

Service competitiveness and urban innovation policies in the UK: the implications of the 'London paradox'

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Service competitiveness and urban innovation policies in the UK: The implications of the 'London paradox'

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The policy models currently employed in British cities to promote urban economic innovativeness and competitiveness echo national policies by being science, manufacturing and technology-based. Yet the most powerful driver of both modern UK economic success and regional and urban inequality has been London-based innovation. This does not depend on local technological initiatives, but on labour intensive, knowledge-based processes, especially within the financial and business services. This paper examines the importance of service-based innovation and competitiveness in the English urban system, dominated by London, and its implications for urban innovation policies. These currently offer little support to other UK cities either in gaining from London's experience of service-led success, or challenging its dominance over the most innovative tradable services.

Urban innovation policy Business services Core cities

JEL classifications: 014, 031, R11, R58

Les politiques en faveur de la compétitivité des services et de l'innovation urbaine au R-U: les implications de la 'paradoxe de Londres'.

Wood.

Les modèles employés actuellement dans les grandes villes britanniques afin de promouvoir les politiques en faveur de l'innovation économique urbaine et de la compétitivité se font l'écho des politiques nationales, étant basées sur la science, l'industrie et la technologie. Cependant, la force motrice la plus puissante de la réussite économique moderne au R-U et de l'inégalité urbaine a été l'innovation basée sur Londres. Ceci ne dépend pas des actions technologiques menées sur le plan local mais des processus à intensité de main-d'oeuvre basés sur la technologie, surtout au sein des services financiers et aux entreprises. Cet article cherche à examiner l'importance dans le système urbain anglais de l'innovation et de la compétitivité basées sur les services, dominées par Londres, et ses implications pour les politiques en faveur de l'innovation urbaine. Ces dernières donnent actuellement peu d'appui aux autres grandes villes britanniques, soit afin de profiter de l'expérience de Londres quant à la réussite induite par les services, soit défier sa domination dans le domaine des services commercialisables les plus innovateurs.

Politique d'innovation urbaine / Services aux entreprises / Grandes villes principales

Classement JEL: 014; 031; R11; R58

Wettbewerbsfähigkeit bei Dienstleistungen und städtische Innovationspolitiken in Großbritannien: die Auswirkungen des 'London-Paradoxes'
PETER WOOD

Die von britischen Städten derzeit eingesetzten politischen Modelle zur Förderung urbaner Wirtschaftsinnovation und Wettbewerbsfähigkeit sind ein Abbild der landesweiten Politiken, da sie auf Wissenschaft, Produktion und Technologie gründen. Der wirksamste Faktor für den wirtschaftlichen Erfolg des modernen Großbritanniens sowie für die regionale und urbane Ungleichheit liegt jedoch in der von London ausgehenden Innovation. Dieser Faktor hängt nicht von lokalen technologischen Initiativen ab, sondern vielmehr von arbeitsintensiven und wissensgestützten Prozessen, insbesondere im Bereich der Finanz- und Geschäftsdienstleistungen. In diesem Beitrag wird die Bedeutung der Innovation und Wettbewerbsfähigkeit im Bereich der Dienstleistungen des von London dominierten englischen Stadtsystems untersucht, und es werden die Auswirkungen für urbane Innovationspolitiken erörtert. Diese Politiken bieten anderen britischen Städten momentan nur wenig Unterstützung: Weder ermöglichen sie es ihnen, von Londons Erfahrung mit

Erfolgen im Bereich der Dienstleistungen zu profitieren, noch rütteln sie an der vorherrschenden Stellung der Hauptstadt im Bereich der meisten innovativen handelbaren Dienstleistungen.

Städtische Innovationspolitik
Geschäftsdienste
Kernstädte

JEL classifications: 014, 031, R11, R58

Competitividad de los servicios y políticas de innovación urbana en el RU: los efectos de la 'paradoja de Londres'

PETER WOOD

Los modelos políticos actualmente empleados en ciudades británicas para fomentar la innovación y la competitividad económicas urbanas son un reflejo de las políticas nacionales al basarse en la ciencia, la manufactura y la tecnología. Sin embargo, el desencadenante más poderoso del éxito económico del Reino Unido moderno y las desigualdades regionales y urbanas ha sido la innovación de Londres. Esto no depende de las iniciativas tecnológicas a nivel local sino de los procesos con alto nivel de conocimientos y mano de obra, especialmente en los servicios financieros y comerciales. En este artículo examino la importancia de la innovación y la competitividad de los servicios en el sistema urbano de Inglaterra dominado por Londres y sus repercusiones para las políticas innovadoras urbanas. Estas ofrecen en la actualidad poco apoyo a otras ciudades británicas ya sea para aprovechar de la experiencia de Londres en cuanto al éxito de los servicios o al desafiar su dominio en los servicios comerciables más innovadores.

Política de innovación urbana
Servicios comerciales
Ciudades centrales

JEL classifications: 014, 031, R11, R58

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THE UK ‘INNOVATION GAP’

In October 2006 the UK National Endowment for Science, Technology and the Arts (N.E.S.T.A.¹) published a research report on what it called the UK’s ‘Innovation Gap’ (N.E.S.T.A., 2006). This was defined as the difference between the realities of what makes an economy capable of creating, absorbing and exploiting innovation and what is measured by traditional indices of economic innovativeness. The report maintained that indicators such as R&D expenditure or patents issued, and policies that focus on raising

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18 them, fail to reflect other important forms of innovation, and poorly represent the process
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20 of innovativeness even in science and technology-based industries.
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24 This argument is familiar to many modern innovation researchers (CASTELLS, 1996, 75-
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26 79; DJELLAL and GALLOUJ, 1999; SMITH, 2000; MILES, 2001, 2002; GALLOUJ, 2002;
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28 WOOD, 2005). Its significance here lies in the status of the source - a UK Government-
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30 sponsored Research Trust, reporting in a policy environment still dominated by the
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32 traditional 'pipeline' view of innovation based on the commercialization of university
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34 and other science research by manufacturing firms (N.E.S.T.A., p 4). The main purpose
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36 of the report was to address the paradox of recent UK national economic performance.
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38 This had been notably successful during the 1990s despite chronically low measured
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40 levels of business R&D spending and patent acquisition compared to the USA, Japan and
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42 Germany. In fact, the UK experience seems almost to be the opposite of the much
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44 debated 1990s US 'productivity paradox', in which high levels of business investment in
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46 new computer technologies had seemed slow to deliver clear productivity and
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48 competitive benefits by the 1990s (BEYERS, 2002; BRYNJOLFSSON and HITT, 2003;
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50 SALVATORE, 2003a). The contrast of course reflects much wider structural and macro-
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1 economic conditions, but reveals at least one common theme; the failure of technological
2 measures fully to portray the realities of national innovation-based competitiveness. In
3 the US, subsequent research seems to have demonstrated that the extent and time lags of
4 technological diffusion depend on labour market and institutional flexibilities, especially
5 those involving service functions (SALVATORE, 2003 a/b; WOOD, 2002). At the
6 institutional scale these are primarily implemented through ‘non-technological’
7 innovations in financial and business processes and procedures, and organizational
8 changes, extending across both technological and other sectors (BRYNJOLFSSON and HITT,
9 2000, 24). These types of innovation cannot, of course, be directly traced by
10 technological measures, and many of the most important may not even be directly
11 technology-related.²

