THE AUTHOR

Stuart Lyons is an industrialist with 35 years' experience in the manufacturing, retailing and international distribution of consumer products. He was responsible for Pearson's fine china and glass interests, serving as chief executive of the Royal Doulton group for 12 years. Earlier he led the UDS retail group. He is now chairman of an investment company and a director of a Gartmore investment trust. A practised business leader and analyst, he served for five years on the Monopolies & Mergers Commission, led a DTI working party for the ceramics industry and chaired the West Midlands Development Agency. He is the author of *Can Consignia Deliver? The Post Office in the 21st Century* (Centre for Policy Studies, 2001). He was awarded a CBE in 1993.

ISBN No: 1 903219 36 1

Centre for Policy Studies

57 Tufton Street, London SW1P 3QL

Tel: 020 7222 4488 Fax: 020 7222 4388

e-mail: mail@cps.org.uk
website: www.cps.org.uk

Printed by The Chameleon Press, 5 – 25 Burr Road, London SW18

Centre for Policy Studies

A DEPARTMENT FOR BUSINESS

THE DTI IN THE 21ST CENTURY

Stuart Lyons

CONTENTS

FOREWORD

This paper is timed to coincide with an announcement from the Department of Trade and Industry (DTI) of its internal review of its mission and operations.

In this excellent paper, Stuart Lyons shows that the DTI has grown into a confused, and confusing, department of state. It is meant to promote British competitiveness – yet has been saddled with social and employment programmes which clearly have the opposite effect. It is meant to promote the transfer of technological know-how – yet while Britain is famous around the world for the quality of its scientific research, we are equally notorious for the failure to exploit it commercially. It has responsibility for the collation and dissemination of economic statistics – yet British businesses suffer from its inability to do so efficiently. And yet its budget will grow by 58% over the next couple of years.

Faced with this catalogue of confusion, some may feel tempted to agree with Edmund Burke who as an MP succeeded in passing a motion abolishing the Board of Trade. His argument was that "commerce, the principle object of that office, flourishes most when left to itself".[1] How true. But Lyons shows that the DTI can have a legitimate role but only if it is focused on the needs of the business community and only if it becomes far more efficient in its delivery of services to business.

Whether or not these conclusions will be shared by the DTI's internal review remains to be seen. What must surely be the case is that they are the benchmarks by which the review must be judged.

Tessa Keswick
Director

---

1 Speech introducing the Plan for Economic Reform (11 February 1780), *Writings and Speeches*, iii, 535.

SUMMARY

- The DTI is in a state of confusion. The pace of economic change and uncertain leadership have left it with unresolved doubts concerning its mission, objective and resource. It is trying unsuccessfully to fit its traditional responsibilities and structures into the new economy.
- The DTI is not understood by and does not connect with the business community of today. The DTI needs a fresher, slimmer organisation and a new operating model for the 21st century.
- The DTI has failed to make coherent choices between economic, socio-economic and social agenda, and between intervention and supervision. It should be a department for business, with a primarily economic perspective.
- The American Department of Commerce stands out as a model for study. It operates through agencies and bureaux with task-oriented remits and, by leveraging off private-sector networks, delivers a better return for clients, taxpayers and the nation.
- The DTI should continue to spin off agencies such as British Trade International, the Small Business Service and the Patent Office, but there should be less political interference and greater accountability.
- The DTI's methodology for designing programmes and awarding grants is haphazard and lacks discipline and clarity, leading to unnecessary costs and inadequate results. A systematic and rigorous review is required.

- The European employment guidelines, requiring member states to teach entrepreneurship, are an unreflective mix of bureaucracy, paternalism and old-style socialism. The UK Small Business Service should be required to review its agenda, philosophy and costs, and measure the results of its programmes.
- The DTI is not equipped to manage the nation's science base. Its role should be in the promotion of technology transfer and the exploitation and application of science.
- The DTI programmes for technology lack focus and clarity. A clear strategy is required, based on which there should be a discrete budget, with executive accountability for costs and outputs, as in the US Technology Administration.
- The Office of Science & Technology applies most of its budget towards academic research through grants awarded by the Research Councils. The Government Chief Scientific Adviser's office should be transferred from the OST and report directly to the Prime Minister. The Research Councils should be brought together within a National Agency for Scientific Research.
- DTI bears significant responsibility for the national failure to provide business and government with accurate and timely statistical information as a basis for well-informed decision-making and for measuring the productivity gap. The DTI should develop a stronger voice within government and champion the provision of improved economic data to aid UK competitiveness.
- The DTI should be remodelled as a Department for Commerce.

CHAPTER ONE
INTRODUCTION

The Department of Trade and Industry is in a state of confusion. It came together gradually over the post-war years as the result of mergers and concentration in the machinery of government. The national management of trade, industry, energy and the nationalised industries of coal, steel, railways, gas, electricity and telecommunications, were harnessed within a single department of state. Science and technology were added later, beginning with the passing of Harold Wilson's 1965 Science and Technology Act.

The Conservative governments of the 1980s and 1990s privatised the nationalised industries, leaving just the Post Office (now Consignia) and British Nuclear Fuels Limited (BNFL) as survivors of the old regime. Regulators took the place of departmental committees. The DTI was pressed by successive secretaries of state to become a Department for Enterprise, a promoter of national competitiveness. The era of Science Parks and e-commerce arrived.

These changes have taken place against a new international and social backcloth. The Cold War has ended. The World Trade Organisation and the European Commission have become the institutions through which the UK negotiates tariffs and terms of trade. Multinational companies have become richer and more powerful than many of the countries with which they plan their developments. In the advanced economies, traditional manufacturing is giving way to knowledge-based services. The loss of jobs in the old economy has intensified the pressure to stimulate business start-ups in the new. The skills gap has heightened concerns about the effectiveness of education and training, not least among ethnic and cultural minorities.

