

Debates and Surveys

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The Industrial Policy of Competitiveness: A Review of Recent Developments in the UK

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WREN C. (2001) The industrial policy of competitiveness: a review of recent developments in the UK, *Reg. Studies* 35, 847–860. The article reviews the recent developments in UK competitiveness policy, and explores its relationship with industrial policy, including regional industrial policy. It argues that competitiveness is virtually synonymous with productivity growth, but that while four Competitiveness White Papers of the 1990s potentially broadened the scope of UK industrial policy, the shift from ‘sectoral’ to ‘horizontal’ measures has in fact helped much reduce the content of this policy. The article reviews current industrial policy and expenditure, distinguishing between the areas of science and technology, small firms and regional policy. It argues that industrial policy is now a part of competitiveness policy, being closely aligned to the efficiency role of government. It finds that while policy has converged on a narrower set of measures, the traditional boundaries between the science and technology, small firm and regional policy components have become much less clear-cut.

Competitiveness Industrial policy Regional policy

INTRODUCTION

Competitiveness became a key part of regional and national industrial policy in the 1990s. The aim was to reverse the UK’s relatively poor economic performance, and improved competitiveness was seen as central to raising the underlying growth rate of the economy and enhancing living standards (see OUGHTON, 1997). The Government’s stance was set out in a series of Competitiveness White Papers (DEPARTMENT OF TRADE AND INDUSTRY (DTI), 1994, 1995, 1996) which coincided with similar initiatives by the OECD, 1992, and by the European Union (COMMISSION OF THE EUROPEAN COMMUNITIES (CEC), 1994). While the White Papers may be viewed as just the latest in a series of relaunches of industrial policy, the Labour government followed these up with its own Competitiveness White Paper (DTI, 1998), and it is committed to an annual review of the UK’s competitiveness position. The proposals differ sharply from earlier efforts both in their understanding and their approach to the UK’s long term economic relative underperformance, and according to KEEP and MAYHEW, 1999, they represent a major step forward in the evolution of UK industrial policy.

Competitiveness policy is informed by the new theories of economic growth and trade, which are suggesting new rationales for government intervention and giving rise to a spate of new policy initiatives. However, competitiveness has received little attention in the literature, while industrial policy is a neglected research area which might seem to be in abeyance. The purpose of this article is to review recent developments in UK competitiveness policy, and to explore their relationship to industrial policy, including regional policy. It is argued that the White Papers broadened the scope of industrial policy, but that the shift from ‘sectoral’ to ‘horizontal’ measures has in fact much reduced its content, so that industrial policy now forms a part of competitiveness policy. It has led the government to pursue what it describes as an ‘active’ industrial policy, which is aimed at improving allocative efficiency (i.e. correcting market failures), directed at small firms, ‘soft’ in nature and largely decentralized in delivery. The article analyses the nature and scale of UK industrial policy, distinguishing between its major components of science and technology, small firms and regional policy. It concludes that while policy has converged on a narrower set of measures and is smaller in scale, it has mushroomed into a multitude of initia-

tives, making it a more complex policy, but in which the traditional boundaries between the science and technology, small firm and regional components have become much less clear-cut.

Competitiveness is not a formal economic concept, but it has developed as part of the policy-making process in an ill-defined way, so that we begin in the next section by considering what is meant by competitiveness. The third section briefly describes the nature of competitiveness policy, focusing on the 1994 and 1998 White Papers, which were the main policy developments. The fourth section examines the relationship between competitiveness and industrial policy, and the fifth section analyses the nature and scale of current industrial policy, as pursued in the different parts of the United Kingdom. Section six critiques this policy, and conclusions are drawn in the final section.

INTERPRETING 'COMPETITIVENESS'

Discussions of competitiveness inevitably start with the question of definition. FAGERBERG, 1996, identifies three features of 'competitiveness', as adopted in common usage. First, competitiveness is a relative concept, which involves the comparison of performance across economic units. Second, competitiveness can be applied at different levels, including the firm, industry or national economy. Third, when used at the country level it can relate both to the well-being of citizens and to trade performance.

When applied at the sub-national level, competitiveness is well understood. The terms on which firms compete across national boundaries are determined both by comparative advantage and the level of industrial 'competitiveness', with the government defining the latter as 'the ability to produce the right goods and services of the right quality, at the right price, at the right time' (DTI, 1994, p. 9). However, that competition occurs at the level of the nation or even the region is more controversial (see DUNFORD *et al.*, 2001). KRUGMAN, 1994, argues that this notion of competitiveness is misconstrued, since while firms may rightly be seen as competing in a 'win-lose' fashion, the same metaphor does not carry over to nations which can potentially all gain from trade. By stressing the idea of conflict he argues that it is actually harmful, as it serves to promote protectionism. It can be seen that the interest in competitiveness arises from the rapid growth of newly industrializing countries and the demotion of the developed economies in the per capita income league tables, but that the policies are not about protectionism, but about improving the fitness of the domestic industry to compete internationally.¹

BOLTHO, 1996, argues that the desirable degree of competitiveness is that which, in conjunction with domestic policies, ensures internal and external balance over the short run, and is compatible with achieving

the highest possible increase in living standards over the long run. In the short run, the factors which affect competitiveness are those leading to adjustments in the real exchange rate, such as a reduction in nominal wages (CORDEN, 1994), but in the long run the real exchange rate is in equilibrium, and competitiveness is virtually synonymous with trend productivity growth. Boltho tends to dismiss competitiveness as a concept, while KRUGMAN, 1996, thinks it might just be a poetic way of saying 'productivity', and indeed productivity has begun to reassert itself in the policy lexicon. Following the June 2001 General Election the overarching theme of economic policy was set in terms of productivity growth, since 'to succeed over the long run Britain's productivity must rise faster than our industrial competitors' (HM TREASURY, 2001). Thus, for competitiveness we can read productivity, and it suggests that to improve the long-run competitiveness of an economy the policy handles are those instruments which raise productivity. These are the traditional policies which are aimed at investment and technology, as well as those indicated by the new growth theories, such as improvements in infrastructure, education, training and so on.

THE FRAMEWORK FOR COMPETITIVENESS POLICY

Four Competitiveness White Papers were published in the 1990s, indicating the considerable interest in this area by policy makers. These take as their starting-point the well-known underperformance of the UK economy relative to similar industrialized countries. The 1994 and 1998 White Papers were the main developments in policy.