29 The N.E.S.T.A. report suggests that various forms of ‘hidden innovation’ are at work in
30 the UK. Some arise from specific technical and institutional circumstances. While the
31 volume of industrial R&D has inevitably declined with the rapid pace of UK
32 deindustrialization since the 1970s, innovation in some of the country’s successful
33 sectors, including petroleum exploration and pharmaceuticals, has been under-recorded
34 by O.E.C.D. classificatory conventions and other innovation indicators (N.E.S.T.A. 18-
35 19). UK biomedical innovation is also strong, but often goes unrecorded because much
36 R&D originates within the network of university laboratories and National Health
37 Service hospitals, rather than being initiated commercially (*ibid.* 25). The most general
38 form of hidden innovation identified by N.E.S.T.A., however, is associated with the
39 growth of the financial, business and creative ‘knowledge-related’ services, few of which
40 engage in science-based R&D or patenting (*ibid.* 26-7; 30-31). Although other countries

1 have also been affected by the shift from manufacturing to tradable services, N.E.S.T.A.
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3 implies that its pace and extent in the UK have accentuated the 'innovation gap'.³
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5 Innovation policies may therefore be misdirected if they neglect the importance of 'non-
6 technological', service based business process innovation, increasingly supported by
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8 specialist 'knowledge-intensive' service firms.
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15 This anomaly in conventional innovation monitoring appears to have been acknowledged
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17 in recent attempts to improve the EU-based Community Innovation Survey (C.I.S.) by
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19 broadening its coverage of agencies and forms of innovation. The Fourth CIS, in 2005,
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21 for example, extended the range of knowledge intensive services surveyed by adding
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23 R&D and other business services (especially business consultancy) to the financial
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25 services, computer activities, architectural and engineering services and technical testing
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27 included in 2001. Questions were also added about 'wider' innovation in management
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29 practices and business structures (D.T.I., 2006, 3).⁴ A more effective comparison is
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31 therefore now possible between the incidence of innovation in manufacturing and what
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33 are commonly termed the 'knowledge intensive business service' (KIBS).⁵ Some
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35 exemplary results for the UK are presented in Table 1 a/b.
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43 **Table 1a/b about here.**
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48 Between 2001 and 2005, KIBS firms were as likely to have invested in innovation and
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50 supported product (i.e. service) innovation as those in most manufacturing sectors. A
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52 significantly higher proportion had introduced process innovation and instigated wider
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54 reforms in management practices and business structures (Table 1a). The CIS also shows
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56 that KIBS relied more on their own, mainly personnel-based, research resources than on
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technological investment in equipment and software (D.T.I., 2006, Fig. 1.4). More significantly for the quality of innovation, KIBS innovations were more often directed to increasing market share by improving service quality and value added, rather than expanding capacity or reducing unit costs (Table 1b). This evidence therefore seems to confirm that the commitment of UK KIBS to innovation, especially in its ‘non-technological’ and market-driven forms, is at least as great as in manufacturing. It also sheds light on a key component of the UK innovation gap, and what is being missed by innovation policies directed to purely technological outcomes.

THE INNOVATION GAP AS AN URBAN AND REGIONAL PHENOMENON

KIBS activities are, of course, overwhelmingly city-based, and the more innovative functions display well-documented regional, and especially inter-urban variability (COE, 1996; KEEBLE, 1997; O.D.P.M., 2006, 85-93; D.C.L.G., 2006). In the UK, the implications for the geography of innovation are most clearly illustrated by London’s experience. The capital’s growing national economic domination, with the surrounding South East region, is generally recognised to arise from the supportive conditions they offer innovative business, especially through the scale and scope of labour markets, and consumer, business and public sector demand. The London TTWA⁶ thus performs well on a range of indices of competitiveness and economic performance compared with other English cities. In contrast, it ranks conspicuously much lower on conventional indicators of innovativeness (D.C.L.G., 2006, 85-9).

Wilson has recently confirmed this situation, using the results of the 2005 CIS (WILSON, 2007). She notes that London’s overall productivity (GVA/worker) outperformed all

other UK regions in 2004, and its businesses showed the highest percentage turnover of products that were new to the firm or were significantly improved. On the other hand, the city's firms spent comparatively little on formal business R&D - the lowest regional share of workplace GVA in the UK (0.5% compared with 3.3% in the Eastern region and 2.2 %in the South East). Wilson associates this London 'paradox' with the importance of KIBS in the city, so that, while performing poorly on conventional *inputs* into innovation, London is highly successful in supporting its *outputs* (*ibid*, 13-14). The contribution of KIBS to national innovativeness thus appears to be characterised by market-driven relationships focused into London. This suggests that even CIS-type evidence for the production behaviour of KIBS firms does not tell the whole story of their innovative role.⁷ As will later be argued from a more theoretical perspective, a more significant indicator would be how they influence national and international market innovation *by their clients*. In general, such an influence is likely to be favoured by distinctively urban-scale interactions of expertise between a diversity of KIBS and clients. The 'hidden' innovativeness of KIBS firms in the UK is therefore greater than the sum of their parts *because of* the agglomeration benefits of concentration into London.

The most recent CIS evidence therefore confirms the importance of KIBS for the national innovation effort, and also why their concentration into London may be important to this contribution. Of course, within KIBS, technological, especially computer-related, expertise has grown in importance, but in London itself technological R&D is low by national standards and of negligible significance for its economic success. Instead, London's economic transformation over the past 25 years has created conditions which support financial and business service innovativeness through close liaison with national

and international clients. Other UK cities, as a consequence, have faced intensified competition in attracting such KIBS, and thus developing their long-term status as national, let alone international, service centres. As will later be argued, urban innovation policies, in their preoccupation with the promotion of technologies, have so far shown little apparent awareness of the modern significance of these processes.