What is the role of a department for trade and industry in the new era? Should it be one of low interference, in which the state establishes the necessary conditions for business to flourish, and deals mainly with matters like regulation and international terms of trade? Or should it be one of active intervention, of picking winners and pump-priming chosen sectors? At what point, if any, should a department for business cross the line between the economic, socio-economic and social agenda?

On coming to office in 1997, New Labour redefined the DTI's mission:

> To increase competitiveness and scientific excellence in order to generate higher levels of sustainable growth and productivity in a modern economy.

To achieve this, it identified four objectives:

1. to promote enterprise, innovation and increased productivity;
2. to make the most of the UK's science, engineering and technology;
3. to create strong and competitive markets; and
4. to develop a fair and effective legal and regulatory framework.

These seemed sensible ambitions, reflecting the Department's two roles of business champion and business regulator. Indeed, the expressed aims were little different from those of previous Conservative administrations. How were they to be achieved, and how different would Labour's approach be in practice?

Labour has failed to come to terms with one of the most complex government departments.

To judge from Labour's first term in office, it has failed to come to terms with one of the most complex government departments. Nor has it developed a coherent strategy for government in industry. The DTI's role and operations are not understood by, and do not connect with, the business community of today.

The purpose of this paper is to inform and stimulate a non-partisan debate. It reviews the remit of the DTI, its objectives and operating structures, and the mismatches of mission, rhetoric, analysis and achievement. It compares the DTI with the Department of Commerce in the US, and considers some of the influences on policy emanating from Europe.

The DTI's focus should be primarily economic. It should not promote social change for social purposes.

The contrast between the American and European approaches highlights a major issue for the DTI. Should its perspective be economic or social, or at a particular point between the two? This paper maintains that the perspective should be primarily economic; the role of a department for trade and industry must be to foster trade and industry themselves. It does not maintain that the role should be exclusively economic. Business and business infrastructure have

social dimensions and create social cohesion. A department for industry must recognise these facts. But the DTI should stop short of promoting social change for exclusively or primarily social purposes. That would be to turn the business mission of the department on its head.

Three problems with the DTI:

1. *The DTI directorates suffer from a confusion of mission, objective and resource;*
2. *The new agencies suffer from socio-political distortions to their agenda;*
3. *The Office for Science & Technology has not succeeded as a catalyst for the transfer of know-how to industry – and is inherently incapable of doing so.*

This paper makes three broad diagnoses. First, the core DTI directorates suffer from a confusion of mission, objective and resource. Secondly, the new agencies, like the Small Business Service and British Trade International, which have been released from the central bureaucracy, are capable of purposeful yet flexible operations, but their efforts suffer from socio-political distortions to their agenda. Thirdly, the Office of Science & Technology (OST) has not succeeded as a catalyst for the transfer of know-how to industry – and is inherently incapable of doing so.

The conclusion drawn is that government should create a fresher, slimmer organisation and a new operating model. The nation needs a focused and task-driven department for business.

CHAPTER TWO
ORGANISATION, RESOURCES AND OBJECTIVES

The DTI has 10,000 employees and an annual budget exceeding £4 billion. It also oversees government-owned businesses like Consignia with 200,000 employees, and British Nuclear Fuels Limited (BNFL). It is responsible for the nation's science and engineering base through the OST and the Research Councils. Less than half the DTI annual budget is used in programmes or administration traditionally associated with private-sector trade and industry.

Less than half of the DTI's budget is used in programmes associated with private-sector trade and industry.

The Departmental Expenditure Limits (DEL) for the year ending March 2002 will be £4.5 billion. £2.7 billion is earmarked for Trade & Industry, of which nearly £1 billion is for the nuclear and coal liability. £1.8 billion is for Science & Technology. Thus, ongoing programmes for trade and industry absorb more or less the same financial resource as those for the OST. But DTI officials and ministers spend far more than 50% or their time on the former and far less than 50% on the latter; and at the OST, once envisaged as a white-hot catalyst for technology transfer, only a small proportion of expenditure is industry-related.[2]

The DTI's ministerial supervision takes on one shape,[3] its full-time management another, its financial structure a third. The official structure in the Government's Expenditure Plans is shown in Table 1.

