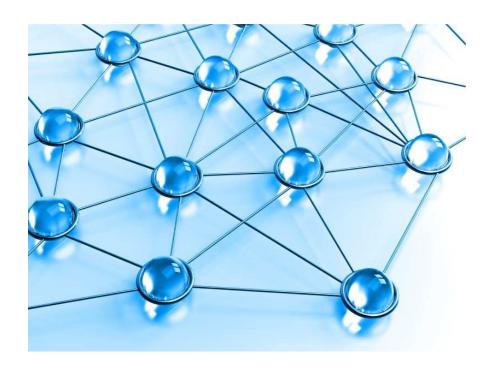
VIEWPOINTSERIES

JULY 2014

ACCELERATING LOCAL ECONOMIC GROWTH – CLUSTERS AND DEALS



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FOREWORD

Over the years, SQW has worked extensively with clients to describe, understand, nurture and develop specific clusters.

We are perhaps best known for our work in and around Cambridge's high tech cluster; and the firm's origins owe much to our seminal study, "The Cambridge Phenomenon", which was completed in 1985. Over the subsequent 30 years, we have maintained a very active interest in the development of Cambridge's high tech cluster, but we have also worked far more broadly. We have, for example, explored the nuclear cluster in the North West; the jewellery cluster in Birmingham; the ceramics cluster in and around Stoke-on-Trent; and the food and drink cluster across the West Midlands. Internationally, we have worked on the innovation system in Emilia Romagna where many of Italy's best known "industrial districts" are to be found. Further afield, our clusters experience includes plastics and polymers in Hong Kong; and food production in Chile.

From this vantage point, we have seen policy makers' enthusiasm for clusters ebb and flow, both nationally and locally. The concept of clusters is tremendously powerful – particularly given the intrinsic links between processes of business growth and local decisions in relation to spatial planning. But it is not a panacea for every economic development challenge, and it is quite capable of being mis-used.

After a period of absence, the concept of clusters appears, once again, to be in the ascendancy. As the ink dries on the first wave of Growth Deals between government and England's 39 Local Enterprise Partnerships, we have therefore taken the opportunity to reflect on recent publications and announcements, and to consider what has been learned – and what is in danger of being forgotten – about the potentials and limitations of cluster growth.

We hope you will find this Viewpoint both informative and stimulating.

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THE VIEWPOINT SERIES

The Viewpoint series is a series of 'thought piece' publications produced by SQW and Oxford Innovation, the operating divisions of SQW Group.

The aim of the Viewpoint series is to share our thoughts on key topical issues in the arena of sustainable economic and social development, public policy, innovation and enterprise with our clients, partners and others with an interest in the particular subject area of each paper. In each Viewpoint, we will draw on our policy research and implementation experience to consider key topical issues, and provide suggestions for strategic and practical solutions.

INTRODUCTION

Over recent weeks, there has been a flurry of publications and announcements to excite those with an interest in UK economic development. In less than a fortnight – from late June to early July 2014 – we saw, in chronological order:

- "Mending the fractured economy: smarter state, better jobs", the final report of the Adonis Review (an independent review for the Labour Party, supported by the Policy Network)
- "Industrial revolutions: capturing the growth potential", a report on UK clusters completed by McKinsey & Partners, working in partnership with Centre for Cities, and supported by The Gatsby Foundation
- Government's announcements regarding the first wave of Growth Deals with 39 Local Enterprise Partnerships (LEPs) across England.

The timing of these different publications and announcements may be co-incidental. However, in a fortnight which also saw the excitement of the World Cup, Wimbledon and the Tour de France's *grand départ*, simple 'co-incidence' seems unlikely. As England flopped, Murray faltered and both Cavendish and Froome fell, the three announcements/publications all raised again the significance of "the local" in terms of the UK's overall economic performance. Two of the three announcements/publications relate directly to policy – actual or prospective – while the third is clearly intended to inform policy. All three are concerned, fundamentally, with the relationships between local areas and processes of economic growth.

In this paper, we reflect on the McKinsey report to re-assess the role of clusters in relation to local economic growth. Less than a year before the General Election, we also consider Lord Adonis' report which is informing Labour Party thinking. We then consider how clusters feature within the recently published Growth Deals (and the Strategic Economic Plans which underpin them).

