

OXFORD ECONOMICS

iCITY: Economic Impact



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Executive Summary

Oxford Economics have been requested to undertake an economic impact analysis of the proposed iCITY development at the London Olympic site in Hackney.

iCITY will comprise a variety of companies in areas as diverse as media, IT, R&D and the creative arts. Potential occupants include Channel 5, Cisco as well as an array of other media and creative design companies.

The site is to be developed over the years 2012-2014, becoming full operational in 2017. This economic impact analysis includes an examination of:

- Local economic impacts in 2017;
- National economic impacts in 2017;
- Construction impacts (cumulative over the period 2012-14); and
- Broader benefits and longer term issues

Note that the impacts presented in this report are preliminary estimates only. More detailed estimates could be provided as a part of a later and lengthier research phase.

Key economic impacts of iCITY include:

- Direct production of over **6,700 jobs** when it is fully operational (in 2017) and a direct contribution of some £368 million in GDP.
- For every job contributed by iCITY another one is supported across the UK economy as a whole. In total in 2017 the (fully operational) project will contribute nearly **13,600 jobs**, and over half a billion pounds in GDP.
- Important benefits to the **local area** (i.e. the Hackney, Waltham Forest, Newham and Haringey council areas). For every ten jobs contributed by iCITY an additional four jobs will be supported in the local area. In total the project will support some **9,700 local jobs** (including those at iCITY itself).
- Separate to these impacts, a total of some **2,100 jobs** are expected to be directly generated by **construction** of iCITY itself (2012-14). An additional **1,000 jobs** in **surrounding boroughs** will also be supported by construction activity during the construction phase. Across the UK as a whole it is expected that construction will support some 7,200 jobs. (Note that these figures relate to the construction period as a whole and that not all of these jobs will be generated at any one time.)
- The development will also result in the clustering (agglomeration) of various industries and employees. When such clustering occurs, industries can benefit from sharing knowledge and ideas which produces “spillover effects” and

boosts productivity within the economy as a whole. These effects are in addition to the GDP impacts described above. It is estimated that the project will contribute an **additional £14 million** to GDP in 2017 through such agglomeration effects.

- The project will generate an estimated **£113 million in exports** in 2017. While these are incorporated in the above GDP estimates, revenues of iCITY companies would be much more export-led than the economy wide average. Such a contribution is important to note, given the government focus on an export-led recovery.
- A measure of job quality at the site can be given by the relative GDP contribution of iCITY workers, as reflective of higher wages and/or higher value to employers. The GDP contribution per iCITY worker is estimated to be **£54,900** in 2017 compared to the local area average of £45,400 and national average of £43,600. Likewise, this figure is higher than the estimated GDP contribution per worker in areas such as Business Services (£44,600) and Distribution (£36,200) in that year. This is reflective of relatively high quality of jobs on offer at the site.
- iCITY will offer close to 6,000 jobs in the area of “Business Services” alone (e.g. architecture, consulting, R&D, computer services). This could help provide alternative employment opportunities to the large numbers of people who commute out of the local area to work in jobs in this sector. iCITY could also “**keep employment local**” by providing an employment complement to the construction of new housing at Stratford and other nearby locations.
- iCITY will provide support for a number of high yield start-up companies. A rigorous selection process will help ensure that these companies are likely to be more durable and more highly productive than typical business start-ups.
- iCITY will contribute to the regeneration of the local area and help to meet the vision set out in the Strategic Regeneration Framework for communities living in the Host Boroughs to have the same economic and social opportunities as the rest of London.

Table ES-1 below provides a summary of iCITY’s impacts on the UK economy.

