped 43 per cent since 2010/2011.¹⁶ This is being exacerbated by an extra £1.3 billion set to be cut nationally.¹⁷ And, where councils use newly devolved powers to borrow to invest in economic development, they require immediate returns in order to support their finances - leading some to invest in property outside their own boundaries.

The deficit in public spending matters, as much of the private sector tends to underspend on innovation.¹⁸ Government has a particularly important role to play in making up for the centralised nature of private funding – where the ten biggest R&D spenders in the UK account for 34 per cent of all UK R&D expenditure while small-to-medium-enterprises (SMEs) only account for 3.5 per cent. While the Government's recent Industrial Strategy makes steps in the right direction, by addressing SMEs, the focus on defined growth stages and certain sectors only (such as medicine and manufacturing) is not wide enough in scope to enable deeper change.

Cities have long been restricted by the centralised nature of the UK... and this has limited their ability to tailor policy to respond to the ongoing changes seen in the national and global economies.

Centre for Cities, Cities Outlook 2018¹⁹



A deficit in long-term investments

We have already hinted that a lack of discretionary funding impedes long-term investment. But why is this so important?

The organisations that have taken on the difficult task of quantifying cities' 'innovative capacity' already consider a much broader set of conditions than firm births and R&D spend. To be competitive in the long run, among other things cities need a diverse pool of talent right across the skills spectrum - entrepreneurs and a labour force with the capacity to think creatively and to turn new ideas into practical value. Attracting talent and enabling them to meet, exchange ideas and work on early stage projects is therefore essential. Examples include London's 17th century coffee shops, Silicon Valley's suburban garages and the increasingly recognised importance of a popular music scene.²⁰

There is no question that governments recognise the importance of innovation and creativity to the long term future. Globally, cities are testing innovative approaches such as Austin's municipal mini-bonds to support local music venues²¹ or Masan in South Korea subsidising rent for artists.²² But at national level, the UK Government mostly focuses on the direct, measurable investments in innovation – the tip of the iceberg so to speak, with various industrial strategies, startup funds and hybrid accelerator programmes as well as tax incentives for innovative firms (estimated to cost £4.45 billion a year).²³ There is a fundamental question about whether these strategies will nurture population-wide creative skills and behaviours. For example, the £150 million Creative Industries Sector Deal is a step in the right direction; but it largely bypasses more foundational investments to foster people's agency and creativity, like children-inventor meet-ups. The latter only reach 1.5 per cent of our children, (with pupils in the South of England twice as likely to have opportunities to take part than those in the Midlands).²⁴ We are underinvesting in our future capacity to think innovatively – in favour of shorter-term, easier to quantify digital skills or export support programmes.

But we are selling ourselves short - particularly in the context of the fourth industrial revolution and its disruption of our jobs market. Bank of England Chief Economist Andy Haldane has recently argued that artificial intelligence will be able to solve problems more rapidly than humans, but that our capabilities of *"creativity and intuition"* and social skills such as *"sympathy and empathy, relationship-building and negotiation skills"* will not be replaced as easily.²⁵ That is where we should place our long term bets.

Consider an iceberg: It is the frequently unnoticed part beneath the water that we should really be paying attention to. The institutional, cultural and biological conditions that underpin our innovative capacity and are essential to a long-term flourishing economy.



Institutional conditions: Innovation requires agile regulatory norms that do not inhibit creative innovation. It also requires the welfare policies and the investment norms, metrics, incentive structures and standards that help to shift our view of innovative government – from one that reduces costs to one that creates value and humans, e.g. seeing welfare not as a liability but as an investable asset.

Culture: Distributed innovation requires an open, permissive and forward-looking cultural environment. This involves both creating the opportunities for knowledge exchange and change encounters through funded *"neutral spaces ... [that provide] opportunities for combinatorial innovation*,^{"26} but could equally be about direct programming of future-focused creative festivals.