KIBS AND THE ENGLISH CORE CITIES

Employment trends

Superficially, the major English ‘core cities’ have experienced healthy KIBS employment growth in the past decade.⁸ Central London nevertheless still employs almost three times their average share; around 38% compared with 14% (WOOD, 2006a, 341; 2006b). It also appears that this core city KIBS growth has been directed primarily to UK domestic markets. This was strikingly demonstrated during the international recession of 2000-2003, when core city KIBS employment continued to expand, apparently insulated from the slump by strong UK credit-based consumer and housing demand. In contrast, KIBS employment fell significantly in London and the South East, in line with international trends (WOOD, 2006a, 350-2). Meanwhile, cost pressures in central London have continued to erode its employment in UK-directed KIBS, especially in banking, insurance and accountancy (see also Table 2). The paradoxical effect of the recession, once international markets recovered, was therefore to reinforce London’s longer-term hold over the more globally-oriented, innovative UK financial and business services.

Table 2 about here

Table 2 confirms that strong KIBS employment growth continued in most core cities to at least 2005, and adds some detail to the pattern of change since 2000. Of the northern cities, Manchester and Leeds continued to gain appreciable numbers, and rates of growth were generally high in Liverpool, Sheffield, Nottingham and especially Newcastle, although from low bases. Meanwhile, aggregate KIBS employment in London had hardly recovered to its 2000 level, and Birmingham had failed to gain KIBS employment at all (in contrast to its hinterland region: See Wood, 2006b). Such evidence, however, tells us little about the quality and market effectiveness of KIBS. One problem is the heterogeneity of KIBS definitions. In Table 2 an attempt is made to unpick this by distinguishing between, (i) Financial intermediation and insurance services, many of which are relatively routine, including significant consumer as well as business markets; (ii) Professional real estate, legal and accountancy services, many again directed mainly to regional consumer and business markets, and (iii) services more unambiguously orientated to regional, and potentially wider, business clients, including the 'auxiliary' financial services (SIC 67: e.g. exchange administration, securities broking and fund management), computer and database services, technical/architectural services, and business consultancy, advertising and market research.

The most significant feature of the table is the pattern of change in the final group (iii), which might be termed the business services 'proper'. These contributed by far the largest number of new urban KIBS jobs (over 63,000), with a rate of growth in central London not much below the core cities' average (16.5% compared with 18.2%). London thus still dominated urban employment growth in these key activities, in spite of the

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effects of the recession and even before account is taken of their comparative innovative qualities. In the core cities KIBS growth was more concentrated into the financial and professional services. Growth in Leeds and Newcastle, reflected the continuing transformation of major building societies into banks. Employment in insurance generally declined, however, with Leeds, Newcastle and Nottingham still appearing vulnerable to the corporate and technical rationalisations already experienced by Manchester, Birmingham and Bristol, as well as central London.. The most characteristic growth in core city KIBS, however, was in professional real estate, legal and accountancy services. Many such functions offer only limited potential for wider competitive tradability, probably depending heavily on regional or, at best, national market demand.

The aggregate levels of core city KIBS activity suggest that only three, Manchester, Leeds and Bristol, gain any net benefit from trade even with other UK regions (Wood, 2006a, 348-9). It therefore seems that, while KIBS employment in the core cities may continue to be supported by domestic demand, the types of KIBS they favour will offer limited opportunities for firms either to respond innovatively to international market trends, or to benefit their regional clients with such experience. How may core cities therefore complement, if not resist, the innovation-driven growth of London's KIBS nexus? How can they promote regional and, perhaps later, international demand for high quality, tradable services? These are the critical issues that national urban innovation policies are failing to address.

Patterns of demand

Direct evidence for regional patterns of KIBS demand is limited, and mostly over a decade old. Surveys of Manchester and Birmingham, however, confirmed that the larger core cities and their regions offer important markets for international KIBS firms. In Manchester in the late 1990s, IT developments were reducing the emphasis on routine tasks, and enabling their branch offices to improve the quality of services (BRITTON *et al.*, 2004). Unfortunately, such new technologies seemed often to be employed to enhance links to outside, especially London-based, expertise, rather than to encourage the local development of more innovative functions. The core city branch offices of major KIBS firms tended increasingly to act as conduits for London-based functions, adapting them to the needs of regional clients. This may benefit such clients, and the urban economy more widely, of course, but it seems unlikely that local corporate KIBS offices will develop significant international, or even national, markets of their own. Technological innovation may thus have improved the quality of locally available KIBS, but in the late 1990s it was doing little to strengthen their independent innovative potential.

If the core cities are to encourage innovative, tradable KIBS, capable of complementing London-based quality, these will have to be sought in specialist firms, including small-medium enterprises (SMEs), supported, at least initially, by regional demand. At the national scale, the profile of such demand is demonstrated by input-output evidence. This shows that the largest and most dynamic KIBS markets are among other KIBS, as well as in wholesale and retailing, and the transport and communications services (Figures 1 and 2). Essentially, therefore, KIBS success depends on serving the requirements of a wide array of sectors, especially other services. Manufacturing, supports only a small and declining share of KIBS demand, although this is likely to be higher in more industrial

regions (WOOD, 2006a, 343-6). Public sector demand is also more important in some regions than others. At the regional scale, therefore, specialised KIBS functions should to some degree reflect localised manufacturing, as well as service, demands. If these are of sufficient quality, KIBS may then be able to widen their markets to other regions, and even internationally.

The Birmingham evidence confirms earlier studies in showing that such KIBS firms already thrive across the UK's city regions, and that some are competitive in national, and even international markets (DANIELS and BRYSON, 2005; see also WOOD *et al.*, 1993; O'FARRELL *et.al.*, 1996). If these firms offer the best hope of core city KIBS competitiveness, this will depend on maintaining:

- i) A high *quality* of expertise and experience in relation to national and international standards;
- ii) *Niche specializations* that will limit direct competition, especially from larger firms. These are most likely to reflect the particular requirements of regional service and manufacturing clients, and may often originate through KIBS entrepreneurial spin-offs from regional firms or agencies.
- iii) Networks of expertise that can develop *complementary* and often *collaborative relationships* with clients and other specialist KIBS firms, both within their region and outside (WOOD, 2006a, 355).

Examples of appropriate KIBS specialisations include investment and financial management; ICT and computer systems and software; technical engineering and design,

1 construction work; various forms of business consulting, including strategy, human
2 resources, marketing and advertising; media design and multi-media creation; corporate
3 law; and logistics. These need to be adapted to the specific practices of major clients in
4 managing their own expertise, especially when engaged in significant change (WOOD,
5 1996). Without such high quality regional KIBS, businesses and public agencies in the
6 core cities and their regions will tend instead to seek expertise from outside, most likely
7 reinforcing the dominance of London and the South East.