Table ES-1: Summary of iCITY’s economic impacts

Phase	Measure	Direct contribution	Indirect contribution	Induced contribution	Total contribution
Local Impacts					
Construction	Employment (jobs)	2.1	0.5	0.6	3.1
	GDP ¹ (£m)	124	22	25	171
Operations	Employment (jobs)	6.7	0.6	2.4	9.7
	GDP (£m)	368	30	96	494
National Impacts					
Construction	Employment (jobs)	2.1	3.5	1.7	7.2
	GDP (£m)	124	161	71	357
Operations	Employment (jobs)	6.7	3.6	3.3	13.6
	GDP (£m)	368	175	137	680
	Exports ² (£m)		-	-	113
Broader and longer term impacts					
Operations	Agglomeration benefits	Clustering (agglomeration) of companies/organisations in Hi-Tech, R&D and business services could lead to “spillover effects” from knowledge and resource sharing, boosting productivity within the economy as a whole.			
	Regeneration of local area	High value and skilled jobs at iCity will benefit workers and residents in the area and contribute to aims of the Strategic Regeneration Framework for the Host Boroughs.			
	Job quality	GDP contribution per worker of £54,900 vs. local area average of £45,400.			
	Commuting impacts	Acts as a potential local employment source for the significant numbers of existing residents working in the business services sector who currently commute out of the area. Coupled with planned residential developments on Olympics sites, iCity will also attract new residents into the local area who would live and work locally.			
	Start up companies	Strict criteria help ensure new start-ups are likely to be more durable and productive than average.			

1 GDP is treated as synonymous with the value added contribution to GDP in this report for purposes of simplicity

2 Exports are a subset of the direct GDP contribution rather than an additional benefit *per se*.

Please note that the analysis of economic benefits excludes the impacts from the purchase of tenants’ equipment.

1 Introduction

Oxford Economics have been requested to undertake an economic impact analysis of the proposed iCITY development at the London Olympic site in Hackney.

iCITY will comprise a variety of companies in areas as diverse as media, IT, R&D and the creative arts. Potential occupants include Channel 5, Cisco, University College London as well as an array of other media and creative design companies.

The site is to be developed over the years 2012-2014, becoming full operational in 2017. This economic impact analysis includes an examination of:

- Local economic impacts in 2017;
- National economic impacts in 2017;
- Construction impacts (cumulative over the period 2012-14); and
- Broader benefits and longer term issues

Please note that the analysis of economic benefits excludes the impacts from the purchase of tenants' equipment.

This report is divided into an examination of:

- Main economic benefits (discussed in Chapter 2).
- Broader benefits and long-term issues (discussed in Chapter 3)

2 Main economic benefits

2.1 Types of economic benefits

The major economic impacts from the iCITY include the following:

- Basic economic impacts;
- Agglomeration impacts; and
- Export impacts

Impacts which fall within the local area will act to regenerate the economy of the local area, potentially leading to important social benefits for the population.

These impacts are discussed below.

2.2 Basic economic impacts

2.2.1 Overview

The development of iCITY will impact on employment and GDP as workers gain employment in the new development and productive activity takes place. This will also have flow-through effects to throughout the rest of the local economy and, more broadly the entire UK economy as businesses at the site in turn increases their requirements for resources from other industries. These effects can be estimated through economic impact analysis.

Economic impact analysis generally focuses on the gross value added or GVA (i.e. GDP) and employment effects of a change in demand (e.g. the “shock” created by a new development such as iCITY). More specifically, it seeks to evaluate three aspects of such increases in demand:

- Direct impacts;
- Indirect impacts; and
- Induced impacts

Direct impacts quantify the effects of the businesses directly involved in a given project or industry. In this case they relate to the employment and GDP generated by firms which will occupy the actual iCITY site (such as Channel 5 and Cisco).

The **indirect effects** of are those which impact on the wider supply-chain. They occur predominately through purchases of goods and services from UK-based suppliers. This spending generates output, profits and employment among suppliers, who then go on to purchase from their own suppliers and so on.

Finally, **induced effects** arise because the direct and indirect effects mean that additional wages are paid to households. Workers use their income to purchase goods and services for their own consumption. This spending then helps to

support additional businesses (and so additional GDP) and jobs in the industries that supply these purchases.

Indirect and induced benefits are also termed “multiplier” effects. The sum of the direct, indirect and induced impacts equates to the total economic impact of a project such as iCITY, as conventionally measured. Note that, as discussed below, iCITY may also produce other long-term impacts such as agglomeration benefits, better support for start ups and job quality benefits.

In this case, the impacts can also be sub-divided geographically as:

- **Local impacts** – The direct indirect and induced effects which stimulate jobs and GDP in the local area (defined as the Hackney, Waltham Forest, Newham and Haringey council areas for the purposes of this study).
- **Economy wide impacts** – These relate to the direct, indirect and induced effects on the whole of the UK economy.