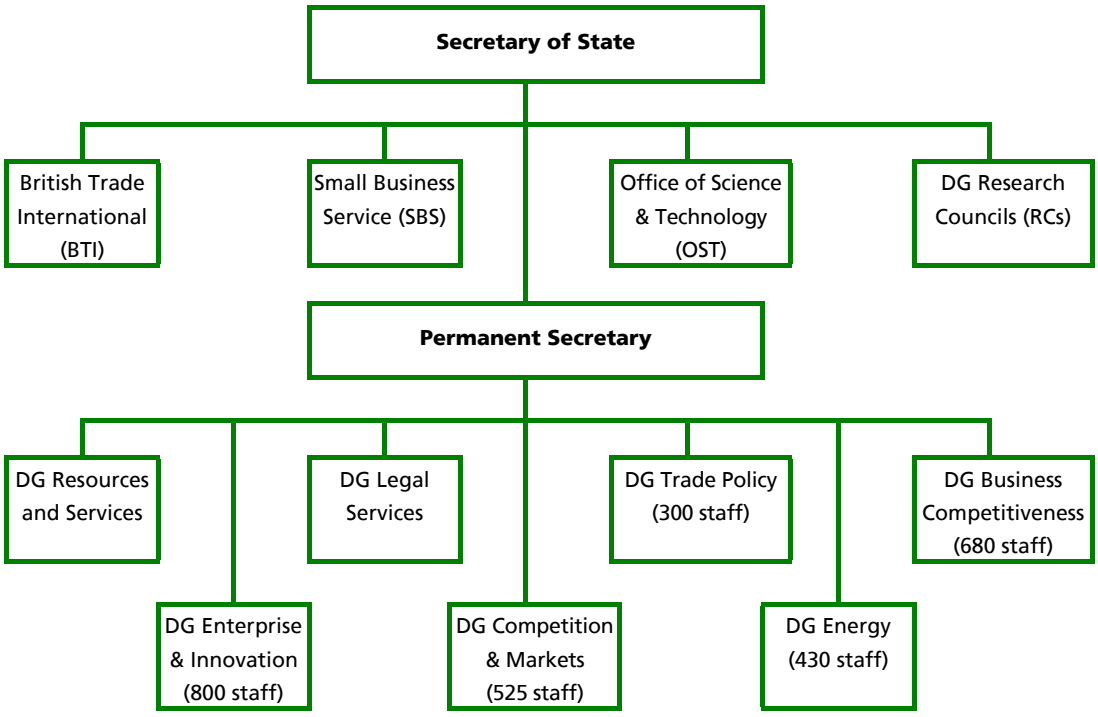
---

2 See DTI Government's Expenditure Plans , Cm 5112.

3 See Appendix 1 for details.

The Permanent Secretary is full-time head of department, with a managerial span of control extending through his seven Directors General (DGs). The last incumbent[4] had no direct responsibility for the overseas trading agency British Trade International (BTI), the Small Business Service (SBS), or the OST and Research Councils.

TABLE 1: DTI ORGANISATIONAL STRUCTURE – OFFICIAL LEVEL



Business Competitiveness includes the Radiocommunications Agency and the National Weights & Measures Laboratory. Competition & Markets includes Companies House, the Patent Office, the Insolvency Service, the Employment Tribunals Service, the Advisory Conciliation and Arbitration Service (ACAS) and the Low Pay Commission.

The Chief Executive of British Trade International reports jointly to the Secretary of State at the DTI and to the Foreign Secretary. The Chief Executive of the Small Business Service has direct access to the Prime Minister.

The head of the Office of Science & Technology is the Government Chief Scientific Adviser; his remit crosses departmental boundaries and he reports to both the Secretary of State and the Prime Minister. However, the Director General of Research Councils, who is accountable for the budgets of six Research Councils and the Central Laboratory, which make up the largest single budgetary centre in the entire DTI, administers the bulk of the OST budget.

After the June 2001 general election, a new Secretary of State and a new Permanent Secretary were appointed to the department. They have initiated a series of internal reviews, the results of which are shortly to emerge. The following paragraphs set out the DTI's core tasks and budgets as they stood at the time of the review.

[4] The Permanent Secretary retired early in 2001; a successor has been appointed.

CORE TASKS AND BUDGETS

The Trade Policy directorate employs about 300 staff. Much of the directorate's activity is now carried out in partnership with the European Union (EU). Its recent objectives have been to strengthen the European and UK competition regimes, to work towards the single market, and to pursue the UK's interest in international trade policy (covering goods, services and investment) by working through the EU and international organisations such as WTO, OECD and the Commonwealth. The DTI has an import-licensing branch which issues about 400,000 licenses annually in controlled goods. The DG is responsible for liaison with the Competition Commission, though not for competition policy.

Government Expenditure in these areas is modest. The revenue estimates call for less than £5.5 million to be spent annually on trade policy and the associated administration, and less than £11 million on the Competition Commission.

The Director General for Business Competitiveness has about 680 staff. He is responsible for liaison with the chemical, biotechnology, engineering, communication and information industries, for consumer goods businesses and for the postal services. He handles innovation policy and standards, and is responsible for the National Weights & Measures Laboratory with 55 employees, the Radiocommunications Agency with some 550 employees and the British National Space Centre, a partnership of nine government organisations. He deals with environmental matters not covered by the energy directorate, industry sponsorship support, and industry economics and statistics.

The Director General for Enterprise & Innovation has nearly 800 staff. He is responsible for regional policy, European policy, and for the securing and administration of European regional funds. He co-ordinates the government regional offices, as well as the industrial and trade functions administered by the Regional Development Agencies. The DG used to be responsible for the Invest in Britain Bureau, but its successor, Invest UK, is part of BTI.

The Director General for Competition & Markets employs 525 staff. She is responsible for company law investigations, consumer affairs, competition policy and employment relations.[5] The DG handles Companies House, the Patent Office, the Insolvency Service, the Employment Tribunals Service, ACAS and the Low Pay Commission.

The Energy directorate has 432 staff. Much of its work in recent years has been in privatising the old utilities, setting up regulators for them and taking steps to achieve greater competition and more competitive prices. The DG has also worked with the EC to achieve further liberalisation in European energy markets. She is responsible for offshore gas and petroleum licensing, and for achieving a sustainable supply within international environmental targets. The issue of a strategy for nuclear energy has been dormant, but is now re-emerging.

---

[5] Employment relations include responsibilities for conditions of employment, the working week and paid holidays. The DTI recently won a battle to retain them in the face of a claim from the Department of Work & Pensions, because of their implications for UK business competitiveness.

To supplement its in-house activities, the DTI has paid the former DETR for the establishment of "innovation clusters and business incubators" and regional centres for manufacturing excellence, as well as towards the costs of the West Midlands RDA and the Water Resources Action Programme. It has paid the Department of Culture, Media and Sport for the funding of projects in the tourist and media sectors, the Foreign and Commonwealth Office for the cost of the Chevening Scholarships, the Department for Education and Employment towards the costs of the Council for Excellence in Management and Leadership, and the Inland Revenue for its enforcement work.