Environmental: Underpinning all of these are fundamental preconditions of our biological and physiological health. There is a fast-growing body of knowledge showing that how what we eat and breathe, and how much we sleep, impacts our mental wellbeing and cognitive development – from studies that show a correlation between mental health and green infrastructure²⁷ or between air pollution and learning potential and executive facilities.²⁸

Some of these factors may seem too nebulous to be the object of investment – especially for city governments who are strapped for cash and focused on tangible wins in the short term – but this is a fallacy.²⁹ In the context of Brexit and the massive economic upheavals of our age, if we don't know how to invest in them then we must find new ways – because doing nothing is not an option.

City endowments should invest in a long-term focused portfolio of activities driving our future capacity to think innovatively

Regulatory experimentation

Regulatory sandboxes on civic-tech for example, prototyping new forms of licensing focused on social entrepreneurialism.

Participative norms

Al citizens' juries and public dialogues are tried and tested methods that allow professionals to come into contact with the public, and for a two-way dialogue to take place.

Fit for purpose welfare

Experiments with new forms of welfare - such as Basic Income and others including Universal Basic Services and Universal Basic share.

New investment metrics

NAMA VAN

Testing new metrics for Social Impact Bonds focused on prototyping new life-long learning schemes, where the metrics used focus on outcomes like growth in emotional intelligence; creativity and imaginative problem-solving; empowerment across multiple career changes.

Financing unlikely innovators

Agile micro-financing such as grant-convertible loans of unlikely and early stage grassroots 'innovators' and fledgling startups.

Support programmes for everyday experts

Such as accelerator programmes for everyday experts e.g. passionate civic groups.



City-scale missions

E.g. developing strategies for how to make Leeds carbon-neutral, or Oxford 95 per cent vegan, or Birmingham free from air pollution.

Citizen science commissions

Focused on topics such as AMR (antimicrobial resistance) in water or asthma linked to air pollution, with grants for awareness raising arts commissions and competitions for distributed sensing/solutions.

Human development movements

Open polytechnic, life-long learning programmes and open movements (e.g. #Radical Childcare) supported through public subsidisation and shared back-end.

Convivial and neutral spaces

Supporting live music venues, new pop-up community cafes, distributed offices as well as reflection spaces through innovative financing e.g. revenue-share and outcomes-based rents, grant-convertible loans.

Building imagination

Competitions for schoolchildren who imagine their cities differently, future augmented reality arts festival and children-inventor meet-ups.

Enabling DIY urbanism

Funded hackathons to develop smart licensing for 'science-busking', allowing anybody to use the street for experiments or food and beverages linked to IP point of sale and supply chain transparency.



A deficit in trusted institutions³⁰

One of these conditions in particular – the institutional – requires our urgent attention. The periods when the UK has been most innovative and successful were also times when serious attention was paid to building institutions. In the case of the first industrial revolution, Andy Haldane's recent speech³¹ highlights how key legislative change helped to create the institutional environment that importantly grew both our shared financial capital and human capital. Examples include the Friendly Societies Act of 1819 which established today's credit-unions, and the schools and universities that were supported by the Elementary Education Act of 1880.

Elsewhere, governments are unlocking institutions to help drive change. Institutional development can happen indirectly, for example, America's 1977 Community Reinvestment Act which was passed to encourage financial institutions to lend locally and led to the creation of hundreds of community development foundations and the Living Cities movement.³²

Governments can also set them up more intentionally: Finland's €771 million innovation fund SITRA invests €30 million a year³³ for a country with a population of 5.5 million – equivalent to many of our city-regions. São Paulo state, which with 45 million people accounts for 22 per cent of Brazil's population and 35 per cent of its GNP, has, since 1962, benefited from the public foundation FAPESP as the major investor and grant-giver for education, research and innovation, funded through one per cent of provincial taxation.³⁴

As mentioned, geography is far from dead – with varied opportunities in each location, and these local contexts requiring local responses. This means that local, contextually embedded responses are crucial, based on the realisation that there are no institutional models that can simply be copied. Barcelona and Madrid have both understood this, setting up iLab³⁵ and MediaLab Prado³⁶ to create opportunities to make sense, at local level, of how to make the most of new technological possibilities.