THE RENAISSANCE OF CLUSTERS?

CLUSTERS – AND THEIR HISTORICAL SIGNIFICANCE IN THE UK

The concept of industrial clusters has been around for a long time. Alfred Marshall wrote about them in 1890. Ninety or so years later, the baton was picked up by the champions of the "new economic geography"—including Michael Piore and Charles Sabel¹, Allen Scott², and Annalee Saxenian³ — who linked cluster-like behaviour to the spatial form of (new) industrial districts. But in the domain of economic and industrial policy, the prominence of clusters owes most to the writings of Michael Porter⁴, and it was Porter who provided the most widely-used definition:

¹ See, for example, Piore, M and Sabel, C (1984) The second industrial divide New York, Basic Books

² Scott, A (1988) New industrial spaces: flexible production organization and regional development in North America and Western Europe Pion

³ Saxenian, A (1994) Regional Advantage: Culture and Competition in Silicon Valley and Route 128 Cambridge, MA: Harvard University Press, 1994

⁴ Porter, M (1998) "Clusters and the new economics of competition" Harvard Business Review (November-December): 77-90

"Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (e.g., universities, standards agencies, trade associations) in a particular field that compete but also cooperate."⁵

For policy makers in the UK, the significance of clusters has ebbed and flowed. Over the last 20 years, Scottish Enterprise has, perhaps, been in the vanguard, investing heavily in the concept since the 1990s. In England, clusters achieved prominence in the early 2000s – at which point the regional development agencies embarked on a frenzied period of strategizing for every conceivable cluster, whether imagined, aspirational or extant. Subsequently cluster policy went out of fashion, and – at least in the south of England where the economy was "doing very nicely" – the more pressing issues surrounded the accommodation and funding of growth. But over recent years – after another recession, the remergence of a national industrial strategy and a renewed recognition of the centrality of business in the process of wealth generation – attention has again turned to the role of clusters at a sub-national scale. In some respects, Lord Mandelson's "industrial activism" paved the way before the last change in government, and Lord Heseltine alluded strongly to it in his report on the contribution of local areas to national growth.⁶

CLUSTERS IN 2014: THE MCKINSEY REPORT

It is within this context that the report produced by McKinsey & Partners (in partnership with Centre for Cities) is to be welcomed. It is a document that LEPs, local authorities and all stakeholders with an interest in economic growth across the UK ought to find stimulating and challenging.

In essence the report seeks to examine *where* the UK's most "economically significant" clusters might be found; the principal barriers to their further growth; how these barriers might be overcome; and the steps that might be taken to ensure that these recommendations are implemented. Some 31 "economically significant" clusters are identified, ranging – as the report puts it – from those which are already "widely documented" (such as financial services in London) to "hidden gems" (like Welsh Electronics). The authors explain that all 31 meet four criteria linked to: geographical concentration (defined through location quotients); a network of interconnected firms; scale; and the availability of data. From five cluster-specific case studies, 19 recommendations are developed relating to branding, networks, innovation, education and skills, and infrastructure.

THE DYNAMICS OF CLUSTERS

Whilst McKinsey's report is timely, LEPs, local authorities and others may, in practice, have questions when seeking to use it. Most immediately, the process through which the 31 "economically significant" clusters have been identified is not fully explained (although there is to be an on-line appendix). Readers will want to understand:

- the spatial scale at which location quotients have been calculated
- the metric to which location quotients relate (i.e. is it employment, GVA or the number of firms?)

⁵ Porter, M (2000) "Location, Competition, and Economic Development: Local Clusters in a Global Economy" Economic Development Quarterly, Vol 14 No 1: 15-34

⁶ Heseltine, M (2012) "No stone unturned: in pursuit of growth" Published by the Department for Business, Innovation and Skills

- the precise basis for identifying a "network of interconnected firms"
- the reasons for apparently excluding Northern Ireland from the analysis.