In just two years, the budget for "the promotion of enterprise, innovation and increased productivity" has increased by 46%.

The total cash cost provision for the core DTI activities in the current year is £1,436 million. Of this, £983 million is earmarked for what the Expenditure Plans describe as the promotion of enterprise, innovation and increased productivity, but proves on examination to consist of a broad mix of tasks. This compares with an out-turn for the year 2000 of £672 million. In two years, government expenditure against this heading has increased by 46%.

Another £453 million is allocated to what is called the legal and regulatory framework and markets. The 2000 out-turn was £314 million. The two-year increase in costs is 44%. The non-fossil fuel obligations and liabilities in respect of nuclear and coal plant closures, total a massive £966 million. Industry-specific support is estimated at £44 million, and the contribution to the European Regional Development Fund at £235 million.[6]

TABLE 2: DTI NON-SCIENCE DEPARTMENTAL EXPENDITURE LIMIT PLANS, 2001-02

	£ millions
Promotion of enterprise, innovation and increased productivity	983
Legal and regulatory framework and markets	453
Modernising the Post Office network	75
Non-Fossil Fuel Obligation Order	92
Nuclear and Coal Liabilities	874
Measures relating to individual industries	44
Net Controlled Executive Agencies and Trading Funds	-1
ERDF	235
TOTAL	**2,755**

The expenditure on enterprise promotion shown in Table 2 includes the costs of BTI and SBS. BTI, with 710 staff, plans to spend £71 million on export promotion and £19 million on inward investment; the £90 million total compares with £72 million in 2000, an increase of 25% over two years.

[6] The government's plans for the Post Office network are discussed in *Can Consignia Deliver?* by Stuart Lyons, published by the Centre for Policy Studies in March 2001.

SBS, with 210 staff, has a budget of almost £340 million. The cost of small business support has increased by 74% over a two-year period and makes up over one-third of the entire enterprise budget of £983 million.

OBJECTIVES

The brief description of the roles of the Directors General raises many questions about government involvement in particular industrial sectors and programmes. What are the objectives which DTI officials have been seeking to achieve?

In the Government's DTI Expenditure Plans for 2001-02 to 2003-04 and the Main Estimates for 2001-02,[7] the DTI announced a change in its assumptions. It signalled its belief that, after a four-year regime of relative financial orthodoxy, industry and commerce should operate against a new backcloth. The written objectives of the DTI were changed. Traditional industry was given less prominence. The Labour government seemed to have managed a quiet withdrawal from detailed involvement in the old economy, an achievement that had been beyond its predecessor's capability.

However, the rewritten objectives, set out below, reflect the interventionist thinking that has persisted at the DTI for many years, but in a more marked degree. Economic development and national competitiveness are confused with social and environmental programmes, and outputs are expressed in terms of transactional use and value judgment, rather than of quantifiable benefit.

The new Objective 1, promoting enterprise, innovation and increased prosperity, sets out an amalgam of proposals for improved competitiveness, which beg the questions of how they have been selected and are to be implemented, and present enterprise and e-commerce as icons of a new society:

> Help build an enterprise society in which small firms of all kinds thrive and achieve their potential, with an increase in the number of people considering going into business, an improvement in the overall productivity of small firms, and more enterprise in disadvantaged communities.
>
> Make and keep the UK the best place in the world to trade electronically, as measured by the cost of Internet access and the extent of business to business and business to consumer transactions carried out over e-commerce networks.
>
> Improve the economic performance of all regions measured by the trend in growth of each region's GDP per capita.

Objective 2 looks for the improved ranking of the UK in science and engineering by international measures of quality, cost-effectiveness and relevance, and an increase in the exploitation of technological knowledge from the science and engineering base. Whether or not it achieves this end is judged by one of the weakest output measures dreamed up by a Whitehall department – a significant rise in "the proportion of innovating businesses citing such sources."

---

7 Cm 5112, published March 2001.

Objective 3 colours economic tasks with a strong shade of green:

> Have the most effective competition regime in the OECD, as measured by peer review, and achieve a fairer deal for consumers, as measured by the level of consumer knowledge and understanding of rights and sources of information.
>
> Ensure competitive gas and electricity prices in the lower half of the EU/G7 basket, while achieving security of supply and social and environmental objectives.
>
> Improve the environment and the sustainable use of natural resources, including by reducing greenhouse gas emissions by 12.5% from 1990 levels and moving towards a 20% reduction in CO 2 emissions by 2010.

Objective 4 seeks a measurable improvement in the performance of exporters assisted by BTI and the maintenance of the UK's position as the preferred European location for inward investment.

The DTI budget will have increased by 58% in just two years. The principal cause of this increase is the cost of socially-directed calls to improve employability and to promote social inclusion.

All these elements are coupled with a targeted value-for-money improvement of 2.5% per annum under the DTI Public Service Agreement for 2001-04. The result, however, has been more, not less, expensive for the taxpayer. The DEL is set to rise steeply:

TABLE 3: DEPARTMENTAL EXPENDITURE LIMITS, 1999-2000 – 2001-02

	£ millions	Year on year increase
1999-2000 outturn	£2,861	
2000-2001 provision	£3,618	+26%
2001-2002 provision	£4,521	+25%

By the end of the current financial year, the budget will have increased by 58%. A fall-off in nuclear and coal industry liabilities brings a reduction to £4,222 million in 2002-03 and £4,167 million in 2003-04. But £4,167 million is still 46% higher than the 1999-2000 outturn. The principal reason for the increase is the cost of socially-directed calls to improve employability, and to promote social inclusion and entrepreneurship.