Information on the direct employment expected at iCITY was provided to Oxford Economics for the study. These estimates were derived from assumptions on employment densities (i.e. employees per unit of floor space) taken from standard industry and official guidance. Oxford Economics then allocated this employment to specific SIC (Standard Industrial Classification) industries based on information on the activities of companies/organisations (e.g. R&D, software design, architectural design) likely to be occupiers at iCITY. The direct GVA estimate for iCITY was then obtained by applying productivity (GVA per worker) forecasts for London in 2017.

National level multiplier (indirect and induced) effects of the iCITY development in this study have been based on the recently published 2005 UK Input-Output (IO) tables from the Office of National Statistics (ONS). Local area multipliers were estimated from the UK IO tables following a methodology developed by Flegg et al (1995)¹. This method estimates local multipliers by taking account of the following factors (all relative to the UK): the size of the local economy, size of individual sectors and the importance of specific sectors to the local economy.

The impacts have also been sub-divided by project phase into:

- **Operational phase** – This relates to the ongoing actual jobs and GDP impacts generated by iCITY once it is fully operational. There will be a “ramp up” period prior to iCITY reaching full occupation and capacity. Accordingly, the modelled impacts relate to the first year of full operations (2017).
- **Construction phase** – This represents the (temporary) economic impacts generated by the construction of iCITY itself. The construction phase is expected to last from 2012 to 2014.

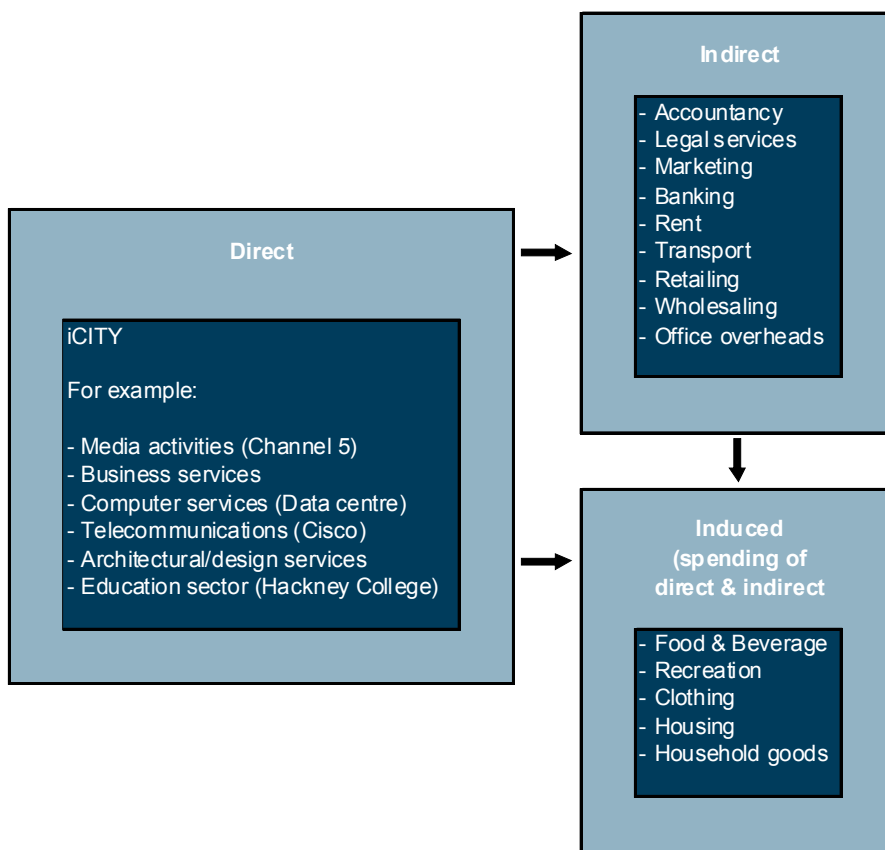
¹ Flegg A. T., Webber C. D. and Elliott M. V. (1995) “On the appropriate use of location quotients in generating regional input-output tables”, Reg. Studies 29, 547–61.

The construction impacts reported below (i.e. jobs and GDP effects) relate to the total impacts over this period (though not all of these will occur at any one time).

Please note that the analysis of economic benefits excludes the impacts from the purchase of tenants' equipment.

Chart 2.1 indicates the basic I-O approach. The direct impacts cited in this chart include references to some of the organisations which are expected to occupy the iCITY site.

Chart 2.1 : Illustration of basic economic impacts



2.2.2 Local impacts - operational phase

As indicated above, the local impacts relate to impacts in the council areas of Hackney, Waltham Forest, Newham and Haringey.