More fundamentally, there are three crucial issues relating to the dynamics of clusters on which the report has relatively little to say. We raise these because **previous forays into cluster policy have** stalled on one, two or all three of these, and – if they are to make use of the report – policy-makers at all spatial scales will in practice need to pay attention to them.

1: The nature of relationships within and between clusters

The report includes a map depicting the UK's 31 "economically significant" clusters; each cluster is represented by a single "dot". On the map, "some dots refer to regions not cities" – and the position of the "dot" relative to the cluster is rather unclear.

Cartographic niceties aside, no attempt is made to portray the real spatial footprint of individual clusters. We recognise that this is incredibly challenging – although McKinsey must have been working with geographical units of some form (whether local authority districts or super output areas or some other unit) to generate and analyse location quotients.

Crucially, what the map (and the report) fails to communicate fully is **the extent to which apparently distinctive clusters overlap spatially and – potentially – also functionally, or the implications that follow**. The case study of "High Tech and ICT South West" hints at the issue: it notes that the cluster "boasts strong links with the nearby aerospace cluster", but it does not consider the consequences.

In terms of their competitiveness and appropriate policy interventions, these "overlaps" are widespread, and they are also important. For example:

- In Oxfordshire, there is a very clear overlap between "Motorsport Valley", "Golden Research Triangle" and "High-tech and ICT South East"; the nature of and pressures on the local labour market, for example, are a clear consequence of all three
- London is crucially important in the "Golden Research Triangle". In turn, the overlap between the "Golden Research Triangle" and for example "Digital London" brings with it huge competitive opportunities and some pressures (not least with regard to commercial premises)
- "High-Tech and ICT South West" is strongly and functionally linked to "High-Tech and ICT South East" through what used to be called the M4 Corridor.

Cluster geographies are messy and inconstant but – as technologies converge and labour markets stretch – the overlaps between them can be crucial. **Particularly in relation to land use and labour markets, local areas need to plan for and nurture the "overlaps"**. And whilst the overlaps are often a source of competitive potential, there can also be pressures and tensions within them. **If cluster policy is to be effective, the consequences need to be properly analysed and understood**.

2: How clusters are changing over time

In the executive summary, the statement is made that "the evolving and dynamic nature of clusters matters. By definition, this report is a snapshot…".

The "evolving and dynamic nature of clusters" certainly does matter; and McKinsey recommends that its own analysis should be "repeated at regular intervals to ensure the UK is up-to-date on where its most dynamic clusters are and how they are faring". As the report notes, new clusters are born. Equally, old clusters die – witness the fate of Lancashire textiles, probably one of the best ever examples of a genuine cluster. The report however pays no real attention to the broad sweep of history, or what we must learn from it: a cluster "snapshot" – without any real sense of the cause or consequences of evolution over time – may therefore be misleading.

In this context, we were minded of a major report prepared by a consortium led by Trends Business Research (TBR) in 2001⁷, for the then-Department of Trade and Industry (DTI)⁸. It used a methodology with clear parallels to that deployed by McKinsey to inform "a first assessment" of "Business Clusters in the UK". It also reported employment data relating to the period 1991-98. If the two analyses are considered together, we actually have an insight into the evolution of clusters across the UK over 20 years.

Despite the similarities, the read-across from one report to the other is not straightforward – TBR's analysis is more granular and definitions of "regions" are rather different⁹. Nevertheless, Figure 1 (presented and explained overleaf) attempts to map – as best we can – McKinsey's findings onto those set out in TBR's earlier report.

Virtually all 31 of McKinsey's "economically significant" clusters appear to be identifiable in TBR's analysis. If the earlier study is therefore treated as the baseline, the intriguing – and, in policy terms, important – question is "what happened next?". If we were to *draw only* on the findings from the two reports, the following observations would be made:

- In the main, the "globally significant" clusters of 2014 were also identified as "internationally significant" in 2001: using McKinsey's terminology, key examples include "Financial Services London", "Motorsport Valley" (in the Midlands/South East), and (what approximates to) the "Golden Research Triangle" in the South East (including London and the East of England)
- However, some "internationally significant" clusters identified in the earlier study appear to have faded. In part, this may be a function of coding¹¹, but there could also be more substantive changes underway. Examples include aerospace in the East Midlands; biotechnology in both Scotland and Wales; and nuclear fuel processing in the North West
- More positively, some of the clusters that were judged "regionally or nationally significant" in 2001 appear to have evolved to become "globally significant" in 2014; examples include "Financial services Edinburgh" and "Property London"