In a context of faltering public trust in institutions, local institutions can meaningfully engage those closest to the challenges and opportunities. This enables innovative and relevant ways of being transparent and accountable; it opens up new avenues to multi-actor



Building societies were created in Industrial Revolution Birmingham, to help members access financing for house-building.

collaboration and inclusive decision-making; and enables a diverse funding model for experimental, and often indirect, investments. Examples include growing a culture of participation and deliberation through online portals;³⁷ participative co-investment models or creating spaces for future-casting.³⁸

Is there really a gap in local institutions?

The UK used to have a much greater 'institutional thickness' in its cities and regions than we see today. Since the first industrial revolution, many local financing institutions, which increased the "potential for mobilising local capital",³⁹ have been lost: regional banks, building societies and city stock exchanges. According to NEF, less than five per cent of the market is controlled by regional and local banks, compared with around two-thirds in Germany, half in Spain and a third in the United States.⁴⁰

While our human development institutions may have fared better, they are not regionally balanced – think of our universities. Arguably the three most innovative city-regions in the UK – Oxford, Cambridge and London – are built on strong research universities and the presence of independent foundations like the Wellcome Trust; and while local universities often play an important role,⁴¹ their capacity is uneven.

And the gaps in institutional capacity are currently not being filled by our overly-centralised government. Regional development agencies (RDAs), imperfect as they were, have been abolished; councils are stretched; local enterprise partnerships tend to have a relatively narrow focus. The recent round of devolution deals are a step in the right direction, but they still only go part of the way towards the fundamental long term conditions. However, where capacity exists we see new potential for interesting approaches - the West Midlands Combined Authority has set up an inclusive growth unit, and the Greater London Authority is pioneering civic innovation challenges as well as supporting the set up of a participative technology initiative⁴² together with the Camden Town Business Improvement District. The challenge is now to be much more ambitious about such approaches for the long term, in ways that suit the diverse strengths and needs of the UK's cities.

We urgently need a UK-wide city-regional institutional response



Barcelona's Decidim – a participatory planning portal where city council, citizens and associations publish proposals.



Berlin's Futurium is a purpose-built civic asset which will be programmed for discussions on the future.

3. A new response



A national network of city endowments

Unlocking shared wealth for inclusive growth

To overcome the triple deficit hampering innovation in UK cities, we propose the creation of a national network of evergreen innovation funds at city (or city-regional) level. We envisage that this next generation of innovation foundations should see the seeding of at least ten endowments of circa £100 million, starting with the ten core cities - with the potential to be

Innovation

City-Endowment

Land value uplift

replicated elsewhere. Their mission would be to unlock and embed long term innovation capacity across our city-regions, enabling firms, communities, individuals and the public sector to grow new ideas that drive inclusive growth, tackle the challenges our society faces and change the world for the better.

These endowments need to be financially independent in the long term. To achieve this, we argue there are untapped sources of potential financing within our cities that could be unlocked (see appendix).

Recycled share of uplift Data on private value uplift Ø Intanaible Capital steered towards \oslash \oslash assets 0 investments Tangible assets Entangled assets that support innovation in cities Endowment Fund raised from Capital goes back to a variety of sources revolving fund Sharing value Investments **Decision making** What should be invested in to What are the potential How do we build civic participation? drive strategic innovation? How do we build public faith? sources of funding?

Designing the national network of city endowments

Trust in institutions is determined by how well they do their job and whether they provide value. In times of faltering trust in institutions, the structural design of the network of city endowments is crucial to ensure their innovative potential and public legitimacy. Three complementary institution-design features stand out.

Firstly, the endowments need to be deeply embedded, locally accountable, and dynamic

The day to day behaviour of the endowments must be in sync with their mission of devolved agency and continuous innovation, as well as long term value creation – and needs to recognise that in times of uncertainty such as ours, strategic experimentation with new forms of governance, operations and investment is necessary to discover pathways to better futures.