Whether the definition and costs of these governmental objectives survive the new Secretary of State and Permanent Secretary remains to be seen.

CHAPTER THREE
THE US DEPARTMENT OF COMMERCE

In a speech to an American audience, the Chancellor of the Exchequer recently called on British enterprise to match the perceived levels of business dynamism in the US, and suggested that, under the re-elected Labour government, one citizen in ten could become an entrepreneur. Where should government involvement in commerce begin and end? Where should a responsible administration draw the line between economic pump priming and social subsidy?

In the US, the Department of Commerce has defined its mission in the language of partnership rather than intervention:

> To promote job creation, economic growth, sustainable development and improved living standards for all Americans by working in partnership with business, universities, communities and workers.

The department lists three objectives in its mission statement:

> To build for the future and promote US competitiveness in the global marketplace by strengthening and safeguarding the nation's economic infrastructure;
>
> To keep America competitive with cutting-edge science and technology and an unrivalled information base; and
>
> To provide effective management and stewardship of the nation's resources and assets to ensure sustainable economic opportunities.

These objectives are not dissimilar from those of the DTI, but there are differences in some of the underlying assumptions and vocabulary. In Britain, the DTI states not merely that the promotion of enterprise, innovation and increased productivity is an important element in increasing the nation's competitiveness, but that government should play a driving role. This is, as we shall see below, directed and measured by social as well as economic criteria. In America, the prerequisite of success is taken to be a strong economic infrastructure with an unrivalled information base. The Department of Commerce thinks about creating an environment where business can prosper, and when the executive branch introduces programmes for development and change, the Congress expects to see measurable and sustainable economic benefits.

In the US, but not in Britain, the prerequisite of success is taken to be a strong economic infrastructure with an unrivalled information base.

The DTI is more politicised than its American counterpart. Each government minister is a Member of Parliament and is accountable to parliament in the hurly-burly of question time or parliamentary debate. Officials can hide behind the protection of their political masters. In the US, the Secretary of Commerce is appointed by the President as a member of the Executive Branch and usually has no experience of serving as a national Senator or Congressman. The offices that report to the Secretary are run as executive administrations and agencies under his appointees. Although Congress requires regular reports, these are generally performance reports in which the spending of taxpayer dollars has to be justified economically, and questioning is carried out in the formal environment of a congressional committee.

The important consideration is what happens in practice. How does the US Department of Commerce operate? What are its priorities and procedures?

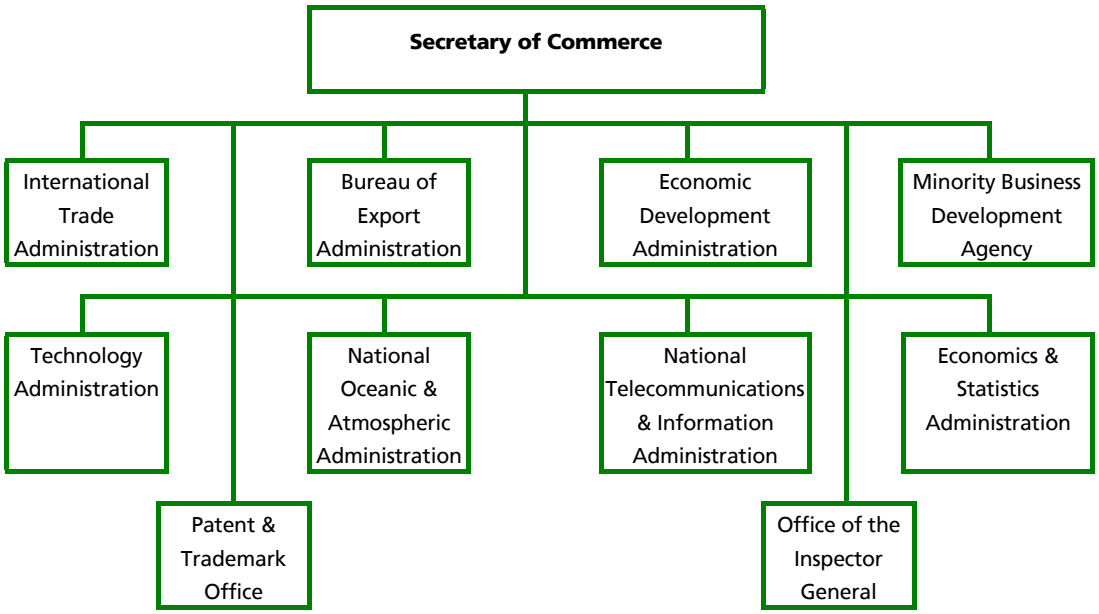
As shown in Table 4, each of the department's offices has a title, which clearly explains its function, and a function with clearly defined tasks. The aim of the executive is to perform the business task and to measure the result.

INTERNATIONAL TRADE AND EXPORTS

The role of the International Trade Administration (ITA) is to strengthen America's position in the global marketplace. It promotes the US exports of manufactures, non-agricultural commodities and services; helps formulate and implement US foreign trade and economic policies; monitors market access and overseas compliance with US international trade agreements; and works closely in these processes with US businesses and other government agencies. It has a number of specialist divisions to deal with trade and investment opportunities, trade agreements, and trade barriers, market access and compliance. The US & Foreign Commercial Service operating 100 Export Assistance Centers domestically and 142 outposts in foreign markets handle export promotion.

The Bureau of Export Administration is concerned with maintaining US controls over the exports of military, telecommunications and intellectual property through an export licence system.

TABLE 4: US DEPARTMENT OF COMMERCE



The Bureau of Economic Analysis and the Bureau of the Census sit within the Economics & Statistics Administration. The National Institute of Standards & Technology and the National Technical Information Service sit within the Technology Administration.