⁷ Trends Business Research (2001), "Business Clusters in the UK: A First Assessment". A report to the Department of Trade and Industry. The TBR consortium members included Ron Botham (TERU, University of Glasgow); Hervey Gibson (Cogent Strategies); Ron Martin (University of Cambridge); and Barry Moore (University of Cambridge)

⁸ The research was prompted by the 1998 Competitiveness White Paper "Our Competitive Future: Building the Knowledge Driven Economy" which highlighted the fact that business development is often strongest when firms cluster together, creating a critical mass of growth, collaboration, competition and opportunities for investment and knowledge sharing

⁹ For example, McKinsey does not distinguish between the East Midlands and West Midlands; and the East of England appears to have been incorporated within the "South East"

¹⁰ The McKinsey analysis of "international significance" is taken from Exhibit 6 within its report; it is not shown in Figure 1
11 For example, McKinsey attaches motorsport to the "Midlands" (even though the map shows the old Government Office regional boundaries and the "dot" on the map is clearly in the South East); TBR identified motorsport as a cluster in the South East. In practice, Northamptonshire (East Midlands) and Oxfordshire (South East) are both very important locations for the same cluster

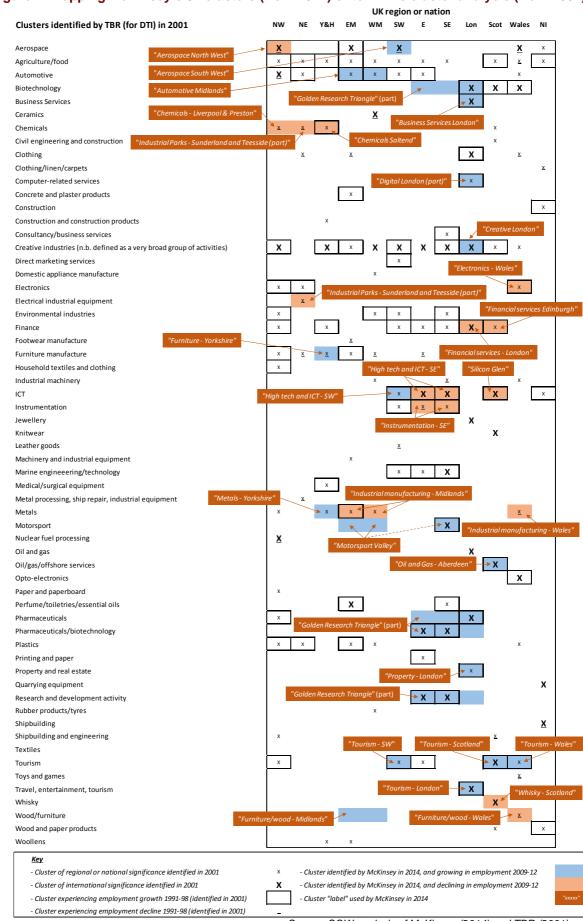


Figure 1: Mapping McKinsey's 31 clusters (from 2014) onto TBR's cluster analysis (from 2001)

Source: SQW analysis of McKinsey (2014) and TBR (2001)

Explanatory note in relation to Figure 1

Figure 1 was developed as follows:

- We summarised the content of Table 2-1 from TBR's main report on "Business Clusters in the UK a first assessment" (page 22) and we then annotated it (in relation to "significance" and "employment growth") using elements of the "classification of regional clusters" as set out in Table 2-2
- We sought to "map" the 31 "economically significant" clusters identified by McKinsey onto the structure provided by TBR. Our main source for this was the narrative set out by McKinsey on pages 16-18 of its report. In the main, the "labels" used by McKinsey map onto clusters identified earlier by TBR and hence they are included in our Figure 1. For the clusters identified by both studies, the shading shows where McKinsey identified either recent employment growth (blue) or decline (pink)

So, for example, business services in London was identified by TBR in 2001 as both internationally significant and growing in employment terms. Our judgement is that this maps onto McKinsey's "Business Services London" cluster, which – in 2014 – is identified as globally significant and as having seen recent employment growth.