18 The best hope for the core cities in countering the challenge of London's globally
19 oriented KIBS is therefore to encourage their own demand-responsive KIBS firms and
20 networks. To balance the scale advantages enjoyed by the London region, these will have
21 to combine the wider economic strengths of the cities and their regions, including other
22 core cities (e.g. Manchester-Liverpool; Leeds-Sheffield). Rather than 'urban innovation
23 policies', the focus should be on 'urban adaptability policies' (WOOD, 2005). These
24 should seek to exploit the whole expertise base of the core city regions, of which KIBS
25 are a growing element, promoting multiple, rather than simply technological, forms of
26 innovation and growth, many of which will be service-led.

27 **THE MISDIRECTION OF URBAN INNOVATION POLICIES?**

28 In spite of the modern strength of market-driven, service-based innovation, UK urban
29 innovation policies continue to focus on technology as the prime basis for the economic
30 revival of cities (see LORD SAINSBURY, 2002, O.D.P.M., 2006, Vol. 2, 41-5; CORE CITIES

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GROUP, 2006). This was reinforced in 2006 by a UK Treasury-sponsored paper on ‘The importance of cities to regional growth’(H.M. TREASURY, 2006).⁹ In this, the treatment of innovation (5.46-5.48) is closely linked to two other initiatives: the *Science and Innovation Framework 2004-2014* (H.M. TREASURY, 2004), and the ‘Science Cities’ project.¹⁰ Urban innovativeness was thus firmly associated with technologies such as biotechnology and software, and the commercialization of university research. The paper nevertheless recognized the importance of flexible networking between local institutions, including not just universities and high technology companies, but also trade associations, local business organizations, specialized consultants, market research and public relations agencies, and venture capital firms. It also accepted the need for cities to be early adopters of new technological ideas from elsewhere, and open to the dissemination of all technologies. This requires a strong basic education system, as well as the training of science and technology specialists. The paper’s overall priority, however, was unambiguously directed towards reviving urban economies by promoting locally-based technological innovativeness, especially through manufacturing-oriented university and private sector R&D.

This bias was reflected even in the London Development Agency’s ‘London Innovation Strategy and Action Plan’, although this seemed at first to adopt a wider approach by aiming to create “a culture of innovation in all London’s organizations” (L.D.A., 2003, 10). It was argued that:

1 “In London, the economic and social importance of the creative sector and the city’s
2 wider knowledge and cultural resources mean that a ‘science policy’ needs to
3 encompass both technological and non-technological ‘knowledge’ resources.” (p. 4).
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10 The imagery presented in the strategy document was nevertheless devoted exclusively to
11 laboratories and men (sic) in white coats! There was also a “Science & Knowledge
12 Policy” addendum, apparently to satisfy government requirements for regionally focused
13 science policies (*ibid.* 18-19). The L.D.A. thus recognized some of the realities of
14 London’s innovativeness, but also felt the need to conform with national policies directed
15 largely to technology-focused measures.
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27 This policy focus on technological innovation seems largely to be based on the uncritical
28 transference of a national priority - to gain greater economic benefit from the UK’s
29 scientific research capacity - to the urban scale. Of course, much of this capacity is
30 located in cities, and London itself houses a significant share of national scientific
31 research.¹¹ But, at least in London, there is no evidence that technology-transfer policies,
32 even when successful, would have much impact on the city’s economic performance.
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34 This is still likely to be dominated by service-based market innovation.¹² The emphasis
35 in the various core cities may to some degree be different . Their industrial bases, and the
36 scale of university and other science investment, suggest that they might make a
37 comparatively greater contribution than London to national technology policies. This is
38 even more likely, however, in areas outside the major cities altogether, for example in the
39 Outer South East. Even if successful, therefore, technology transfer policies in the core
40 cities would support only small numbers of specialized jobs in the short term, and
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uncertain prospects of substantial urban employment growth thereafter. Meanwhile, core city economies continue to be overshadowed by London’s hold over innovative corporate and KIBS functions. Whatever the national significance of technological innovation, therefore, and its undoubted local significance in some areas, it cannot be the key to urban economic revival.

APPROACHES TO SERVICE INNOVATION

The argument for promoting a service-based approach to urban innovation is not simply a response to empirical trends and misdirected policies. There is also support from contemporary theoretical discussions of service innovation. Conventional innovation studies have generally been slow to recognise how innovation occurs in a knowledge-based, service-led urban society (MILES, 2002; WOOD, 2005). In many such studies, the focus is on the behaviour of service firms compared with better-documented manufacturing experience (COOMBES AND MILES, 2000). Service producers are approached as if they were ‘pseudo-manufacturers’, assembling and selling intangible services in much the same manner as tangible goods. As we have seen, this is the basis for large scale surveys such as the CIS. These studies tend to conclude that innovation by KIBS firms is based on organizational more than technological change, for example through the improvement of personnel capabilities, better internal coordination, and the management of intra-organizational conflicts (NIJSSEN, *et al.*, 2006, 242). Service innovation is also often associated with cross-functional teams, bringing together key people, sharing tacit knowledge, networking with external agencies, and sustaining formal and informal control processes (TIDD and HULL, 2006).

The London experience, outlined earlier, however, would suggest that these distinctive 'innovative' characteristics of service firms are no more than symptoms of more fundamental contrasts between service and manufacturing functions. Indeed, Djellal and Gallouj argue that service and manufacturing innovation cannot be compared: 'A service does not have an autonomous existence defined by its technical specifications. It is a social construction ...'. This may engage various degrees of materiality (i.e. technologies), be evaluated in different contexts (i.e. by producer or consumer clients, or in the private/public spheres), and extend over variable time periods (DJELLAL and GALLOUJ, 1999, 227). Any service innovation thus arises from the processes of interaction intrinsic to service creation and delivery, combining various competencies without necessarily requiring distinct (and therefore easily measurable) R&D functions. Thirty years ago, Hill also explained why service innovation might not be identifiable through studies, like those for manufacturing innovation, of producers alone. The intangibility of service products means that their value always depends on how they affect the service recipient (HILL, 1977, 318). The supposedly innovative behaviour of KIBS firms, whether reflected in organizational or technological change, is thus no more than a means of adapting their expertise to the requirements of clients. The mere existence of such change does not constitute innovation. This explains why, as we have suggested, service innovation is most favoured where diverse forms of KIBS-client interaction can be sustained, especially in and around cities.