Direct employment impacts (i.e. employment generated in the iCITY site itself) will equate to some 6,700 jobs, generating GDP of £368 million in 2017 (expressed in 2011 prices).

However this direct activity also stimulates jobs and economic activity in the local area (via indirect and induced impacts). Some 600 jobs will be supported via indirect (supply chain) effects through purchases from local businesses, while 2,400 will be supported via induced effects (employees spending some portion of their wages on local purchases).

For every ten jobs contributed by iCITY an additional four jobs will be supported in the local area. In total the project will support some 9,700 local jobs (including those at the iCITY complex itself).

Table 2.1: Economic benefits for the local economy - operational

	Employment (000s)	GVA (£ millions, 2011 prices)
Direct	6.7	368
Indirect	0.6	30
Induced	2.4	96
Total	9.7	494

Source: Oxford Economics calculations based on Drivers Jonas Deloitte data

2.2.3 Economy wide impacts - operational phase

iCITY will also generate impacts across the economy as a whole, as the industries located at the development purchase supplies from others across the country and as workers at iCITY and its supply chain spend their wages. Some of these effects are captured in the local impacts above (which effectively constitute a sub-set of national economic impacts). However the economy-wide impacts are naturally larger than local ones (as much industry and employee spending will take place outside the local area).

In total, by 2017 iCITY will support some 13,600 jobs across the UK economy, and some £680 million in GDP. So for every job contributed by iCITY another one will be supported across the UK economy as a whole.

Table 2.2: Economic benefits for the UK economy - operational

	Employment (000s)	GVA (£ millions, 2011 prices)
Direct	6.7	368
Indirect	3.6	175
Induced	3.3	137
Total	13.6	680

Source: Oxford Economics calculations based on Drivers Jonas Deloitte data

2.2.4 Local impacts - construction phase

Construction of the project will be a major undertaking and is separate from the operational impacts cited above. Construction is anticipated to take place between 2012 and 2014. While the jobs and activity generated through construction will not be permanent they will have an important effect on the community during that period. The figures below indicate the total impacts of construction during the construction phase, although not all of these will occur at any one time. (In effect they represent the impact of compressing the three years of construction activity into a single representative year.)

Given this, construction at the iCITY site is expected to directly involve a total of 2,100 jobs and generate £124 million in GDP. An additional 1,100 jobs in the local area (Hackney, Haringey, Newham and Waltham Forest) will also be supported by activity during the construction phase through indirect and induced effects.

Table 2.3: Economic benefits for the local economy – construction phase

	Employment (000s)	GVA (£ millions, 2011 prices)
Direct	2.1	124
Indirect	0.5	22
Induced	0.6	25
Total	3.1	171

Source: Oxford Economics calculations based on Drivers Jonas Deloitte data

2.2.5 Economy wide impacts - construction phase

The construction of iCITY will also generate employment and activity across the UK. Across the UK economy as a whole it is expected that construction will support some 7,200 jobs (including the 2,100 directly generated at iCITY) and £357 million in GDP.

Table 2.4: Economic benefits for the UK economy – construction phase

	Employment (000s)	GVA (£ millions, 2011 prices)
Direct	2.1	124
Indirect	3.5	161
Induced	1.7	71
Total	7.2	357

Source: Oxford Economics calculations based on Drivers Jonas Deloitte data

2.3 Agglomeration impacts

iCITY will bring together a number of industries in a variety of fields such as media, technology and creative design.

Cluster (or agglomeration) effects are productivity gains from industries being located close to each other. Creative and information-focussed industries in particular often require a diverse mix of skills and in theory gravitate towards urban areas and/or specific sites that have the institutions or other attributes to meet such labour requirements. This constitutes a form of inter-industry clustering.

When such clustering occurs, companies can benefit from sharing knowledge and ideas. When companies invest in highly trained staff and/or new ideas and innovations they are obviously seeking a return on that investment. However, when firms are clustered together, in the longer term, there will be spillover effects from such investment to the economy as a whole. These may arise from effects as straightforward as providing a ready pool of workers within close proximity (and therefore lowering hiring costs) to broader, long-term, spillover benefits which arise from the exchange of (non-propriety) ideas and knowledge. Close proximity may also lower transport costs and thereby reduce the costs of doing business in situations where face-to-face contact is important.