- Other "internationally significant" clusters that were shedding jobs in the 1990s appear to have grown in employment terms over more recent years; an example is "Aerospace South West"
- Some of the "nationally or regionally significant" clusters that were losing employment in the 1990s have also shed jobs over the last few years: "Industrial Parks (Sunderland and Teesside)" and "Furniture/wood Wales" are two examples.

In practice, these observations need further examination (for example, there is no evidence that the nuclear fuel processing cluster in the North West has actually disappeared). But assuming they broadly stand up to scrutiny, the implications at both national and local levels are really very important: **the UK's 31 "economically significant" clusters – as identified by McKinsey in 2014 – appear to be on quite different trajectories, with some growing quickly and some shrinking.** The sub-title of McKinsey's report is "capturing the growth potential"; yet little consideration is given to the very real differences between the 31 "economically significant" clusters in these terms, or the implications that follow. **There is also a clear, and predictable, spatial dimension.** McKinsey's own observation is that the top five clusters are all in London and together these account for 55% of the 31 clusters' GVA.

3: The imperative to "look outwards" – and the international dimension

The McKinsey report talks in terms of the "global significance" of particular clusters, but only in the context of relative scale; it does not really consider the nature, process or extent of "internationalisation", or the relationship between this process and different clusters' growth trajectories.

A finding from our own work is that there is a fundamental paradox at the heart of successful clusters – and if not fully understood, this paradox can lead to inappropriate policy responses. Competitive and successful clusters are absolutely embedded within – and committed to – particular places. Simultaneously, however, their "DNA" is defined around networks and relationships that are anything but local or parochial. Some fourteen years ago – in relation to the high tech cluster in and around Cambridge – the Vice-Chancellor of the University of Cambridge observed that:

"...one of the city's great strengths was its local networking and this remains important.

What we see today is an equally vital and complementary enthusiasm for international links.

I am sure that the years ahead will see us collaborating – and competing successfully – with other centres of excellence around the world"¹²

A few examples from our recent work on high tech Oxfordshire¹³ – which is relevant to three of McKinsey's 31 clusters¹⁴ – also illustrate the point:

- One of the major software firms explained that 15-20% of its (Oxfordshire-based) engineers are recruited internationally; while one of the biotech firms reported that 15 different nationalities are represented among its 75 Oxfordshire-based staff
- A research-intensive biotech firm which currently employs just over 100 people in Oxfordshire –
 relies on 12 international research collaborations, including those with Harvard University, Stanford
 University and the University of California (Santa Cruz)
- New investment (from Russia) is explained in terms of relationships forged between an investor and the founder of a high tech business whilst both were undergraduates at the University of Oxford.

The outward facing and international character of high tech businesses in Oxfordshire is not therefore an "outcome". Nor is it something that is achieved only as the cluster reaches "maturity". Instead, **it is intrinsic to what the cluster is and how it functions**.

"Facing outwards" is – arguably – a pre-requisite for long term competitiveness. **The crucial lesson** from history is that over time, inward-facing clusters tend to ossify, particularly if factor conditions also change. As the economic geographer Gernot Grabher observed in the context of the demise of the Ruhr's steel industry, the "ties that bind" – the lifeblood of genuine clusters – can insidiously also become "ties that blind" as the cluster fails to adapt, innovate and ultimately survive.

The McKinsey report has relatively little to say about these outward facing processes. It celebrates "global significance" but does not examine the causal significance of increasingly international relationships – across labour markets, processes of innovation and investment, and networks. For local and national policy-makers, these dimensions are very important, particularly if some consideration of "cluster potential" is to provide the rationale for substantial infrastructure investment.