ECONOMIC DEVELOPMENT

The Economic Development Administration (EDA) makes grants to economically distressed communities with a view to creating sustainable economic development. Its current budget is $439 million, of which $411 million goes to fund its programmes, the rest being absorbed by salaries and expenses. Over half the programmes are for public works and development, and about one fifth are to facilitate economic adjustment, for example on the closure of military bases. The budget figures are likely to fall in 2002 to $366 and $335 million respectively, because of reductions in defence conversion. EDA has created more than 1.5 million long-term jobs since 1965.

The assessment process for an EDA grant is rigorous. Applicants, who are usually regional, county or local authorities, develop a Comprehensive Economic Development Strategy (CEDS) with the help of EDA's regional office staff, and any project proposals must be consistent with the CEDS.[8] A regional review panel, the Project Review Committee (PRC), then considers the project's potential for creating wealth, reducing poverty and sustaining the benefits over time. The PRC recommends which projects should be invited to apply for funding to EDA. EDA is particularly keen that projects should be market based with market viability.

The Government Performance Results Act requires that funds allocated by EDA be leveraged. The average grants approximates to 50% of the project cost, and research by an independent team from Rutgers and Princeton Universities has shown that, over a ten year period, every dollar of EDA funding generated $10 dollars of private sector resource.

[8] The EDA mission statement and CEDS guidelines are shown in Appendix 2.

THE MINORITY BUSINESS DEVELOPMENT AGENCY

The Minority Business Development Agency (MBDA) was established in 1969 to improve economic opportunities for native, black and Hispanic Americans, and immigrant communities. Its current budget is less than $30 million. The agency's stance has moved in recent years from what it describes as a social services model to a private sector model, in both operating procedures and funding philosophy.[9] Its aim is to help would-be entrepreneurs from minority communities to be successful stakeholders in the national economy.

MBDA has five regional offices, 17 district offices, and 70 Minority Business Development Centres (MBDCs) through which it promotes entrepreneurial development and innovation. It believes the critical success factor for those who apply for help is their potential to bring products and services to market.

MBDA operates in a similar way to a franchise business This helps it to achieve leverage from its budget. It builds a constituency among trade associations and chambers of commerce, and encourages black, Hispanic and other local minority associations to form links with the established bodies. The agency invites interested parties to make grant applications in competition with others, before choosing the most suitable. The average MBDC is given funding of $250,000-300,000 annually for a three year contract and is required to meet agreed performance targets, including visitor numbers, business plans prepared, finance plans prepared (in cooperation with local banks) and business start-ups.

There appears to be a broad bipartisan consensus among politicians and their appointees that both the EDA and MBDA should operate and be evaluated on measurable economic output criteria.

THE TECHNOLOGY ADMINISTRATION

The purpose of the Technology Administration (TA) is to promote non-military technology for commerce and to work with US industries to improve economic competitiveness. Its four goals are to:

1. develop advanced technologies with the private sector;
2. aid the rapid commercialisation and deployment of new technologies;
3. build a twenty-first century technological infrastructure; and
4. lead industrial and governmental initiatives to improve the US's technological competitiveness.

TA encompasses the National Institute of Standards & Technology (NIST), the National Technical Information Service (NTIS) and the Office of Technology Policy (OTP).

NIST aims to promote economic growth by working directly with industry to develop technology, measurements and standards, through four inter-related programmes: the Measurement and Standards Laboratories, which provide technical leadership in scientific, technical and engineering fields; the Advanced Technology Program, which provides cost-shared funding to industry for high-

[9] The Director describes the funding philosophy as moving from "Give them fish!" to "Teach them how to fish."

risk R&D projects; the Manufacturing Extension Partnership, which supports a nationwide network of centres offering technical assistance to small manufacturers; and the National Quality Program. NIST has a budget of $480 million and the cost of its support activities attracts criticism as well as support.

NTIS has become a national repository for R&D results and is self-financing. Its collection includes three million titles on 375 scientific, technical, engineering and business-related subjects.

OTP's mission is to work with industry to promote competitiveness through maximising the impact of technology on economic growth. The technology transfer regime is governed primarily by two Acts of Congress of the early 1980s,[10] which set up steps to encourage the sharing of information among federal research laboratories, universities and the private sector. There has been considerable success in technology transfer as a result of this legislation, but the authorities feel more must be done to facilitate and optimise research among the three main performers and funders of R&D. OTP has launched an Experimental Program to Stimulate Competitive Technology (EPSCoT), providing funding to support technology-based economic growth in those regions which have historically received less federal R&D funding than the majority of states. A partnership has also been established between government, researchers and the three major automotive manufacturers to develop a new generation of electrically powered vehicles. OTP believes it has important duties in:

- the co-ordination and dissemination of information to enhance competitiveness and technology led economic growth;
- the development and co-ordination of technology transfer policies;
- the development of an appropriate environment and policies for emerging technologies, such as nanotechnology;
- considering legal and regulatory issues for new technologies, such as IPR, privacy and accounting;
- understanding innovation and technology strategies and best practices internationally.

THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The National Oceanic and Atmospheric Administration (NOAA) carries out environmental assessment and prediction, and environmental stewardship, including the protection of marine resources. NOAA includes the National Weather Service, the Office of Oceanic and Atmospheric Research, the National Environmental Satellite, Data and Information Service, the National Ocean Service and the National Marine Fisheries Service. Its work is supported by a programme of research at NOAA laboratories, supported by universities throughout the country. The research work is focused on three main areas: tracking and warning of dangerous weather systems, helping to guide the nation's use and protection of ocean and coastal resources, and improving the understanding of the oceans and atmosphere that sustain life on the planet.