The 1994 White Paper

The 1994 Competitiveness White Paper makes the link with productivity when it states that a sustained improvement in competitiveness requires an 'underlying improvement in long-term productivity, control of costs and a performance in many aspects of national life' (DTI, 1994, p. 9). In this we can read the difference between the short ('costs') and long run ('productivity'), as well as an emphasis on domestic factors. It goes on to argue that the government's role 'is to create the conditions in which firms throughout the economy can improve competitiveness' (*ibid.*, p. 15), so that it is firm-centred. It identifies 10 factors influencing competitiveness, which form the basis for its proposals. These 10 factors are set out in Table 1, along with a brief description of the role ascribed to each of them.

The 10 factors in Table 1 make explicit recognition of the whole range of ways in which the government can affect productivity. As well as setting the macro-economic environment, this includes activities in which

Table 1. *The 10 main influences on competitiveness*

<i>Macroeconomy:</i> low inflation and sound public finance to give business the confidence to undertake investment
<i>Education and training:</i> raising average attainment and greater access to education to develop a high quality, skilled and motivated workforce
<i>Labour market:</i> matching demand and supply so that the workforce reacts flexibly to new patterns of work and changing technological requirements
<i>Innovation:</i> a continuous commitment to innovation by business
<i>Management:</i> successful management to commercially exploit new ideas
<i>Fair and open markets:</i> the spur to enterprise and improved efficiency
<i>Finance for business:</i> the availability of capital to fund investment
<i>Communications and infrastructure:</i> to enable businesses to get goods and services quickly and efficiently to customers
<i>Commercial framework:</i> a domestic environment that favours deregulation enabling companies to respond quickly to the market place
<i>Government and public purchasing:</i> carried out efficiently and effectively to ensure industry gets the support it needs

Source: DTI, 1994.

the public sector is the main or significant provider (e.g. education and training, research and development), activities over which the government has regulatory control (e.g. commercial framework and fair and open markets), and measures to improve the efficiency of private sector firms (e.g. innovation, enterprise and management). The concern with productivity is not new, but whereas earlier industrial policies focused on manufacturing investment – and to some extent, science and technology in the 1960s, and enterprise and innovation in the 1980s – it can be seen that the 10 factors influencing competitiveness in Table 1 considerably broaden the scope for government action.²

The proposals of the 1994 White Paper are less ‘interventionist’ than earlier efforts, with an emphasis on setting the parameters for the free-working of the market economy, rather than on specific measures to promote particular firms, industries or sectors through direct government action. Thus, the policy is ‘horizontal’ rather than ‘sectoral’ in nature, concerned with ‘getting the environment right’ for business. It is consistent with the policy of extending private ownership and management, but also with the constraints imposed on national governments by the competition policy objectives of the European Union (see DUNFORD *et al.*, 2001). This does not just disallow general investment aid schemes, but other forms of public intervention such as capital injections in publicly-owned enterprises, the acquisition of minority holdings by public authorities, support for ‘national champions’ and export aids (BRITTAN, 1989).³ While Article 92 of the EU Treaty allows for certain exceptions, such as aid for regional development, the European Commission still has considerable influence, such as in the choice of assisted areas, the aid intensity and the regional policy budget. Hence, while the scope for action has been broadened, the nature of the policy intervention has also changed.

A further feature of the White Paper is that while concerned with efficiency and the stabilization function of government, it is largely silent on distributional matters, and in particular unemployment. As OUGHTON, 1997, pointed out, this contrasts with the European Union’s industrial strategy where job creation

has been an overriding aim (CEC, 1994), and it is also at odds with previous UK industrial policies. It no doubt reflects the relatively stable economic conditions of the 1990s and falling UK unemployment, which means that unlike previous industrial policies the White Paper was not born out of economic crisis. It has permitted a more strategic view to be taken of industrial policy, with recognition of the ‘efficiency-equity’ trade-off that exists between competitiveness and employment, at least over the short-run. This trade-off was evident for much of the inter-war period, where a dominant theme was the rationalization of industry in order to achieve the economies of scale necessary to achieve long-run international competitiveness and growth (see GROVE, 1962).

The 1998 White Paper

The 1995 and 1996 White Papers report progress on the 1994 proposals, and identify further measures to be undertaken, so that the next major development was in December 1998 when the Labour government published its Competitiveness White Paper (DTI, 1998). This is best seen as a continuation of the same policy, as it places the emphasis on productivity, with an accompanying analytical paper arguing that the ‘poor performance in GDP per head is primarily due to a shortfall in our labour productivity’ (DTI, 1998, p. 13).

Much the same influences on competitiveness are identified as before, although an important difference is the role given to the ‘knowledge economy’. The analytical paper attributes the increased importance of knowledge to four factors: the pace of change in the information and communications technologies, including the Internet; the long term trend increase in R&D expenditure and scientific knowledge; the growth in international capital flows, including foreign direct investment and the increasing spread of knowledge; and increased demand for knowledge-based products as incomes rise. It trails developments elsewhere, since in 1996 the OECD identified knowledge as the ‘driver of productivity and economic growth, leading to a new focus on the role of information, technology and learning in economic performance’ (p. 3), while

Japanese policy emphasized the role of the 'knowledge-intensive industries' as far back as the early 1970s (see EL-AGRAA, 1997).

The analytical paper stresses the importance for policy of the new theories of growth and trade, and this is recognized by the 1998 White Paper when it states that firms have: 'to compete by exploiting capabilities which competitors find hard to imitate. The UK's distinctive capabilities are not raw materials, land or cheap labour [but] knowledge, skills and capabilities' (p. 6). The White Paper makes proposals in three areas, which are thought to underlie the knowledge economy as follows.⁴ As they relate to industrial policy they are considered in more detail below:

- *Capabilities of firms and other institutions to acquire, absorb and exploit knowledge to develop new products and processes and to learn from best practice.* These proposals are aimed chiefly at enterprise, innovation and developing entrepreneurial behaviour.
- *Collaboration between firms and other institutions in networks and clusters to develop skills and market technologically-complex products.* These focus on partnerships at the sectoral and regional levels, and between industry and the science base.
- *Competition between firms as a spur to improved productivity and innovation.* These proposals cover a range of issues at the national and international level, including competition policy, electronic commerce, telecommunications, Intellectual Property Rights and the European Single Market.