In an era where trust in institutions is low, the design of the endowments' governance and operations must be based on openness and transparency, and creating diverse, tangible links with people, firms, communities and civic organisations. This will be the only way to spot, understand and appreciate local opportunities for effective early stage investments, for creating synergies that matter, and to gain the confidence of the public.

Just like Business Improvement Districts have pioneered a new form of democratic legitimacy and governance, and participatory budgeting approaches have given us insights in alternative decision-making structures, the city endowments would also need to create new types of boards, representation, communication channels, transparent approaches to shared risk-taking, and outcomes measurement.

Secondly, the city endowments need to be nationally networked

To succeed, the city endowments will need to learn fast from each other. So we propose an active network for peer-to-peer learning, mutual accountability, and shared capabilities (e.g. data capturing and analytics; land value uplift sharing mechanisms such as covenants; fund management) that would be beyond the capacity of any single endowment. To achieve this we propose a strong shared backbone organisation jointly owned by the individual endowments.

Thirdly, these endowments need to be focused on inclusive growth and funded sustainably

In resourcing these city endowments, it is important to take note of the rise of 'intangible' investments discussed above. As Haskel and Westlake point out, the synergistic and spillover-rich dynamics of these assets favour high density environments such as cities, leading to the growth in land values in intangible-rich places, and the growing concentrative power of digital giants – and therefore contribute to the rapid growth in inequality that we experience across our society. We contend that new ways of sharing this growing wealth could be the key towards a more inclusive trajectory of growth and innovation investment.

4. Next steps

In summary, our proposition is that the UK should set up at least ten city endowments of circa £100 million as a next generation innovation infrastructure. We see this as comprising four key elements:



National political engagement

Engagement from national politicians with both the diagnosis and the prescription – since realising it will depend on a governing political party establishing and enabling the key institutional infrastructure.



City-level advocacy

Advocacy on the part of city leaders – and making the case for free, futureoriented finance alongside the many other reforms needed.



Research

More detailed research into the various financing options available.



Public engagement

Open conversations on priorities for individual cities to inform both the design of the city endowments and their potential focus of activities.

Appendix

Further thoughts on financing the city endowments

Public spending in R&D: Three case studies

There are many precedents of governments intentionally establishing national systems of capital allocations that drive distributed innovation growth. Much public spending in R&D already aims to allocate funds according to innovation goals set by policy, enabling the right conditions for systemic change. Case studies include:

South Korea

Korea is the world's biggest investor in research.⁴³ Building on a long tradition of innovation support, in 2019, the government set out a new national plan to invest US\$2 billion by 2022 in its AI R&D capability to support innovation relating to the fourth industrial revolution.⁴⁴ Investments will be directed towards multiple areas of innovation such as data, FinTech, biohealth, renewable energy and smart cities.⁴⁵ Historically, the principal funding mechanism for innovation has been the Informatization Promotion Fund which collects funds from profits generated in the Information and Communications Technology (ICT) sector present in the country, and reinvests those profits back into the ICT industry.⁴⁶ The Science Ministry of Korea, which oversees governmentbacked R&D, will be adopting a new investment platform known as 'R&D PIE (Platform for Investment & Evaluation) – a web-based software – to help manage and evaluate R&D projects across all government branches.⁴⁷

Brazil

In Brazil,⁴⁸ a series of parliamentary votes since 2000 have established new mechanisms for funding innovation activities.⁴⁹ At a city region scale, the São Paulo Innovation Fund (FIP)⁵⁰ has been set up to direct funds towards acquiring equity in innovative early-stage companies in the State of São Paulo – managed by a venture capital company, SP Ventures. The fund's capital was raised mainly through public resources (São Paulo Development Agency Desenvolve SP, Brazilian Funding Authority for Studies and Projects FINEP and São Paulo Research Foundation FAPESP) and reached R\$105 million, with the aim to return R\$420 million after the sale of successful supported companies. Agribusiness technology companies account for 73 per cent of FIP's portfolio (agribusiness being a substantial domestic market and a field offering the greatest potential return) whilst sectors such as IT and Health Technology make up the rest.