Drejer has more recently examined the application of Schumpeterian ideas to service innovation, reminding us that these encompass much more than technology-driven

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processes.¹³ She also points out, incidentally, that many of the supposed peculiarities of service innovation apply equally to modern manufacturing. The incentives for innovation are common to all types of activity: ‘...the creation of new possibilities for additional value added’, and should be distinguished from activities that simply support or evolve from established production systems and market relations (DREJER, 2004, 561). As with Hill, therefore, it is market *outcomes* that matter, and not inputs (anticipating Wilson on London). Subject to this condition, following Gallouj and his associates, four sources of service innovation are identified (GALLOUJ, 2000; GALLOUJ AND WEINSTEIN, 1997; DJELLAL AND GALLOUJ 2001). Most generally, for KIBS these include the *new expertise* they offer and the *new external networks* that they may bring to bear to support client aspirations. More contingently, and in contrasting situations, innovation may also arise from the *formalization* of services or from *ad hoc* consultancy for individual clients. Both of these demonstrate the importance of evaluating market impacts.

Formalization, for example through automation or programming, may be innovative if it results in new service opportunities and procedures in wider markets, presumably at lower unit costs. Simply reducing supplier costs, however, with no additional, or possibly even a negative, impact on clients is clearly not truly innovative in the sense meant by Schumpeter. The consultancy advice characteristic of financial or business services, on the other hand, might appear to be inherently innovative, since by definition it offers clients additional, and often new, expertise. In practice, however, many such transactions involve no more than routine professional advice, or the subcontracting of in-house functions. Even when innovative ideas are engaged, their economic significance depends on whether, and how, they are applied by the client. Such ad hoc processes are therefore

1 innovative only if the resulting client practices exert a wider market effect through
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3 improved competitiveness and their wider adoption.
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8 There are thus important theoretical reasons for aligning urban, service-based innovation
9 policies to market impacts, encouraging KIBS firms that can promote client
10 innovativeness, and thus establish their own wider tradability. Such processes seem to
11 have underpinned London's revival, and probably also enhanced national economic
12 competitiveness. They encompass technological as well as non-technological expertise,
13 but no single firm or group within a firm, even if playing a leading role, can claim to be a
14 sole innovator. Success always depends on exchanges of expertise with other firms,
15 especially 'co-production' with clients. A further characteristic is that the application of
16 new ideas or methods is not carried out later or elsewhere, as is common for
17 technological innovation, but immediately, in the context of specific client problems.
18 What is learned by consultants may then be applied to other projects. The benefits are
19 therefore cumulative. Overall, many of the most significant innovation processes now
20 reflect the increasing influence of KIBS on corporate priorities in responding to market
21 changes. City regions offer supportive contexts within which such relationships develop.
22 This is therefore where distinctively urban innovation policies need to be directed.
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46 **CONCLUSIONS: TOWARDS KIBS-FOCUSSED URBAN INNOVATION POLICIES?**

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53 What should be the basis of urban innovation policies in a situation where knowledge
54 intensive financial and business services are driving urban (and regional) economic
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inequality? In general, it has been argued that gaining a larger core city share of potentially innovative KIBS depends mainly on realising the market potential of regionally-developed specialist expertise, specifically through local service enterprise. The capacity to do this varies between core city regions, and the market and employment characteristics of the different types of KIBS. If little else, the evidence presented here suggests that the limitations of their current KIBS profiles need first to be acknowledged.

For example banking and insurance services currently dominate core city KIBS employment. Most primarily serve UK consumer demand and many, such as those in provincially-based life insurance, seem unlikely to develop major new markets. Nevertheless in the larger cities, some banking or other financial institutions may offer specialist business expertise, and be capable of developing a wider national and even international clientele. Urban innovation strategies need to focus on these, building on the scale and quality of regional demand, promoting their international connectivity, and enhancing their ability to attract and retain key staff expertise.

The professional services similarly are unlikely to be at the forefront of business innovation for clients. Much of their measured employment growth may also simply have followed the boom in consumer demand since 2000. Their significance in supporting core city enterprise, however, should not be neglected. Some presumably serve regional, and perhaps wider business needs for national and international (especially EU) standards of legal, accountancy, and property management expertise. Certain branches, such as aspects

of commercial law, may be able to develop outside commercial markets. More generally, standards of service need to maintain the quality of each city's business environment in relation to others, especially London.

In other cases, a real potential for innovative KIBS growth may be being neglected.

Among the most distinctive inherited strength of the core cities are various forms of specialist 'technical' consultancy, built on long-established industrial, mining, maritime, and associated engineering and trading traditions.¹⁴ Their construction, architectural, engineering and computer systems and software expertise, while often technology-based, also requires commercial and creative skills directed more to *applications* than to invention. Such activities also offer a relatively secure basis for technologically advanced work, since they are not necessarily tied to particular production processes, products, markets or clients. Recent core city employment trends offer only patchy evidence that this potential is being developed sufficiently to counter the domination of London in international technical or computer services (WOOD, 2006b, 249-50).¹⁴ Nevertheless, if the core cities are to be centres of excellence in technical knowledge and practice, technology transfer policies needs to be complemented by the promotion of specialist consultancy services supporting the application of technical expertise across many national and international markets.

Innovative business services may also be more 'creative' than technological. Advertising and marketing, for example, are particularly concentrated into London, and even Manchester currently attracts only modest levels of activity. KIBS need to be associated

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with the current enthusiasm for ‘creative industry’ strategies, including multimedia associated with TV, radio and film production, Web-based enterprise, and the arts (RANTINSI, *et.al.*, 2006). While only limited employment benefits have so far arisen from the cultural revival of the core city regions, there will be further opportunities for promoting innovative services, through major cultural initiatives and events, as well as the devolution of dominant agencies such as the BBC.

Each core city’s KIBS potential is different, and economic policies need to promote various inter-related threads of development. Nevertheless, recent KIBS trends, especially in such key activities as wholesale financial, business, computer and other technical services, have shown little weakening in the dominance of London and its wider region. Core city KIBS still rely more on cost-sensitive domestic markets and routine administrative functions, and seem to be missing some obvious opportunities for KIBS development, including building on their inheritance of technical and commercial expertise. Of overriding significance is the quality of the commercial, technical, scientific and creative labour force. There is also undoubtedly a national need to exploit technological R&D capacities, not least to benefit from past investments in university and other scientific infrastructure. Cultural and creative activities are also integral to modern urban success. On current trends, however, perhaps the most difficult forms of core city activity to promote are the tradable commercial services, attuned to regional needs but also capable of developing and sustaining international-quality expertise and investment.