The intention is to produce *Competitiveness Indicators* on an annual basis to monitor 'progress in closing the gap in productivity and living standards with our main competitors' (DTI, 1999a, p. 4). The first of these was published in 1999, identifying 34 aspects which were thought to contribute to the UK's economic performance. A further five indicators measure the UK's competitiveness position, comprising per capita income, productivity, the employment rate, the trade balance in the knowledge-based industries and their output share.⁵ The plan is both to monitor these indicators over time and to compare them with other G7 countries. A second edition of the *Competitiveness Indicators* was published in February 2001, when another White Paper (DTI, 2001) announced further minor developments in competitiveness policy.

THE RELATIONSHIP TO INDUSTRIAL POLICY

The Competitiveness White Papers have changed the scope and nature of UK policy towards raising productivity, but how exactly have they changed industrial policy, including regional industrial policy? Indeed, do they represent industrial policy at all? To answer these questions requires some definition of industrial policy,

but on this there is no agreement. Opinions differ both on the industrial sectors which are included and on the range of activities which are covered. According to COATES, 1996, this may partly reflect philosophical differences in the role attributed to the state, but it also reflects the large number of policy objectives which industrial policy has been expected to perform. In practice, the specification of the 'industry' part of industrial policy is less difficult – as it can be taken to be any paid production outside the administrative sector, including private and public sectors and manufacturing and services – but it is the definition of the 'policy' part which has been much more problematic.

One approach is just to define industrial policy as that which government calls industrial policy, but this makes the definition arbitrary and subject to the whim of the policymaker. An alternative approach is to include in the definition any government activity which affects industry, but then this embraces virtually every aspect of policy. Further, this broad definition 'actually serves to hide and obscure the nature of industrial policy' (*ibid.*, p. 21), so that ultimately it is not very useful. Efforts therefore concentrate on narrowing down the all-encompassing definition.

Refinements to the all-encompassing definition

Attempts to derive a meaningful definition of industrial policy tend to distinguish between those measures which are aimed at specific sectors, industries or firms, and those which deal with the economy as a whole. In this context, EL-AGRAA, 1997, provides a useful definition of industrial policy as 'any state measure designed primarily to affect the allocation of resources between economic activities' (p. 1,504). Limiting the domain of industrial policy in this way, he argues that the public provision of the environment needed for all industries is nothing other than just public policy, and should therefore be excluded. Hence, industrial policy is less concerned with broad objectives of policy, be it regional, social, environmental or even macro-economic, than with the intention of the policy maker to impact on the industrial sector. It has a number of implications.

First, a policy measure can fall within the realm of more than one policy. For example, a macroeconomic policy measure aimed at stabilizing the economy is part of industrial policy if it involves subsidizing some part of the industrial sector or directing a nationalized industry, so that we might talk of a macroeconomic industrial policy in the same way as we talk of a regional industrial policy.⁶ Second, in order to bring in some obvious past policy measures, such as support for 'national champions' or 'lame ducks' which were directed at dominant or large firms, we should include policies which focus on particular firms, and those which discriminate between broad sectors or industries. This suggests we should also include measures which

target some significant part of the industrial sector, such as regional or small firm policies.

As a third point, we should not concern ourselves with policy measures which have only an unintended effect on the industrial structure, no matter how large, since this neither represents the purpose of policy nor the government's stance towards industry. Policy will almost always be felt differentially across industries, whether it is a new road, a management development aid, an export credit scheme, a technology-related measure, a training subsidy or macroeconomic policy, so that the take-up or effect of some measure should not be used as a basis for determining whether it is part of industrial policy. As a consequence, we are concerned with only some of the ways in which the government affects industry, where this is the primary purpose of policy.

Finally, when there is discretion in the exercise of policy then the extent of industrial policy can only be determined *ex-post* once the intention to discriminate between firms becomes apparent. The difficulty this poses for defining industrial policy *ex-ante* can be illustrated in the case of competition policy. Suppose an investigation of an industry by the competition authorities leads to its restructuring, then this is industrial policy, as there is a clear intention to affect the intersectoral allocation of resources. However, if there is no action as a result of an investigation then it is still competition policy, albeit perhaps a lax one, but it does not fall within the realm of industrial policy. Of course, it could be argued that policy is defined by as much as what is not done as by what is done, and that the support of the status quo still constitutes an industrial policy. However, this treats industrial policy as an absolute, whereas here we take it as the intention to alter the current allocation of resources, so that it is defined relative to the existing industrial structure.

The relationship with competitiveness

JOHNSON, 1984, sees competitiveness policy as identical to industrial policy, defining it as all those government activities which are 'intended to develop/retrench various industries in a national economy in order to maintain global competitiveness' (p. 7). While this is based on the all-encompassing definition of industrial policy, it is nevertheless the case that industrial policy is closely related to competitiveness. COATES, 1996, argues that the core concern of industrial policy is to 'enhance the efficiency, productivity and competitiveness of home-based industrial producers' and through time create an industrial structure which is 'strong enough in terms of productivity and competitiveness to underpin other long-term social and political goals' (p. 24). However, it is clear that industrial policy can be much broader than this, since it is used to pursue other policy objectives, such as regional,

social, environmental or even macroeconomic aims, including distributional and stability objectives.

While in some respects industrial policy is broader than competitiveness policy, it includes only those aspects of competitiveness policy which are intended to affect particular firms or industries. If we examine the 10 factors influencing competitiveness in Table 1 then each of these can potentially be classified as industrial policy, but this depends crucially on the policy measures which are adopted. At one extreme, industrial policy is one and the same thing as competitiveness policy, where industrial policy is focused solely on competitiveness, and competitiveness policy is intended only to change the intersectoral allocation of resources. However, at the other extreme, where competitiveness policy deals only with the economy as a whole then the policies may have nothing in common. What is clear from the above discussion is that the wider view of competitiveness taken by the Competitiveness White Papers potentially broadened the scope of industrial policy, but the coincident shift in the nature of policy from 'sectoral' to 'horizontal' measures has in fact much reduced its content. It is the article's contention that industrial policy is now best seen as a component part of competitiveness policy. In particular, it is that part of competitiveness policy which is concerned with altering the intersectoral allocation of resources, including that at the firm, industry or sector level.