¹² Alec Broers, Vice-Chancellor of the University of Cambridge, quoted in the preface to "The Cambridge Phenomenon Revisited", SQW, June 2000

¹³ **The Oxfordshire Innovation Engine: Realising the growth potential** Report by SQW (2013) Available at http://www.sqw.co.uk/files/2613/8690/7243/Oxford_engine.pdf

¹⁴ As set out above, high tech businesses in Oxfordshire could reasonably be included within the "Golden Research Triangle" and/or "Motorsport Valley" and/or "High-tech and ICT South East" as defined by McKinsey. This points again to the significance and extent of spatial overlaps between individual clusters

¹⁵ Grabher, G (1993) "The Weakness of Strong Ties. The Lock-in of Regional Development in the Ruhr Area" in **The Embedded Firm**, ed. G. Grabher. London: Routledge, pp. 255-277

FROM MCKINSEY TO ADONIS...

There is a clear read-across from the McKinsey report to the final report of the Adonis Review (which was completed for the Labour Party and will, presumably, shape at least part of its manifesto as we head towards the General Election in May 2015).

A number of the Adonis Review's 24 recommendations map (more or less) onto the 19 set out by McKinsey. The links are perhaps strongest in the domain of education and skills: both documents call for a greatly expanded network of University Technical Colleges; both emphasise the need for local employers to influence curricula and learning priorities; and both argue that schools should do more to promote careers in local businesses.

The first chapter of the report of Lord Adonis' review has the title "Wanted – more growth companies and clusters" and it references the McKinsey report in this context. If the report of the Adonis Review is the policy blueprint – in the domain of economic and industrial policy – for a future Labour government, the intriguing question that follows surrounds the relationship between the interventions it recommends and the three critical issues that we identified above: relationships within and between clusters, change over time, and the imperative to "look outwards" (which often, and increasingly, means internationally).

THE ADONIS REVIEW AND... RELATIONSHIPS WITHIN AND BETWEEN CLUSTERS

Four of the Adonis Review's 24 recommendations relate directly to enhanced roles for an "improved" set of LEPs (and several other recommendations also concern LEPs). In flexing – and planning for – the **relationships within and between clusters**, LEPs must play a key role. This is recognised implicitly by the Adonis Review. This role is far more likely to be effective if the spatial footprint of the LEPs makes functional sense.

The Adonis Review is critical of the current configuration of LEPs, emphasising the need for "rationalisation". However it is silent on both the process of rationalisation, and its logical consequences. Its proposal – that each LEP should "cover a clear travel to work area" – needs unpicking. For the northern city-regions, the formulation works well – although most of these are already working to functional geographies and hence there is not really a problem to solve.

But what is it saying in relation, particularly, to London, and what might be the consequences of planning for a *de facto* "London City-Region"? The politics would be fraught as the London TTWA is – on any definition – enormous.¹⁶ Moreover it encompasses, as set out in the McKinsey report, around two-thirds of the UK's "economically significant" clusters, including most of those that are "globally significant" and/or growing.

THE ADONIS REVIEW AND... CHANGE OVER TIME

In terms of **change over time**, the Adonis Review acknowledges that "inequality is vast, both between people and regions". Its proposed solutions relate mainly to "radical devolution" and to "a new generation of Joseph Chamberlains" (which are defined as "strong and far-sighted city and civic leaders, with bold, credible plans, for the amenities and infrastructure their localities need, working in close partnership with business and social leaders, to make their towns and cities magnets of new and better

¹⁶ Defined in TTWA terms, the London City-Region would be far bigger than the 33 London Boroughs – it would also sweep up large parts of the (old) South East and East of England regions

jobs"). This ambition is laudable. But – cutting to the quick – where will the "new and better jobs" come from, given the evidence inferred from TBR (2001) and McKinsey (2014) about long term cluster dynamics (as set out in Figure 1)? Put another way, **how** will radical devolution actually generate more "growth companies and clusters"?