Finland

Finland has been financing innovation for the past 50 years.⁵¹ The Bank of Finland and the Finnish Parliament endowed the Finnish Innovation Fund – Sitra – with approximately €650 million in 1967⁵² capital and a mission to guide the country's next generations. Sitra's future-oriented work is funded from the return on its endowment capital investments, which are directed towards responsible investment, taking account not only of return and financial risks but also of environmental, social and governance (ESG) factors. At the end of 2017, the market value of Sitra's endowment capital was 840 million euros. Currently the themes of the projects supported by the Fund include carbon-neutral circular economies and shifts in the workplace. For example, Sitra is guiding and supporting FISU (Finnish Sustainable Communities), a network of 11 Finnish municipalities that share best practices and reliable knowledge, towards becoming carbon-neutral and waste free by 2050, strengthening municipal and regional economies, creating jobs and promoting sustainable wellbeing.

Many of these funds are demonstrating new pathways to raising initial, often catalytic, funding for driving strategic innovation themes that address socio-economic issues. There are also a variety of mechanisms, if still embryonic, which demonstrate innovative ways to create more sustainable financing options through shared value – two of which we detail below.

Because businesses flock to cities to exploit the spillovers and synergies associated with intangibles, it is a major cause of the rise in the value of prime urban property, which accounts for much of the new wealth of the very rich.

E O I

Jonathan Haskel and Stian Westlake's, Capital without Capitalism

Raising revolving capital

Creating shared value from land

The heartlands of an economy based on knowledge and creativity are found in cities. This is where clusters congregate – in finance, fashion, software, media, design and many others. It's a great irony that in the age of the internet the economy is more geographically concentrated than ever before, with a larger not smaller gap between the leading edge places and the average.

This pattern is reflected in land values. Much of the value generated by the myriad endeavours in our economy is reflected and captured in growing land value – a dynamic we call value spillovers. Think Boston and San Francisco, or Shoreditch and more broadly Hackney and the City Fringe in London; or Bristol, Brighton and Central Manchester – where property prices rose by 15 per cent, and rents by 6.5 per cent from 2016 to 2017.⁵³ This leads to the paradoxical result that many of the biggest beneficiaries of the growth of the intangible economy have been landowners – Grosvenor, Bedford Estates, Oxbridge colleges, De Walden and others, often with roots in old aristocratic families.

Another contributor to land value is public investment. We've known about this dynamic for over a century – in 1909 Churchill delivered a speech⁵⁴ on the land monopoly being "not the only monopoly, but it is by far the greatest of monopolies" where he tells of the removal of a toll for a bridge (at the expense of the municipal accounts) across the Thames leading to an increase in rents on the south side. It was not (just) the access to physical infrastructure that people are willing to pay more for; but the job opportunities, latest trends and knowledge that made the north side so attractive.

Just as the notion of land value uplift is not new, nor are the mechanisms to capture it. Sharing in the private value growth thus generated has long been a focus for policymakers – with Henry VIII⁵⁵ creating a 'betterment' levy to capture value for flood defences. In the US, tax increment financing has long been used, and London's Crossrail Business rates supplement levy works from this starting point. What is new is our ability to understand, and demonstrate, how value flows, creating unprecedented potential for new land value capture tools to take into account a wider range of parameters. As we move to an increasingly intangible economy, the value of intangible infrastructure (cultural life, the knowledge and networking opportunities that come from good schools and vibrant places etc.) is increasingly well understood.