Much of the detailed UK research on KIBS is now over a decade old, and there is an urgent need to explore the processes underlying recent employment trends through comparative city studies. KIBS policies need to be based, firstly, on a better understanding of demand profiles, while more information is also needed on current patterns of KIBS activity in the core cities and their regions. Urban KIBS-based development policies require better local intelligence relating to:

1. Major externally owned service and manufacturing businesses, operating core city offices and plants, many with international connections (cf. O'CONNOR, 2003). What are the relationships between their use of in-house and corporate expertise and their engagement with local and other specialist KIBS?.
2. The knowledge intensive inputs required by successful regionally-based businesses. How are these satisfied from in-house, local or non-local KIBS sources? In this context, what is the role and effectiveness of publicly-supported business advisory services, sometimes offered as substitutes for commercial KIBS (BENNETT and ROBSON, 2003)
3. The scale and nature of various public sector agencies as markets for KIBS, which are especially important in economically laggard regions. It seems unlikely that a critical mass of demand for specialist regional KIBS can be developed in the core cities without combining the needs of local businesses and the public sector. What is the scope for such 'regional preference' policies in the engagement of KIBS by public agencies?
4. What are the current patterns of KIBS activity in each city. How far are these regionally, nationally or internationally directed, and what types of expertise may

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already be being offered to resist the draw of the London region for major regional clients?

These requirements are tentative, and amount to little more than a plea for more information to enable the sources of core city economic dynamism to be addressed more realistically. The inherent inter-dependence of regional KIBS and other sectors, commonly neglected in sector-based economic commentaries, presents both problems and potential for policies. These should not focus on narrow target sectors, whether ‘high technology’ or ‘creative’ activities, but need to encompass the quality of all the local corporate, entrepreneurial, public sector and KIBS inputs likely to support economic development.

The easy access offered by local corporate KIBS offices to London-based expertise might appear to fatally undermine the wider KIBS prospects of the core cities. They nevertheless remain a significant asset for other regional businesses, especially when operating in international markets. At the same time the continuing national and international growth of KIBS demand presents many opportunities for regionally-based KIBS firms to offer niche technical, organisational or marketing specialisation, capable of serving wider markets. National and regionally-based KIBS in Manchester and Leeds have clear potential advantages in serving multinational and other export-orientated companies based in northern England. Core city KIBS may also offer lower prices than London-based firms for comparable levels of expertise. At the same time, over-concentration in the South East has encouraged some KIBS to disperse to other regions, especially in and around Birmingham, Nottingham and Bristol (DANIELS and BRYSON,

2005). By responding to and supporting regional potential, therefore, or by spinning-off London's strengths, the core city regions might look to develop various KIBS-based roles, including serving overseas markets in association with major clients. Policies to focus and foster regional cross-sectoral KIBS demand need to take account of such evolving spatial relationships within an increasingly knowledge-intensive national economy.

The English core cities have benefited in recent years from significant office, retailing, entertainment, sporting, and cultural investments. Closer examination nevertheless suggests that they have had limited success in engaging with the service core of the UK's modern international competitiveness. To respond to the danger of their further marginalization in this respect, they need to foster technological, creative and educational service quality and to promote an array of regionally-based, innovation-orientated KIBS. The task may appear novel and difficult, but the realities of inter-urban competition in recent years suggest that it must be addressed if the polarization of economic opportunity in the UK is not to continue.

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NOTES

¹ Launched with government support in 1999 through £300 million endowed funds from the National Lottery Fund. Promotes innovativeness in UK, including research on innovation processes and policies across sectors and institutional boundaries. See <http://www.nesta.org.uk/> (accessed November 2007)

² Their effects generally emerge as residuals in macro-economic studies of productivity growth. For example, Oliner and Sichel (2000, Table 1) showed that, although ‘capital deepening’ through ICT investment explained much US productivity growth in the late 1990s, equally significant was growth in multifactor productivity, ‘a catch-all for technological or organizational improvements that increase output for a given amount of input.’

³ Comparisons of manufacturing trade balances since the mid 1970s indicate that the rates of deindustrialization in the US and UK were greater than in other developed economies (Rowthorn and Coutts, 2004, Fig.7). Further, after 1990, the UK was more successful than the US in developing new sources of overseas income, especially from knowledge-based services and investments. This suggests that service innovation may well have played a distinctive role in the UK’s recent economic performance (*ibid.* 784-5)

⁴ The Oslo Manual 2005, which guides the CIS methodology, has added two additional types of innovation to be included in the 2008 CIS; marketing and organisational innovation, the latter also covering knowledge management. (Task Force Meeting on

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⁵ In this paper, KIBS include financial intermediation, insurance and auxiliary services, (Standard Industrial Classification 65-67), and property development and management (7011;7032), computer consultancy and database (721-4), legal (7411), accounting (7412), market research (7413), business consultancy (7414), architectural and engineering (742), technical testing (743) and advertising (744) activities.

⁶ TTWA: Travel to work area, based on commuting hinterlands around a formally defined urban core.

⁷ In ascribing service innovativeness to London's competitive and demand-led environment, Wilson advocates improved survey methods, focusing on output measures of innovation, as well as the input conditions that encourage firms to innovate. She also suggests alternative indices of innovativeness, including entrepreneurship, human capital, agglomeration measures, and various forms of IP protection. (Wilson, 2007, 21-30). For earlier discussion of such issues applied to the CIS, see Djellal and Gallouj (1999).

⁸ The English 'core cities' group consists of Manchester, Birmingham, Leeds, Liverpool, Sheffield, Newcastle, Nottingham and Bristol. Since 2000, the UK Government, with the city local authorities, has begun to focus more on their economic promotion, to support of both national and regional economic development goals (ODPM, 2004). Scotland and Wales have separate legislative authorities responsible for economic and urban

development.

⁹ The paper was produced in collaboration with the Department of Trade and Industry and the Office of the Deputy Prime Minister.

¹⁰ In the 2005 Budget, the Government supported plans for Regional Development Agencies to develop six 'science cities' in Manchester, Newcastle, York, Birmingham, Nottingham and Bristol, aligning policies towards developments in areas such as business-university collaboration, support for enterprise, infrastructure development, skills and public engagement with science. See http://www.learninggrid.co.uk/press_releases/24-05-06 (accessed March 2007)

¹¹ London has over 5,000 researchers working in highly rated (4, 5 and 5*) technology-related university research departments and institutes. These represent 25% of the UK higher education research capacity, directed especially to biomedicine and information technology.

¹² The LDA has recently also placed particular emphasis on the 'creative' industries (FREEMAN, 2007). Their implications for the nature of urban innovativeness reinforce arguments based on KIBS experience.