THE NATURE AND SCALE OF INDUSTRIAL POLICY

UK industrial policy may best be seen as a component part of competitiveness policy, but only some of the proposals of the 1998 White Paper fall within the realm of industrial policy, and these are described in Table 2. Given the vagueness of policy statements, we cast the net widely to include general science and technology measures, while those aimed at small firms and the regions are separately identified, even though these categories are not mutually exclusive. Because discretionary elements may or may not turn out to be industrial policy *ex-post*, we do not include the proposals under the competition theme referred to above, and some other minor measures are also excluded.

The table indicates the general direction of policy, as represented by the position of the current government. As such, it gives a dynamic rather than a static picture of policy. It includes announcements and recently-introduced measures, and extra funding or refinements to existing measures. It excludes some ongoing policy measures which are not covered by the White Paper, although it still gives a reasonably comprehensive picture of the current state of industrial policy. A brief review of the major components of policy is now given, including the economic development strategies pursued in the devolved territories.

Table 2. Industrial policy measures

Science and technology

- launch second round of Foresight
- £10 million for new round of LINK Awards to support research partnerships
- doubling of DTI funding under the TCS scheme to support technology transfer
- extend Smart scheme for a further three years
- various measures to commercialize research in public sector research establishments and universities, including eight university Enterprise Centres

Small firms

- Business Links support for 10,000 innovative start-ups with growth potential
- increase to 1 million the number of small firms wired up to the Internet
- an Enterprise Fund to finance small businesses with growth potential
- review of law on insolvency and business rescues to help businesses in difficulty, and consideration of tax incentives to encourage R&D in SMEs

Regional policy

- funding for Regional Development Agencies to spend on priorities for improving competitiveness
- inward investment to refocus on high-quality, knowledge-based projects
- introduce new Assisted Areas map
- develop industrial strategies for Scotland, Wales and Northern Ireland

Notes: Industrial policy proposals under the 1998 White Paper. See text for details of the included measures and commentary.

Source: DTI, 1998.

This is largely a descriptive account of industrial policy measures, which is intended to inform on recent developments. The purpose is not to consider the effectiveness or efficacy of industrial policy, which is a considerable task, although the policy is critiqued in the following section.

Science and technology

A key part of science and technology policy is the Foresight programme, which seeks to identify possible 'needs, opportunities and threats to UK national wealth' and develop links between business and the science base in order to address these. It works primarily through thematic and sectoral panels, which are composed of representatives from business, science, the voluntary sector and the government. The first programme made its recommendations in 1995, followed by four years of implementation, and a second round commenced in April 1999, with three thematic and 10 sectoral panels. The Foresight programme provides a framework in which the government attempts to anticipate trends and develop policy initiatives. This includes a new round of LINK, known as Foresight LINK, which the White Paper launched in the Foresight priority areas of advanced food science, future vehicles, new communications and medical engineering. The LINK scheme is the principal means to encourage pre-competitive collaborative projects between industry and the research base. It supports projects of two to three years duration which have good potential for commercial exploitation, and currently involves around 1,500 companies and 200 research-base organizations.

The main mechanism for promoting technology transfer is TCS (formerly the Teaching Company

Scheme), which seeks to form industry-academia partnerships. It funds graduates to carry out projects in companies, and increasingly it is used to take forward to market the results of LINK research, so that in 1998 the LINK and TCS Boards were merged. The Smart scheme offers grants to smaller firms to promote the use of new technology, and is the successor to the SMART, SPUR and RIN schemes.⁷ It makes assistance available towards technology reviews and studies, to help develop prototypes, and competitive awards for feasibility studies and development projects. To promote university-industry links, the Science Enterprise Challenge Scheme committed £34 million to 12 new Enterprise Centres at 18 universities, and through these and other measures the aim is to increase the number of companies spun-out by universities.

Other measures seek to develop the competitiveness of particular industries, including high-growth sectors of biotechnology, communication technology, electronics, information technology, and established industries, such as automotives, chemicals and engineering. These follow on from the former Sector Challenge, which involved industry in promoting the competitiveness of particular sectors. There are programmes in space, defence and aerospace, which in the case of the latter comprises launch investment (the old Launch Aid), which generates a positive cash-flow return to the Treasury, and the Civil Aircraft Research and Technology Demonstration programme, which supports pre-competitive collaborative projects.

Small firms

A Budget Statement accompanying the 1998 White Paper announced a new Small Business Service (SBS) to simplify and improve the government support

offered to small business. It was established in April 2000, and its main roles are: to monitor and advise on small firm regulation; promote business-support access and take-up in disadvantaged communities; and provide a Gateway service for business information and advice from a range of suppliers in the public, private and voluntary sectors. It has taken over the Benchmark Index, which seeks to examine and provide guidance on the performance of small firms against comparable firms. It is linked to other initiatives, so that the SBS manages small-firm TCS and Smart technology measures, and the national network of Business Link, which is the main publicly-funded source of information and advice for smaller enterprises (BENNETT and ROBSON, 2000). The SBS is also expected to form close links with the Regional Development Agencies.

Business Link comprises 85 locally-based partnerships covering England (see OUGHTON, 1997), handling around 400,000 enquiries a year, and similar organizations operate in other parts of the UK. The government provides on-going funding for core services, which is in addition to the Business Link own fee income. The Business Link partners have been invited to put forward proposals to run the SBS local services, which will work through 45 local franchises. Business Link offers support at the local level, which has been criticized for being too localized (BRYSON and DANIELS, 1998) but, since 1998, arrangements exist for access to expertise at the regional level through 22 Centres of Expertise where it is not cost-effective to supply this locally. These provide specialist services in the areas of ceramics, aerospace, defence and printing. Local Support Centres also exist to offer a range of advice in the use of the information and communication technologies. These promote electronic business and commerce, with £25 million set aside over three years to connect around 650,000 small businesses to the Internet, which has been achieved well ahead of schedule. In addition, the government seeks to build up a customized advisory service to support 10,000 innovative start-ups a year.