In the face of this, we are witnessing a re-emergence globally of interest in new forms of and land value capture.⁵⁶ From parliament committees on land value capture, to GLA's Investigative Committee on Land Value Tax,⁵⁷ and new toolkits focused on land value capture as a way to fund the Civic Commons.⁵⁸ We propose that the city endowments, which would invest in precisely the kind of intangibles that lead to growth in land value, should share in this value uplift, creating a virtuous cycle of civic capital and shared wealth.

What would a common value contribution from land look like?

The Community Infrastructure Levy already provides one mechanism for redistributing value in cities, in this case a levy on physical developments that is directed to funding related physical infrastructures. CIL raised £6 billion in 2016/17. We propose an equivalent focused on the intangible value captured in land. This would require the following:

- The Land Registry to regularly survey property and land values, using the wide range of tools already available and developing new ones using data to distinguish between property and land more systematically. This would provide a nationwide mapping of land values and changes. HMRC could oversee this valuation process.
- In designated urban districts this would provide the foundation for a levy on value gains, giving owners the option of deferring part of the payment until property is sold. This would generate a revenue flow which would then be channelled to cities, and ideally to the new institutions we propose.

New funding obligations are rarely popular, yet Business Improvement Districts have seen a remarkable degree of acceptance and there are examples of property-owners accepting an increase in order to fund local institutions such as the St Louis' Cultural District, which was introduced through a referendum.

There are many more detailed design options to be considered. In our view the Common Value Contribution would be better introduced in districts (like the Queen Elizabeth Olympic Park's Fixed Estate Charge) rather than as a city-regional mechanism (such as London's Crossrail Business rates supplement levy). Its technical design would need to sharply separate the land value from property value effects so as not to disincentivise development, something which is now much more feasible using the variety of data tools already being used in property markets.

Having established such a system there would be many other strategic choices to be made, including whether to extend it to other areas, and whether to redistribute some of the gains. But as a first step we recommend channelling fairly modest levies on land gains into the new institutions we propose – turning windfall gains to old capital into creative investment in future capital.

Creating shared value from data

Data plays a big role in the contemporary economy. This is not the place to rehearse the many arguments now underway on data, from its role in politics and its public benefit to its impact on privacy or childhood.⁵⁹ Most relevant here is the role of data in relation to place.⁶⁰ At present the structure of digital markets means that an incredible amount of data is harvested from cities, with much of the value captured in the distant places where the big tech platforms are owned. As with land, we see a strong case for recycling and sharing some of that value with the cities and people that generate it.

In a recent proposal, Alphabet's Sidewalk Labs Toronto sets up a working definition for 'urban data'⁶¹ as data which is gathered in space (e.g. phone tracking, Fitbit scores, air pollution sensors, traffic flows etc.). While still contentious, this data might well be defined as a public good.

As it is people going about their everyday lives that generates this remarkable source of wealth,⁶² the time has come to establish ways to turn this into a second source of civic capital to fund the city endowments. This is not a new concept, with some cities taking the lead on testing mechanisms to better control (and in some cases even monetise) this data, such as Copenhagen's City Data Exchange.⁶³ In the UK, it is increasingly on the political agenda, with exploring data trusts a key commitment of the AI Sector Deal.⁶⁴

What would a common value contribution from data look like?

Data trusts are being considered and designed in the UK and elsewhere. Trusts are legal agreements that create governance systems over a particular set of assets – they have often been used to protect public resources (e.g. the National Trust). Data trusts may play a growing role in curating and managing data in key fields such as transport.

- Some of these roles will have the potential to generate revenue from the main users of that data, such as commercial taxi firms or drone operators. In the same way, companies that harvest significant quantities of data in the public realm – e.g. from sensors embedded in next generation phone booths or billboards - could be required to pay for licenses to do so.
- The recent experience of projects like Sidewalk Labs shows that the public will increasingly demand a say in the next evolutions of the smart city; as they do so, new funding possibilities will also become apparent, ranging from fees for data harvesting (akin to payments for mining rights, wayleaves or advertising hoardings) to managing marketplaces for data. In the medium term we see such new data arrangements providing an additional source of revenue to complement levies on land.

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