¹³ Schumpeterian innovation theory includes the entrepreneurial introduction of (i) a new good or improved quality of a good (product innovation), (ii) a new method of production, including commodity handling (process innovation), (iii) the development of

a new market (**market innovation**), (iv) a new source of materials or intermediate input (**input innovation**), and (v) a new organization of industry (**organizational innovation**). Innovation must also be put into practice, and other entrepreneurs must follow (Drejer, 2004,. 556, emphasis added)

¹⁴ For example, O’FARRELL, *et.al.* (1996), carried out a survey of international business by over 860 small business service firms in South East England and Scotland. While firms in SE England were more generally internationally orientated, especially in management and computer consultancies, Scottish strengths lay in engineering and product design, which were more internationally-orientated than their SE England counterparts.

| | Manufacturing Engineering | Other | KIBS | Retail/ Distribution |
|---|------------------------------|-------|-----------|-------------------------|
| Innovation active <i>Of which:</i> | 73 | 70 | 69 | 52 |
| Product innovator | 38 | 34 | 37 | 22 |
| <i>Goods</i> | 35 | 30 | 18 | 15 |
| <i>Services</i> | 16 | 14 | 31 | 14 |
| Process innovator | 24 | 24 | 28 | 10 |
| Innovation-related expenditure | 72 | 68 | 66 | 46 |
| Wider innovation | 40 | 37 | 47 | 29 |
| Either product or process innovation | 44 | 40 | 47 | 25 |

Table 1a: Innovation indicators: Percentage of all UK enterprises (Bold = highest)

| | | | | |
|--|----|-----------|-----------|----|
| New products/ increased share | 29 | 28 | 31 | 26 |
| Improved quality | 34 | 34 | 37 | 30 |
| Increased capacity | 22 | 24 | 17 | 13 |
| Reduced unit costs | 30 | 31 | 17 | 20 |
| Regulatory requirements | 26 | 23 | 27 | 23 |
| Incr. value added | 29 | 29 | 32 | 24 |

Table 1b: Percentage of UK enterprises rating innovation effects as 'high'

Source, CIS 2005, reported in DTI, 2006, Tables 1.2 and 1.5

| | (i) Finance and Insurance | | | | (ii) Professional services | | | |
|------------------|----------------------------------|---------------------|--------------------|----------------------------|----------------------------|-------------------|------------------|------|
| | 65 : Financial intermediation | 6601/3 Insurance | Change: Total | % | 70: Real Estate | 7411/12: Legal | Change: Total | % |
| Central London | -19,388 | -4,638 | -24,026 | -13.5 | 3,609 | -4,043 | -434 | -0.4 |
| Manchester | 445 | -1,629 | -1,184 | -5.1 | 1,463 | 2,267 | 3,730 | 24.4 |
| Birmingham | -338 | -1,443 | -1,781 | -8.0 | 843 | 1,015 | 1,858 | 14.1 |
| Leeds | 3,769 | 615 | 4,384 | 21.9 | 2,930 | 2,440 | 5,370 | 54.4 |
| Liverpool | -482 | 666 | 184 | 1.9 | 80 | 1,003 | 1,083 | 21.5 |
| Sheffield | 1,464 | -376 | 1,088 | 13.0 | 1,815 | 900 | 2,715 | 58.1 |
| Newcastle | 5,042 | -1,282 | 3,760 | 52.8 | 467 | 1,436 | 1,903 | 36.5 |
| Nottingham | 1,627 | 477 | 2,104 | 52.5 | 1,606 | 373 | 1,979 | 35.6 |
| Bristol | -848 | -1,348 | -2,196 | -12.5 | 621 | 2,643 | 3,264 | 57.6 |
| All core cities: | 10,679 | -4,320 | 6,359 | 5.7 | 9,825 | 12,077 | 21,902 | 34.0 |
| Total changes | -8,709 | -8,958 | -17,667 | -6.1 | 13,434 | 8,034 | 21,468 | 11.7 |
| | (iii) Business services | | | | | TOTAL CHANGE: | | |
| | 67 : Auxiliary to finance | 72 Computer | 742-3 Arch/Tech | 744/7413-4: Consultancy | Change: Total: | % | Numbers | % |
| Central London | 15,076 | 10,438 | 952 | 12,247 | 38,713 | 16.5 | 14,253 | 2.5 |
| Manchester | 4,128 | 1,018 | 290 | 2,327 | 7,763 | 28.5 | 10,309 | 15.1 |
| Birmingham | -1,773 | -220 | 525 | 882 | -586 | -2.6 | -509 | -0.9 |
| Leeds | 640 | 1,323 | 669 | 820 | 3,452 | 20.8 | 13,206 | 27.4 |
| Liverpool | 459 | 1,984 | 2,320 | -255 | 4,508 | 1.9 | 5,775 | 26.3 |
| Sheffield | -83 | 1,541 | 677 | -271 | 1,864 | 26.7 | 5,667 | 27.4 |
| Newcastle | 198 | 2,446 | 801 | 947 | 4,392 | 48.8 | 10,055 | 45.3 |
| Nottingham | 252 | 789 | 430 | -755 | 716 | 6.5 | 4,799 | 22.5 |
| Bristol | -1,478 | 1,728 | 2,112 | 478 | 2,840 | 19.5 | 3,908 | 10.2 |
| All core cities: | 2,343 | 10,609 | 7,824 | 4,173 | 24,949 | 21.8 | 53,210 | 173 |
| Total changes | 17,419 | 21,047 | 8,776 | 16,420 | 63,662 | 18.2 | 67,463 | 7.9 |

Table 2: Core city and central London KIBS employment change, 2000-2005
(Source: Annual Business Inquiry)