Finance for small business is addressed through the new Enterprise Fund, which is to receive £180 million in government money over three years to help fund early stage high technology firms. It subsumes the current £40 million a year Small Firms Loan Guarantee Scheme, but in addition it offers equity investment to support early-stage high technology firms through the UK High Technology Fund, and regionally-administered venture capital of up to £500,000 to finance growth companies under the Regional Venture Capital Funds. The plan is to establish a Regional Venture Capital Fund in each English region, with similar initiatives being established in Scotland and Wales, although this aspect of the Enterprise Fund is being investigated by the European Commission for compatibility with its state aid rules.

Regional policy

The Regional Development Agencies (RDAs), which were formally launched in the eight English regions in April 1999, with a ninth in London a year later following the creation of the Greater London Authority, are the key agents for the implementation of the competitiveness programme at the regional level in England. In relation to the White Paper their role is: to encourage the exploitation of the science and engineering base; develop links between business and higher education; co-ordinate the development and implementation of innovation and technology programmes; and to disseminate best practice. This is reflected in each of the economic development strategies produced by the RDAs towards the end of 1999. The strategies provide a framework in which to co-ordinate development work and serve as a basis for establishing detailed plans of action, and there is a striking degree of similarity between them. The RDAs have a number of specific roles, including reviewing the business support in their regions, such as the Business Link partnerships, helping to establish the Regional Venture Capital Funds, facilitating the development of clusters and improving supply chains.⁸

In their regions the RDAs take a lead role in attracting and retaining mobile investment projects, including assembling packages of support for individual investors. This work is co-ordinated by Invest UK (formerly the Invest in Britain Bureau), which has responsibility for promoting the UK overseas and filtering enquiries to the RDAs or other agencies (see MACKINNON and PHELPS, 2001). The White Paper requires Invest UK to focus on high-value projects, including those which support the development of sectoral or technology-based clusters, and Regional Selective Assistance (RSA), the main industrial grant scheme, has been refocused onto high-quality, knowledge-based projects providing skilled jobs. In England, RSA is run by the regional Government Offices, of which about half goes to foreign-owned firms (TAYLOR and WREN, 1997).

Under the devolution settlements the Treasury has responsibility for allocating funds to Scotland, Wales and Northern Ireland within the overall framework of public expenditure control. The devolved administrations have the freedom to formulate policy and to make their own spending decisions on matters which are 'not reserved', including economic development, industry, education and training. The White Paper requires economic strategies to be developed for each devolved territory, but while lagging those of the English RDAs, in one form or another they incorporate many of the same policy measures. The *Framework for Economic Development in Scotland* (SCOTTISH EXECUTIVE, 2000) sets out to 'create a knowledge-driven economy' and recognizes that economic growth requires 'a sustainable increase in the rate of growth of

productivity'. Likewise, the *National Economic Development Strategy* (NATIONAL ASSEMBLY FOR WALES, 2001) gives its key objective as to improve regional productivity, allied to social justice and sustainable development. In these areas, financial assistance to industry is devolved, but here a Concordat exists (LORD CHANCELLOR'S DEPARTMENT, 1999) for consultation before even indicative offers of assistance are made to large mobile investments or relocations within the UK, or where the agreed financial limits are breached (see MACKINNON and PHELPS, 2001).

A revised Assisted Areas map for Great Britain was produced in 2000, but subject to protracted approval by the European Commission (see ARMSTRONG, 2001). The highest tier of Assisted Area (Tier 1 areas) are areas with per capita GDP below 75% of the European Union average. These are now defined by the EU and are eligible for Objective 1 support under the EU Structural Funds, and include West Wales and the Valleys, Cornwall, Merseyside and South Yorkshire. The next tier (Tier 2 areas) are areas with 'acute labour market need', which are determined by the UK government, but as ARMSTRONG, 2001, notes, they are heavily constrained by the Commission. In England there is a third tier of areas with 'identified special need', called Enterprise Grant Areas. These areas can

be redrawn in response to local economic crises in a manner similar to the old 'blackspot' approach. They offer capital grants known as Enterprise Grants at rates up to 15% to small firms and support under the Enterprise Fund (similar schemes operate in other parts of the UK), but firms in these areas are not eligible for RSA.

Expenditure on industrial policy

To gauge the current scale of UK industrial policy, Table 3 presents figures for expenditure, taken from the *Government Expenditure Plans* for the Department of Trade and Industry. It mainly covers spending in England, and it gives projected spending for 2001–02. It excludes expenditure on the space, defence and aerospace programmes, and on the general science budget. In the case of small firm policy it gives government pump-priming for Business Link and expenditure on local competitiveness measures, such as the SBS, while for the RDAs it gives spending on the competitiveness functions. It does not tell the whole story, as it covers expenditure-based measures only, and so excludes those aspects of policy which involve forming a dialogue with industry and so on. Expenditure on central government administration is also excluded.

Table 3. DTI expenditure on industrial policy measures (£ million)

	1997–98 out-turn	1998–99 out-turn	1999–2000 estimated out-turn	2000–01 plans	2001–02 plans
<i>Science and technology</i>	121.9	118.2	139.3	170.0	167.7
Knowledge transfer/collaboration ¹	39.3	45.5	47.2	56.9	50.1
Innovation ²	78.0	61.2	79.5	109.2	117.2
Sector Challenge	4.6	11.5	12.6	3.9	0.4
<i>Small firms</i>	171.3	152.0	180.3	225.2	202.9
Business Link ³	31.2	14.3	1.2	0.4	0.0
Small firm services ⁴	98.0	103.2	124.8	132.2	138.1
SFLGS ⁵	41.3	33.9	—	—	—
Enterprise Fund ⁵	—	—	48.5	73.5	56.5
Other initiatives	0.8	0.6	5.8	19.1	8.3
<i>Regional policy</i>	128.2	126.4	127.3	147.2	147.6
Regional Selective Assistance ⁶	114.2	112.2	110.0	116.3	110.3
Enterprise Grant	0	0	0	9.0	15.0
RDA Competitiveness Fund ⁷	0	0	2.0	5.2	5.2
Inward investment: RDOs ⁸	10.4	11.0	11.2	11.0	11.6
Invest UK ⁹	3.6	3.2	4.1	5.7	5.5

Notes: 1. Includes Foresight, LINK, Foresight LINK, TCS, University Challenge Fund and international collaborative programmes such as EUREKA.