At a local level, the Adonis Review proposes the formation of Combined Authorities (Recommendation 9) and a trebling of funding for a "rationalised" set of LEPs (which should share the Combined Authorities' boundaries) (Recommendations 8 and 10); and it suggests that revenue from business rates should be devolved to Combined Authorities (Recommendation 11). At a national level, there are also measures that should help – such as a 10-year innovation strategy to increase the number of Catapult Centres, Innovation Platforms and projects with the private sector, supported by the TSB (Recommendation 4); a greater role for the Small Business Research Initiative (SBRI) (Recommendation 6); and (through LEPs) the active promotion (outside the South East) of a Business Angel Co-Investment Fund (Recommendation 22).¹⁷

The critical question that follows is how, in practice, national measures of this nature will interface with the "improved" set of LEPs. The answer is currently very uncertain. It will depend hugely on the real scale of the powers, resources, capacities and capabilities implicit within Recommendations 8-11. The rhetoric of radical devolution is a familiar one, but previously, it has always tended to stall when it comes to implementation. What is clear is that devolution without both appropriate resources/powers and an overtly supportive national policy framework will leave local areas – particularly those outside the greater south east – with all of the responsibility and few of the tools needed to help generate "more growth companies and clusters".

THE ADONIS REVIEW AND... "LOOKING OUTWARDS"

The third imperative – to "look outwards" – is a challenging one in relation to national policy levers. The Adonis Review acknowledges the need to strengthen the roles of UK Export Finance and UKTI (Recommendation 21). Depending on how they are implemented, some other measures could also be helpful; for example, international networks for innovation may be supported through Recommendation 4. Some of the issues that have been uppermost in our recent work within major UK clusters which are seeking to "look outwards" – like on-going uncertainties in relation to future airport capacity and the time it takes to process work permit applications for foreign nationals – are echoed in the findings from the Review's own business survey (reported in Chapter 3). However none of its 24 recommendations address them directly.

"Looking outwards" is intrinsic to dynamic clusters and it relates to far more than exporting (important though that is). If the UK is to succeed in generating more "growth companies and clusters", the next government will need to do its bit.

¹⁷ Reading these through, it is striking how similar the recommendations of the Adonis Review are to those set out by Lord Heseltine: there is considerable overlap between them, and both explicitly acknowledge Joseph Chamberlain as an influence on their thinking

CLUSTERS AND THE FIRST WAVE OF GROWTH DEALS

As the dust settles on the first wave of Growth Deals, it is instructive to consider how the 39 settlements are approaching cluster development (noting though that some clusters require little more than a supportive infrastructure to help create the right environment while others require active involvement to address market failures). Within this context, to what extent are the 19 recommendations identified by McKinsey anticipated through LEPs' Strategic Economic Plans (SEPs) and the Growth Deals that followed?

Critics have quipped that some LEPs' SEPs are neither strategic, nor economic, nor plans. This judgement – which is unfair – needs to be seen in the context of changing ground-rules, an overarching imperative for "quick-impact, shovel-ready" capital projects and the pressure placed on LEPs to "do something" about housing. With the clear economic growth remit proposed by Lord Heseltine and endorsed by government¹⁸, our view is that many LEPs would have given greater consideration to medium/long term processes of cluster development within their SEPs had they had more autonomy, and had the structure of the 2015/16 Local Growth Fund been different.

Nevertheless – within the constraints of (essentially) a short term capital programme – some cluster-related priorities have come through. Some of these map onto the 31 "economically significant" clusters identified by McKinsey. For example:

- Hertfordshire's Growth Deal includes funding to accelerate the second phase of the Stevenage
 Bioscience Catalyst and Oxfordshire's Growth Deal includes an indication of support for a Centre for
 Applied Superconductivity (linked to cryogenics and located across the Harwell Campus and at the
 Culham Centre for Fusion Research Campus); both ventures are at the heart of the "Golden
 Research Triangle" cluster as identified by McKinsey
- Thames Valley Berkshire's Growth Deal includes provision for specialist STEM laboratories at Reading, Newbury and Slough Colleges, linking in to McKinsey's "High-tech and ICT South East" cluster
- Worcestershire's Growth Deal indicates support for the further development of Malvern Hills Science
 Park with a focus on cyber security, linking broadly to the defence and aerospace-related
 specialisms identified by McKinsey as "Aerospace South West"
- Coventry and Warwickshire's Growth Deal makes provision for new advanced manufacturing and engineering "grow on" space at Ansty Park, complementing the work of the Manufacturing Technology Centre and resonating with three of the Midlands clusters identified by McKinsey: "Automotive West Midlands", "Industrial Manufacturing West Midlands", and "Motorsport Valley"
- On Teesside, two of the Growth Deal projects appear to link to McKinsey's "Industrial Parks Sunderland and Teesside" cluster: a Materials Processing Institute and Teesside Advanced Manufacturing Park (TAMP) Offshore Wind Validation Centre.