Spillover effects mean that the benefits to the economy as a whole exceed the private benefits to a given industry, since the economy has greater productivity than would otherwise be the case. In the counterfactual case where, say, industries did not locate close to each other but spread out in different areas, these benefits would be lost. Examples of successful Hi-Tech clusters can be found in San Diego (supported by the Connect program²) and Israel. Israel is estimated to have the third highest number of high-tech start-ups in the world after USA and China, while significant numbers of major technology firms have R&D facilities in the region such as Intel, Google Cisco and Microsoft.

The Department for Transport (DfT) has sponsored a number of recent efforts aimed at quantifying agglomeration benefits within the UK, and in London in particular. While useful, the methodologies suggested by the DfT would require a large amount of data on employment down to the ward level across the UK. Such inputs are not available in the case of the current work for iCITY. However the DfT (2005)³ also suggests a simplified approach to the estimation of agglomeration benefits. This involves applying an elasticity of productivity with respect to city size to the estimated change in the number of workers within a given area.

² <http://www.connect.org/programs/connect-track/docs/CONNECT-IR-Q2-11-FULLREPORT.pdf>

³ Department for Transport (2005) Transport, *Wider Economic Benefits and Impacts on GDP*

In the case of iCITY, as indicated above, the number of additional workers who will now be employed within Hackney equates to some 6,700. This represents an increase in employment of some 6.1% to local Hackney employment in 2017. DfT (2005) cite a number of elasticity estimates which can be used in conjunction with such changes in absolute employment, ranging from 0.04 to 0.11. The current study has used the figure at the lower end of this range, in order to develop a conservative preliminary estimate.

Applying these figures (in conjunction with estimated Hackney GDP in 2017) allows for an estimate of agglomeration benefits arising from iCITY of **£13.7 million** in 2017 (alone).

More formally this was calculated as follows:

- Percentage increase in 2017 Hackney employment due to iCITY (6.1%) x
- Elasticity with respect to city size (0.04) x
- Hackney GDP in 2017 at 2011 prices (£5,595 million)

The figure of £13.7 million represents the productivity gain in 2017 to the economy from the clustering of activity in iCITY and is separate to the basic GDP and employment estimates calculated in Section 2.2 above.

As indicated, this represents an initial estimate of agglomeration impacts. A more refined approach could be undertaken at a later date if resources become available.

2.4 Export impacts

Exports are an area of keen interest to UK policymakers given the current economic environment. This is because with domestic consumption likely to remain flat for some time, a major source of future growth is likely to come from overseas markets. In addition, although the value of exports is incorporated in the basic GDP impacts figures reported in Section 2.2, growth in exports from a development such as iCITY may not “crowd out” the development of domestic industries in the longer term.

As such, it is worth considering the export contribution of iCITY. The ONS’ UK Input-Output tables which formed the basis of the calculations developed in Section 2.2, also allow for the calculation of the relative export propensities of the various industries which are expected to locate in iCITY. Likewise the modelling developed for Section 2.2 allows for the estimation of iCITY revenues in 2017.

Estimates based on the weighted average of the iCITY industry groups suggest that exports will account for some 18.7% of the expected revenues from the site in 2017. Revenues (gross output) accruing to iCITY firms are expected to total

some £602 million in 2011. So, the estimated export contribution in 2017 is estimated to be **£113 million** (i.e. 18.7%*£602 million).

Based on the same data the economy-wide average export propensity is 14.8%. Thus revenues of iCITY companies will be more export-led than the economy-wide average. This is due to the presence at iCITY of businesses/organisations in the research and development sector and graphic/creative design sector. The industry groups associated with these activities (i.e. “Research and Development” and “Other Business Services”) have relatively high export propensities (55% and 28% respectively) These businesses may continue to grow strongly in the future (i.e. beyond 2017) boosting the site’s overall (and relative) export contribution.