2. Includes the Smart scheme and its predecessors SMART, SPUR and RIN, Enterprise Centres, Local Support Centres and some sectoral initiatives.

3. Three-year pump-priming grants to establish Business Link partnerships.

4. Includes core service funding, Business Link support, Regional Supply Office networks, local competitiveness measures, specialist counsellors, Centres of Expertise (from 1998–99), and Small Business Service (from 1999–2000).

5. SFLGS is the Small Firms Loan Guarantee Scheme. This is subsumed within the Enterprise Fund (from 1999–2000).

6. Includes a small amount of expenditure on Regional Industrial Grants.

7. Paid to Department for the Environment, Transport and the Regions from April 1999.

8. Grants to Regional Development Organizations in England to promote their regions and deliver suitable locations for inward investment. Paid to DETR from April 1999.

9. Includes the activities of Invest UK, the former the Invest in Britain Bureau.

Source: *Government Expenditure Plans*, DTI, 1999b, and DTI, 2000.

Table 3 shows that expenditure on industrial policy measures in England is at about £400 million per annum, rising to about £500 million over the near future. Within this, there is a roughly equal split between the science and technology, small firm and regional policy components. Each of these has a projected increase in out-turn, but the main sources of growth are in innovation, local competitiveness and the Enterprise Grant scheme. Overall, the table shows that the Competitiveness White Papers are associated with only a very modest increase in spending on industrial policy.

Elsewhere in the UK, the economic development strategies are still being put together, but Table 4 presents aggregated figures for expenditure using recent Budget Plans. In Scotland the main agency to promote competitiveness is Scottish Enterprise, which has an industrial development strategy for lowland Scotland, while Highlands and Islands Enterprise is responsible for other areas. Support for science and technology is relatively small, while spending on RSA is not far below that of England. In response to the 1998 White Paper, Knowledge Economy Taskforces were set up to focus mainly on collaboration between industry and universities.⁹ These make recommendations on the commercialization of research, but expenditure is small. The Welsh Development Agency promotes economic development in Wales at the local and regional level (see LOVERING, 1999). Spending is modest, but a major boost for economic development will come through Objective 1 status for West Wales and the Valleys, which promises £200 million per annum in EU matching

grant over seven years. At the time of writing, the Northern Ireland Assembly has yet to fully formulate its strategy, but under previous spending plans financial assistance accounts for a major part of its budget.

Overall, industrial policy is on a relatively small scale, and substantially smaller compared with earlier efforts. In the late 1960s, for example, government spending on private-sector industrial subsidies alone peaked at around £9 billion per annum at 1980 prices (WREN, 1996b). This reduction in expenditure is reflected in the budget of the DTI, which received 1% of the total allocated funds in the last *Government Expenditure Plans*, compared with around 7.4% of public expenditure in 1974–75 on industry, energy, trade and employment.¹⁰ This has led BUCKLEY, 2000a, to revisit the question of the DTI's existence, while a previous Secretary of State for Industry has argued for a major reorientation of its activities (YOUNG, 2000).

THE CHARACTERISTICS OF THE 'ACTIVE' INDUSTRIAL POLICY

The UK government describes its industrial policy as 'active', which it articulates as recognizing that the government 'cannot stand in the way of change but that change itself needs to be managed so that its consequences are not traumatic or so disruptive that they actually hold back economic growth' (BYERS, 2000b). However, while policy is about 'working with the market', it is clear that it is primarily 'accelerative' rather than 'decelerative' in nature (GRANT, 1982),

Table 4. Expenditure on industrial policy measures by the devolved administrations (£ million)

	1998–99 out-turn	1999–2000 estimated plans	2000–01 plans	2001–02 plans
<i>Scotland</i>	237.6	231.7	234.4	279.2
Scottish Enterprise ¹	125.4	112.0	119.5	151.0
Highlands and Islands Enterprise ¹	36.3	38.4	39.9	39.3
Innovation Support ²	5.3	4.9	4.9	4.9
Regional Selective Assistance	70.6	76.4	70.0	84.0
<i>Wales</i>	—	124.2	139.6	164.4
Welsh Development Agency ³	—	45.0	43.0	53.0
Pathway to Prosperity Fund ⁴	—	0.0	10.4	25.2
RSA and other Business Support	—	70.2	67.2	67.2
European Regional Development Fund	—	9.0	19.0	19.0
<i>Northern Ireland</i> ⁵	183.0	184.0	175.0	174.0
Industrial Research and Training	21.0	22.0	24.0	23.0
Local Enterprise	31.0	30.0	30.0	30.0
Selective Assistance and trade support	121.0	124.0	113.0	113.0
Industrial development promotion	10.0	8.0	8.0	8.0

Notes: 1. Includes activities to improve business competitiveness, assist new business start-ups and attract inward investment.

2. Mainly comprises SMART and SPUR schemes.

3. Includes activities to improve business efficiency and trade, business start-up and growth and attract inward investment. Budget estimates are based on a static grant-in-aid from the Welsh Assembly.

4. Various small firm and other measures.

5. Planned expenditure by the former Department of Economic Development.

Sources: *Investing in You: The Annual Report of the Scottish Executive*, Scottish Executive, Edinburgh; *Promoting Prosperity: WDA Corporate Plan 2000–2003*, Welsh Development Agency, Cardiff; *Better Wales: The Strategic Plan*, The National Assembly for Wales, Cardiff; *Northern Ireland Expenditure Plans and Priorities, 1999–2000 to 2001–2002*, Department of Finance and Personnel/HM Treasury.

concerned with promoting growth rather than with preventing decline or with alleviating the consequences of industrial decline and change. Indeed, the above review of policy measures shows that there are a number of distinct characteristics that help define industrial policy, which we can consider as follows.