¹⁸ For example, Lord Heseltine's 69th recommendation in *No Stone Unturned: In pursuit of growth* – which was "fully accepted" by government – was that in developing their economic plans, LEPs and chambers should consider ways in which leadership and management capabilities in local businesses can be raised making full use of local networks, local training providers and businesses themselves.

So despite significant constraints, some of the capital projects which are being supported through the Growth Deal process ought to contribute to the growth of the UK's 31 "economically significant" clusters, as identified by McKinsey.

There are also some examples of Growth Deals supporting more embryonic clusters. In Cheshire and Warrington, the Growth Deal has secured £20 million, in partnership with the Greater Manchester LEP, to support a new life science fund. This is intended to stimulate small business activity in the emerging life science/medtech/pharma corridor, anchored at the one end at AstraZeneca's Alderley Park and Hurdsfield sites, and at the other, in the Oxford Road and University agglomeration in Manchester.

Where the Growth Deals are collectively light, however, is in any real acknowledgement of the significance of "softer" aspects of cluster development or the absolute imperative to encourage clusters to "look outwards". As set out above, both elements are critical if clusters are to thrive. Without them, there is certainly a risk that capital projects could have limited long term impacts.

Themes of this nature really ought to feature within the second wave of Growth Deals. Whether this is achievable will depend in part on the future composition of LGF (and specifically the balance between capital and revenue funding). It will also depend on the flexibilities which are – in practice – afforded to LEPs and their business-led Boards, and the investment which is made in their capacity to use them.

CONCLUSIONS

In terms of the future competitiveness of the UK economy, clusters matter greatly. They matter because they help to de-risk economic activity and they embed it, *de facto*, within particular places. This does not mean that those places have any room for complacency. In the main, the clusters that thrive are the ones that are intrinsically outward facing and the "churn" within them is both relentless and demanding. This in turn means that even "successful" places need continually to reinvent themselves and – sometimes – to make tough decisions (including in relation to housing and growth).

However it is important not to use the concept in simplistic or sloppy terms. In seeking to "capture their growth potential", all clusters are not equal: central government must recognise and respond to the fact that local areas have radically different cluster endowments which are on divergent trajectories. Some local areas have clusters which are declining on any objective measure. In this context, there is a need to learn from clusters which have unravelled and the manner in which local areas have sought to respond. Across the UK, this picture has a clear spatial dimension and it demands an appropriate response. It will be vital not to starve the more dynamic clusters of the investment that they – and their places – require. At the same time, in relation to *de facto* regional policy, existing clusters – including some identified among the 31 most "economically significant" – are not the whole, or only, answer.

Finally, we suggest that the issues raised in this paper with regard to cluster *dynamics* (specifically, change over time, and the strength and dynamism of relationships within and between clusters) merit additional research. There is an urgent need to move beyond static analyses of location quotients to generate insights focused far more on real and evolving economic relationships and networks. New tools are, gradually, emerging in this domain. Whilst still experimental, research of this nature ought to pave the way for a locally-nuanced set of policy tools that can respond more effectively to the opportunities, potentials and limitations of cluster growth.

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Founded in 1983, SQW operates across the UK, Europe and internationally, from offices in London, Edinburgh, Manchester and Cambridge. We work across four main fields: innovation; spatial development; children and young people; and the personalisation of public services. Our core services include economic and social research; appraisal, economic impact assessment, and evaluation; demand assessment, feasibility and business planning; and strategy and partnership development.

For more information: www.sqw.co.uk



Oxford Innovation manages a network of business and innovation centres across the UK, providing a supportive home for a community of growing businesses. The company also provides innovation services to entrepreneurs, including business planning advice, coaching and mentoring. Oxford Innovation manages three highly successful investment networks that link investors with entrepreneurs.

For more information: www.oxin.co.uk



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