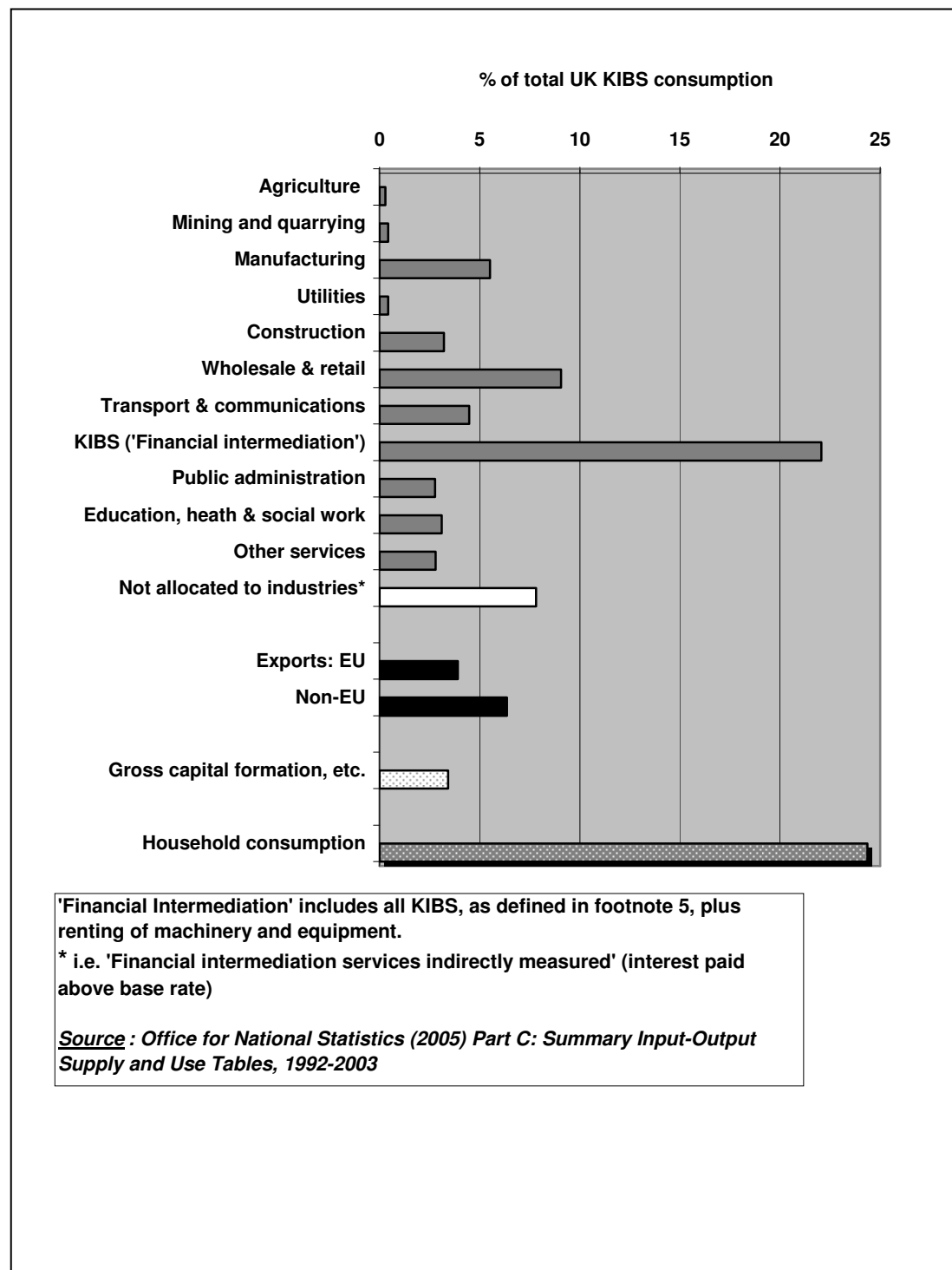


Fig. 1. UK markets for KIBS by industry groups, 2003.

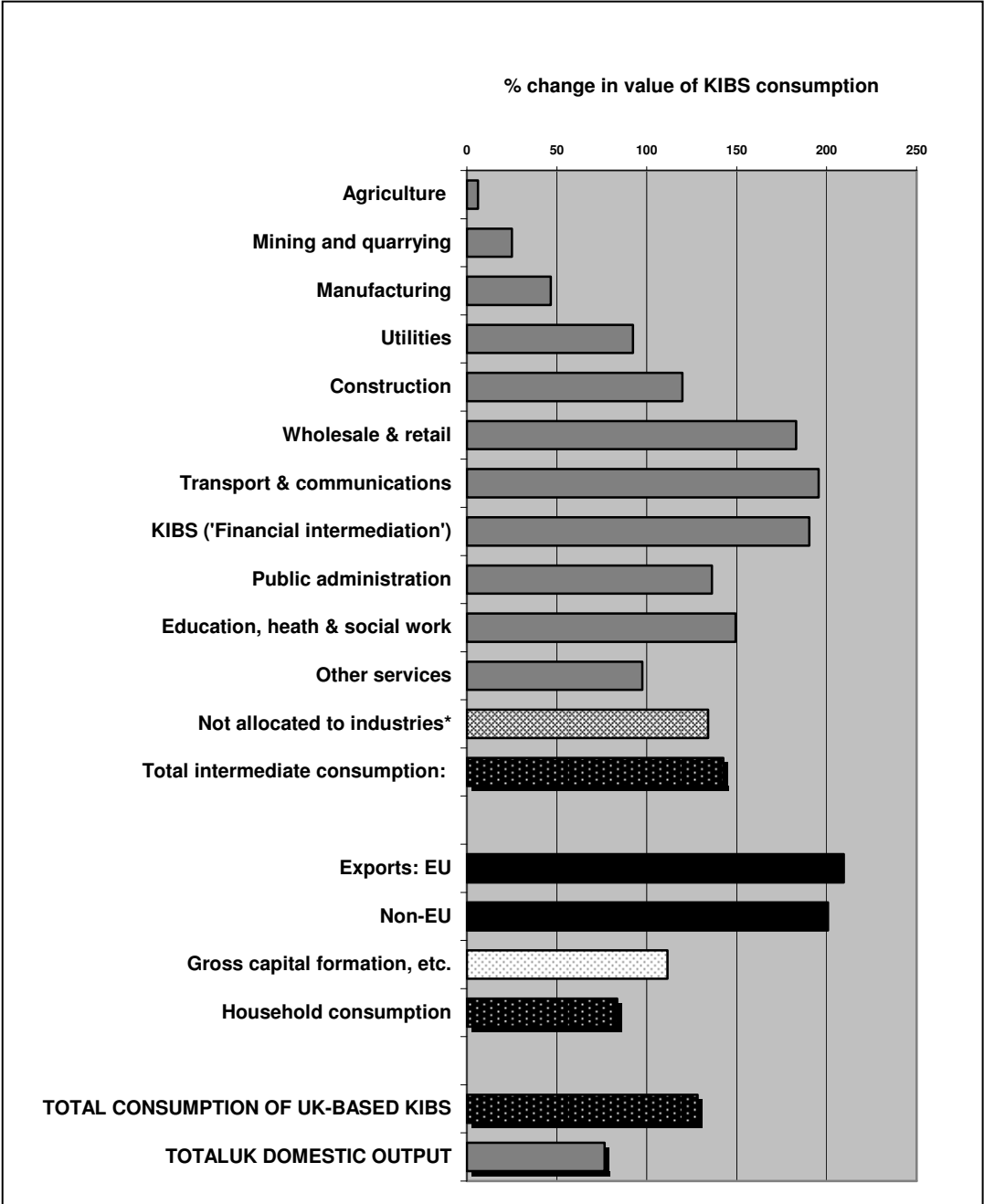


Fig. 2. Change in UK KIBS markets, 1993-2003.