Allocative efficiency

Industrial policy is essentially microeconomic in nature, aligned to the efficiency role of government and aimed at identified market failures. Previous industrial policy had a strong macroeconomic dimension, as it was used to stabilize the economy, through large-scale investment subsidies to manufacturing, directives to nationalized industries and counter-cyclical adjustments to the depreciation allowances for investment. It also had a distributional role through a strong regional policy and support for declining industries. Since the 1980s these two functions have been largely abandoned, apart from ad hoc interventions to support firms in difficulty for distributional reasons.¹¹

The stability function is now handled by general macroeconomic policy, and while this is within the realm of competitiveness policy (Table 1), the nature of the policy instruments means it lies outside industrial policy. Regional policy remains the main distributional part of industrial policy, but it is small in scale (TAYLOR and WREN, 1997), and there must be legitimate doubts about whether it constitutes a 'regional policy' at all. This is because every English region has an RDA, including London, and in essence these formulate and implement national policy at the regional level. The main regional instrument, RSA, no longer funds the interregional transfer of firms where there is no net increase in UK activity, and its role in attracting internationally-mobile firms can really be seen as a national policy, as within the limits of EU state aid policy it is the only real opportunity to compete internationally for these projects.¹² What is termed regional policy therefore has little or nothing to do with redistribution, and increasingly it is the implementation at the regional level of national competitiveness policy measures. Indeed, the former Secretary of State for Industry described the aim of the 'new regional policy' as to 'strengthen the building blocks for economic growth in *all* regions' [my italics] (BYERS, 2000a).

Small and medium sized enterprises

A second characteristic of UK industrial policy is that the various strands of policy are focused on small and medium sized enterprises (SMEs). In the early 1980s the promotion of start-ups was important to foster an 'enterprise culture', but over time policy has shifted to developing a relatively small number of established SMEs with growth potential (see GAVRON *et al.*,

1998). One reason for this is that start-ups have high failure rates which have not been amenable to policy on a cost-effective basis, while SMEs with growth potential are an important source for the growth of the economy as a whole (STOREY, 1994). A further reason is the firm-size limits on financial assistance applied by the European Commission.

In promoting small firms with growth potential the presumption is that these would not otherwise grow without intervention, so that there is market failure. This can take many forms, but ultimately it rests on asymmetric information, either on the part of banks, leading to a lack of private-sector finance for projects, or on the part of firms, such as a lack of information on market opportunities. Larger firms are presumed not to experience these problems, and are excluded from public support through either the specification of the eligibility criteria or 'additionality' tests to ensure that implementation depends on the support. As a result, most technology and regional policy measures in Table 2 are taken up by smaller firms: half the 1,500 LINK companies are SMEs; 90% of the TCS scheme actively involves SMEs; the Smart scheme exclusively targets small firms; while SMEs account for 90% of all UK-owned firms receiving RSA offers. This means that the boundaries between the technology, regional and small firm policy measures are becoming increasingly less clear-cut, as they converge on a common set of policy measures. This is well illustrated by the recent White Paper (DTI, 2001) in which the government announced technology institutes as a regional policy measure, but the purpose of these is to boost the supply of *high-tech* skills for *small firms* in *all* regions. The policy coincides with a convergent interest in these subject areas by academics, which were previously treated as quite distinct (see MORGAN, 1997).

'Soft' support

A third feature of the 'active' industrial policy is that it is primarily 'soft' in nature, consisting of advisory support, Gateway services, the dissemination of best practice, encouragement of partnerships, collaborative arrangements, networks, clusters and so on. It contrasts with the 'hard' support for capital investment offered in earlier decades. The shift in emphasis can be seen to reflect the change in the perception of the underlying market failures facing firms. Previously, the problem was that the social return from capital was believed to be above the private return, so that the subsidies lowered the cost of new capital to encourage investment, whereas now it is much more information based (this is clear from an inspection of the above list of policy measures). The change in emphasis from 'hard' to 'soft' support also indicates the increased role given to human capital in the economic development process, and it mirrors the broader change in the sectoral composition of the economy from manufacturing to services.

Decentralized policy delivery

Finally, policy delivery is increasingly decentralized, provided by agencies which are either wholly or part-funded by central government for this purpose, but outside its direct control. These may be in the private or public sector, and include the Regional Development Agencies, the Small Business Service, Business Link, Enterprise Centres, standards councils, trade associations, universities and so on. Likewise, in the devolved territories, the respective administrations have the power to determine budgets and to formulate and implement policies. In England, part of the explanation is that the nature of the 'soft' support means it has to be delivered locally, but government has neither the means nor capacity to carry this out, so that it works through the various agencies which have this expertise.

An advantage of decentralizing policy formulation and delivery is that the policy can be tailored to local circumstance and discretion exercised. However, a difficulty lies in setting targets, and in monitoring and auditing programme performance. Moreover, it leads to the fragmentation of programmes, creating a difficulty of signalling policies to firms, as well as to banks, advisors and other officials. In England, GAVRON *et al.*, 1998, reckoned that there were recently 200 government-funded small-firm support initiatives (and hundreds of local variants introduced by the Business Links and the Training and Enterprise Councils). It is little wonder that a key role of the Small Business Service is to simplify and improve the coherence of government support for small business.

Explaining the 'active' industrial policy

The change in the nature and scale of industrial policy to a great extent reflects the changed consensus of the role of the government in society, but also it recognizes the constraints on action posed by globalization and by European Union membership. In relation to the latter this has influenced industrial policy in a number of ways. First, the European Union has taken a much more active role in certain areas, such as regional policy and collaborative industrial programmes. Second, under Treaty obligations the UK is required to harmonize aspects of industrial policy to promote fair competition and to remove barriers to trade under the Single Market. Finally, the European Commission has taken an increasingly tough stance on national state aids. It has banned assistance to sectors such as steel, coalmining and shipbuilding, and set limits on the grant rates, the geographical areas and the sizes of firms where financial assistance can be applied (see DUNFORD *et al.*, 2001).

It is difficult to know for certain what impact European Union membership has had on the structure of UK industrial policy, since at the time that the Community was clamping down on state aid, the UK

was already cutting back its assistance, so that it was the only industrialized country to experience a reduction in state aid over the 1980s (BRUCE, 1990). Indeed, by the end of this decade it had one of the smallest shares of aid in GDP of all EU countries (CEC, 1990). Moreover, the Commission has approved the vast majority of applications for state aid, i.e. in excess of 95% of about 500 applications a year received since the mid-1980s from across the EU (BESLEY and SEABRIGHT, 1999), suggesting that its 'bark may be worse than its bite', although it is difficult to assess the deterrent effect of the 'bark', as this may have had the greatest impact on state aids.