[10] The Stevenson-Wydler and Bayh-Dole Acts.

THE NATIONAL TELECOMMUNICATIONS & INFORMATION ADMINISTRATION

The National Telecommunications & Information Administration (NTIA) is the principal adviser on telecommunications policies affecting economic and technological advancement and telecommunications regulations. Telecommunications and information-related industries will soon account for 20% of the US economy. NTIA's aims are to provide greater access to all Americans to affordable communication services, to champion greater market access and to create new opportunities through spectrum, ultra-wideband and other technologies. It also provides specific telecommunications planning and evaluation for federal agencies and US industry. Its research effort is assisted by the Institute for Telecommunication Sciences (ITS).

THE ECONOMICS AND STATISTICS ADMINISTRATION

The Economics & Statistics Administration (ESA) exemplifies the US's preoccupation with up-to-date statistical information and other data, and the belief that these contribute to a robust economy with well-informed decision-makers in government and commerce. The department produces a stream of economic indicators through its Bureau of Economic Analysis (BEA) and the Census Bureau. For example, in a four-day period at the end of March 2001, it published details of personal income and outlays for the month of February, an advance report on durable goods manufacturer's shipments and orders for February 2001, details of new one-family houses sold in February 2001, and the Gross Domestic Product for the fourth quarter of 2000, broken down into regions, states, metropolitan areas and counties. It provides details of retail sales and international trade, and a wealth of demographic information. All of these help government and the US business community monitor progress, make appropriate decisions and set new competitive targets.[11] The information is available for sale on-line via a service known as STAT-USA.

There appear to be few complaints from the business community about the burden of submitting statistical information, much of which is now done electronically. Business generally welcomes the publication of regular, high quality statistical information, and the guarantee of confidentiality protecting its own information. It has, however, been suggested that government publishes some information at too high a frequency to be fully useful, and that the proportion of administrative resource devoted to manufacturing and agriculture is too great compared with the service sector.

The costs of the service are not low. BEA employs 425 people, while the Census Bureau has about 5,000 people in Washington and 5,000 around the country with more at the decennial census. But the department is intent on adding value through the provision, analysis and highlighting of relevant information. As the proportion of GDP swings from goods to services, work is taking place on more and better measurement of the service sector, covering its revenues, outputs, employee incomes (including bonuses and stock options), and productivity.

---

[11] At her recent congressional hearing, the Under-secretary for Economic Affairs described economic statistics as a national treasure.

THE OFFICE OF THE INSPECTOR GENERAL

The Office of the Inspector General performs an audit and performance monitoring function for the Department as a whole.[12]

THE NATIONAL SCIENCE FOUNDATION

In the US, the national science base is not supervised by the Department of Commerce or by any government department. The National Science Foundation (NSF) was established in 1950 as an independent agency of the US government, with a mission to promote the progress of science, to advance the national health, prosperity and welfare, and to secure the national defence. It has a Board of 24 part-time members and a Director, each appointed by the President with the consent of the Senate.

In practice, the NSF carries out similar tasks to the UK Research Councils.[13] Its directorates are for Biological Sciences, Computer and Information Science and Engineering, Education and Human Resources, Engineering, Geosciences, Mathematical and Physical Sciences, and Social, Behavioural and Economic Sciences. It invests over $3.3 billion annually in almost 20,000 research and education projects in science and engineering. It is also responsible for tracking total federal expenditure on research and research facilities. Currently, about $26 billion is spent on R&D at US academic institutions, of which about $16 billion comes from the federal government, and the remainder from state governments, charitable foundations and industry.

TRANSATLANTIC COMPARISONS

The British DTI and the American Department of Commerce operate in different environments. The US is a large country, where responsibility for many aspects of economic development rests with individual states. The UK now shares trade and tariff matters, and various technology programmes, with its EU partners. Delegation to the English Regional Development Agencies is still in its infancy and remains contentious. Comparisons between the US and UK must be made with caution.

The impression is that the organisation and functions of the US Department of Commerce are more transparent and workmanlike than those of the DTI. There is less confusion as to their purpose.

The impression, however, is that the organisation and functions of the offices of the Department of Commerce are more transparent and workmanlike, and that there is less confusion as to their purpose. It operates through agencies and bureaux with task-oriented remits. For example, the EDA has an economic, not a social mission, though social benefits arise from well conceived and executed projects. Through the MBDA, government has not only ring-fenced business development in minority communities from other business-related objectives, but made clear that MBDA's role is economic, too. In the UK, on the other

12 The present paper does not review the US Patent and Trade Office.

13 The NSF's powers allow it to engage in the range of activities listed in Appendix 3.

hand, political tradition, Labour party policy and the European social charter, have produced a result where the social agenda is more pervasive and more likely to distort economic programmes.

In the UK, Labour Party policy and the European social charter have produced a result where the social agenda is more pervasive and more likely to distort economic programmes.

The UK directorates of Business Competitiveness, Enterprise & Innovation and Competition & Markets look fuzzy by comparison with the Department of Commerce bureaux. As an American might say, what is the bottom line? The British names denote concepts rather than tasks. Why does the Radiocommunications Agency fall within Business Competitiveness, and ACAS and the Employment Tribunals Service within Competition & Markets? Where does wordplay end and reality begin?

The British have a reputation for not exploiting technological know-how as effectively as our major industrial competitors.