2.5 Regeneration of the local area

Oxford Economics has previously undertaken work to support the Strategic Regeneration Framework for the Host Boroughs. The vision is for the communities in the Host Boroughs to enjoy the same economic and social opportunities as the rest of London within 20 years. Oxford Economics’ work⁴ suggests that without additional regeneration the sub-region would continue to underperform relative to other parts of London and would remain an area of relative deprivation with below-average incomes and employment rates. However the Olympics-related projects and other developments could lead to 80,000-90,000 additional jobs in the sub-region by 2030 and raise GDP by £6.5 billion per year by 2030. iCITY would contribute to the regeneration of the local area by:

- Creating 6,700 direct jobs on-site, with a further 3,000 jobs generated in the local area through supply-chain and consumer spending effects.
- A significant proportion of these jobs will potentially go to local residents reducing unemployment and raising employment rates of the population living in the area. iCITY will provide job opportunities for the large numbers of local residents who have business services jobs outside the area (i.e. out-commuters). In addition residential developments associated with the Olympics may attract other iCITY workers to move into the local area close to their place of employment. (see Section 3.3.)
- Moreover many jobs generated at iCITY will have a Hi-tech/R&D focus, with above-average productivity (GDP per worker) and requiring above-average skills/qualifications. This would raise the skills profile and average earnings of workers and residents in the local area. (See Section 3.2)

⁴ “Six Host Boroughs Strategic Regeneration Framework – Economic Model”, Oxford Economics, November 2010

- Agglomeration effects resulting from iCITY have the potential to provide a significant boost to productivity and economic growth in the local area.

3 Broader benefits and long term issues

3.1 Types of broad issues

In addition to the areas discussed previously, specific types of other long term benefits include:

- Job quality;
- Changes to commuting patterns; and
- Impacts of start ups

3.2 Job quality

The iCITY development will be creating a centre for highly trained and creative workers in areas such as media, education, research and development and design. This holds the potential to increase the quality of jobs available within the local area (as defined above).

Defining “job quality” is inherently difficult. However one approach would be to measure the relative contribution to GDP of the jobs generated by iCITY, compared to the average in the local area as a whole. This would reflect the fact that the jobs generated would be higher paying (to employees) and/or of higher value (to employers).

Analysis using the input-output modelling developed for Section 2.2 indicates that the GDP per job directly generated by iCITY in 2017 equates to £54,900 (in real 2011 prices). By comparison, the equivalent figure is expected to be £45,400 for the local area in 2017. This measure suggests that job quality in iCITY will be above-average in comparison to jobs in the surrounding council boroughs. This figure is also higher than the estimated GDP contribution per worker across the UK as a whole in that year (£43,600) and is higher than that estimated for industries such as Business Services (£44,600) and Distribution (£36,200).

3.3 Changes to commuting patterns

A development such as iCITY will act as a magnet to workers from a variety of locations outside the local area. Nonetheless, it is also likely to provide new opportunities for local workers. The discussion in Section 2.2 above indicated how local jobs could be created through indirect and induced effects. While some of the direct jobs (i.e. jobs within iCITY itself) will be occupied by people from outside the local area, the development will also provide important local opportunities. For example, 2001 census data (the latest currently available) indicate that some 26,000 people living in the local area commuted out of it to

work in a range of “business service” industries (including architecture, consulting, accounting, R&D, computer services and real estate). However iCITY will provide just under 6,000 jobs in these business service industries alone by 2017. This will not only provide local area employment but may also help reduce the length of the commute for such workers.

Likewise, it is likely to be the case that some potential workers at iCITY will choose to move close to the site itself. Some 5,500-6,700 units are expected to be constructed in the Stratford area alone by 2017. Around 35% of these are likely to be designed to accommodate affordable housing but the rest could potentially house higher income workers, some of whom could find employment at iCITY. So taking the mid-point of this range of unit numbers suggests that some 4,000 units ($6,100 \times 65\%$) will be available for occupation by such workers.

While the development at Stratford and other local sites are not a part of the iCITY project, the development at iCITY will offer an opportunity to keep employment local, by effectively catering for some of the expected influx of workers to the area. This may also assist in reducing the burden on the transport system which would otherwise need to support higher levels of inward/outward commuting.

3.4 Start ups

Another potential source of benefits could be the potential of the project to generate, high yield, start-up companies which act as incubators of new technologies. Such start ups will themselves only receive bursary support after a rigorous selection process and will have to agree to a given level of support. These facts will help ensure that the types of start-up companies fostered within iCITY are more likely to be ones which will survive and grow than is the case for the average new business. (In other words this could be considered a deliberate attempt at “selection bias”.)

These effects are only likely to be felt in the longer term (i.e. well beyond 2017). Nonetheless, they suggest that the development should help foster industries which are both more durable and more highly productive than is the case within the economy as a whole.

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