CONCLUSIONS

The emphasis on UK competitiveness can be seen as a renewed interest in the causes of productivity growth as a source of national competitive advantage. Drawing on the new economic theories of growth and trade, there has been a major transformation in the scope, nature and scale of UK industrial policy, so that industrial policy may best be seen as a part of competitiveness policy. It is primarily concerned with allocative efficiency, and this more limited role for industrial policy, in which there is no substantial redistributive or stability objectives, and in which there has been a shift in the nature of the policy from 'sectoral' to 'horizontal' measures, helps explain the substantial reduction in expenditure. It has led to a much more complex policy which is focused on smaller established firms with growth potential, but in which the traditional boundaries between the science and technology, small firm and regional components are breaking down, as industrial policy converges on a narrower set of policy instruments.

A US government report praises the government's efforts to raise productivity, which it describes as the UK's attempt to make itself the 'economic engine of the EU, with e-commerce and emerging technologies the means to achieve this goal' (EVANS and CASSY, 2000). However, while the early signs appear good, it is far too early to form any definitive judgement on the success of the programme, not least because of the economic downturn in high technology sectors. It is best judged over the long run and over the economic cycle. The government has set out its own benchmark figures for the state of UK competitiveness, against which it can judge the policy's success, but the difficulty will inevitably lie in identifying the areas where it should intervene (i.e. the allocative inefficiencies and market failures), which will determine the programme's success (see WREN, 2001). The acid test of the competitiveness policy will inevitably be whether it raises productivity and living standards over the long run, but the difficulty of determining this should not be underestimated, as it will involve disentangling the

programme's effect from other factors, for which the 'national league tables' and *Competitiveness Indicators* seem far too crude. Indeed, in relation to old industrial policy of investment incentives, SUMNER, 1999, p. 298, finds that it 'is no easier to reach firm and positive conclusions about the effects of fiscal policy on investment than it was twenty years ago', while in a perhaps overly pessimistic assessment, EL-AGRAA, 1997, p. 1,516, describes the task of evaluating the new industrial policy as 'not just Herculean, but truly impossible'.

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NOTES

1. A much-quoted and widely accepted definition of competitiveness at the national level is 'the degree to which [a country] can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the longer run' (OECD, 1992, p.237). This has been adopted by the UK government.
2. The concern with productivity was strongest in the 1975 White Paper, *An Approach to Industrial Strategy*. A discussion of this, and other UK industrial policies in the post-war period can be found in WREN, 1996a.
3. In recent years European policy has rested heavily on the distinction between 'generic aids', available to all firms (subject to the EU guidelines on eligibility, grant rates and so on) and 'ad hoc aids', available to particular firms. The latter are treated as presumptively suspect in that they are less likely to be targeted at genuine market failures and more likely to distort competition between member states (see BESLEY and SEABRIGHT, 1999).
4. To forward these proposals an Implementation Plan was published, and a Cabinet Office unit and a Competitiveness Council were established to co-ordinate this work. The latter draws its members from business, and follows a similar US initiative. As well as other issues, it advises on the Competitiveness Indicators (see below), which are then considered by a Cabinet Committee on Productivity and Competitiveness, chaired by the Chancellor of the Exchequer. The indicators complement and are part of a trend in setting performance targets across Government Departments. Others include the National Learning Targets, the Poverty Indicators, the Sustainable Development Indicators, and since 1997 Regional Competitiveness Indicators.
5. This uses the OECD definition of the 'knowledge-based industries', comprising knowledge-based services (i.e. business services, communications, finance, insurance, real estate and community, social and personal services); high-tech manufacturing (aircraft, office and computing equipment, drugs and medicines and radio, TV and communication equipment); and medium high-tech manufacturing (professional goods, motor vehicles, electrical machinery, chemicals, other transport equipment and non-electrical machinery).
6. Some define industrial policy to comprise supply-side microeconomic interventions, and hence distinguish it from demand-side macroeconomic management. However, this denies the macroeconomic role of industrial subsidies, which have been used to target particular firms and industries to promote stabilization or distribution.
7. From 1986 the Small Firms Merit Award for Science and Technology (SMART) made grants to proposals demonstrating innovation in important areas for translation into commercial success. The Support for Projects Under Research (SPUR) from 1991 sought to exploit innovative products and processes. From 1988 the Regional Innovation Grants (RIN) funded half the eligible costs of small firm projects in the Development Areas leading to new products or processes.
8. The latter function is supported by the Regional Supply Offices, many of which are based at RDAs. These were set up in 1995 to develop networks on behalf of major purchasing firms, and since 1998 they have focused on key sectors.
9. The Scottish Parliament is served by the Scottish Executive, and within this by the new Enterprise and Lifelong Learning Department, which was created from the pre-devolution Scottish Office Education and Industry Department.
10. The figures are taken from the *Government Expenditure Plans*, and exclude central government lending to the nationalized industries.
11. The lack of a well-articulated 'decelerative' policy means the government faces inevitable dilemmas when the market produces an undesirable outcome, such as a large-scale plant closure. These cause industrial crises to manifest themselves as political crises, and as BUCKLEY, 2000a, puts it, the government 'cannot prevent BMW selling Rover or Ford ending car production at Dagenham but it will always take some of the blame for the devastation caused by those decisions. Its best defence should rest with attack and in setting a more pro-active agenda for promoting industry'. Its chosen method is to deal with these on an ad hoc basis, which involves persuasion and inducements, while the consequences of adjustment are dealt with through designated special action areas. Recent years have seen a number of industrial crises, including substantial job losses in textiles and at Corus, the former British Steel (see BUCKLEY, 2000b), and more recently at Cammell Laird and at Motorola at Bathgate. The government has found £100 million to avert job losses in the coal industry and £40 million to secure a new production line at the Nissan car plant in Sunderland. It was also involved in managing the BMW divestment of Rover at Longbridge, but at other car plants it has let the market take its course, most notably Ford at Dagenham and Vauxhall at Luton.
12. If the government was allowed to offer these grants on a national basis then the pattern of inward investment

might not be too different, as the grants essentially serve to match those on offer outside the UK, while factors such as slack regional labour markets help determine the location within the UK. The aid limits on the grants

are at a standard maximum of 40% in the highest tier of Assisted Areas and at 10% or 20% in the next tier. The grant rates can be increased by 10% or 15% for SMEs and in areas of low-population density.

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