One might argue that these points are not fundamental, and that the allocation of particular names and portfolios is purely stylistic. There are, however, fundamental matters to be considered. The two US Development Agencies, EDA and MBDA, successfully leverage private sector and local organisations, and generate community buy-in and investment for their programmes. The US's Technology Administration is tasked with commercialising technological knowledge for the benefit of business, but the OST's main spend is on research grants for university students. The financing of research is important and necessary, but the British have a reputation for not exploiting technological know-how as effectively as our major industrial competitors.

Many reasons have been put forward for this failure. They include economic factors, such as the size of the UK market; the academic status given to the arts and sciences, as opposed to engineering and industrial design; and the inbuilt biases of the British governmental classes, both elected and official, who can be more comfortable as strategic administrators than as performance-accountable drivers of programmes. The DTI is not responsible for the cultural baggage of centuries nor for the failings of individual British businesses. Nevertheless, it has a propensity to lean on distinguished chairmen, rather than effective chief executives, in pursuing its objectives.

The National Science Foundation operates with more clarity, independence and authority than the British amalgam of DTI, OST and Research Councils.[14] The Economics & Statistics Administration provides a breadth and quality of service to government and business, which makes the DTI's efforts seem amateurish.

---

[14] Japan is not a successful model and is still in transition from its post-war system. See Appendix 5.

Perhaps, too, the name of the Department of Trade & Industry has inappropriate resonances. One recent Secretary of State[15] tried to remedy this by grafting on the title "The Department for Enterprise". Another reintroduced the title of President of the Board of Trade.[16] In each case, the resultant dual-branding gave a confused sense of purpose and did not survive. Nevertheless, the concerns, if not the proposed solutions, were well placed. The Department of Trade & Industry reflects an era that is past. The name projects the wrong signals both to users, staff and the outside world. The fact that the DTI brand is well-known and has survived for some decades is not a sufficient argument for its retention. More important is the objective of changing perceptions and culture to meet the needs of the twenty-first century. The Department of Commerce would be a more accurate description of the task in hand.

15 Lord Young.

16 Michael Heseltine.

CHAPTER FOUR
EUROPEAN INFLUENCES

The Council of Ministers held in Lisbon in March 2000 set a:

> …new strategic goal for the European Union to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion.

It urged member states to implement new employment guidelines, together with two other priorities, the modernisation of social protection and the promotion of social inclusion.

The employment guidelines contained a series of recommendations, some practical and necessary, others raising as many questions as they asked. These were presented as four "pillars" of the social fabric:

1. improving employability;
2. developing entrepreneurship and job creation;
3. encouraging adaptability of businesses and their employees;
4. strengthening equal opportunities policies for men and women.

Proposals were put forward for tackling youth unemployment and preventing long-term unemployment. The guidelines demanded that:

> Benefit, tax and training systems must be reviewed and adapted to ensure that they actively support the employability of unemployed persons.

A subsidiary agenda was also revealed: member states should reduce and simplify the administrative and tax burdens on SMEs and thereby eliminate undeclared work.

The guidelines called for an attack on discrimination, the promotion of social inclusion by access to the labour market, and the development of new businesses to create jobs and train young people:

> This process must be promoted by encouraging greater entrepreneurial awareness across society and in educational curricula, by providing a clear, stable and predictable set of rules and regulations by improving the conditions for the development of, and access to, risk capital markets.

Member States, it continued, will encourage the taking up of entrepreneurial activities:

- by examining, with the aim of reducing, any obstacles which may exist, especially those within tax and social security regimes, to moving to self-employment and the setting up of small businesses;
- by promoting education for entrepreneurship and self-employment, targeted support services as well as training for entrepreneurs and would be entrepreneurs;
- by combating undeclared work and encouraging the transformation of such work into regular employment, making use of all relevant means of action including regulatory measures, incentives and tax and benefit reform …

> Innovative enterprises must find a supportive environment because they can make an essential contribution in mobilising the job creation potential of the knowledge-based society… All actors at the regional and local levels … must be mobilised to implement the European Employment Strategy.

The guidelines document continued:

> Member States will:
>
> - take into account, where appropriate, in their overall employment policy the regional development dimension
> - encourage local and regional authorities to develop strategies for employment …
> - promote measures to enhance the competitive development and job creation capacity of the social economy, especially the provision of goods and services linked to needs not yet satisfied by the market…
> - strengthen the role of the Public Employment Services at all levels in identifying local employment opportunities and improving the functioning of local labour markets.

There are problems of language which are highlighted in translation. Nuances differ from culture to culture with the EC. “Social” and “entrepreneur” do not mean the same to the Latin as to the Anglo-Saxon ear. To the French and Italians “social” does not necessarily imply “socialistic” and “entrepreneur” does not imply “entrepreneurial”. Both terms are often neutral: “social” may mean no more than “pertaining to society” and an “entrepreneur” no more than one who manages a firm or undertaking. In the UK, “entrepreneurship” has creative overtones, which (as distinct from business studies) cannot easily be taught. The results of such creative development over the generations can be seen throughout Britain, from the businesses of shopkeepers, artisans and tradesmen to the higher reaches of the City of London.

The European guidelines are an unreflective mix of self-important bureaucracy, state paternalism and interventionist socialism.

The European employment guidelines, taken as a whole, are an unreflective mix of self-important bureaucracy, state paternalism and interventionist socialism. While the strategy calls for a competitive and sustainably growing economy to provide jobs and social cohesion, the agenda is for social and employment programmes at high cost and without clearly measurable outputs. In addition, the objectives include economic centralisation and the tightening of the European tax net. Even if the word “social” is used neutrally, it implies the social services model, rather than the economic model favoured by the US Department of Commerce. There is no mention of the role of the private sector and private institutions, other than vague references to partners and actors. Government is pilot, navigator and controller, and the crew consists of public authorities and agencies. Entrepreneurship is a flag carried by a state-owned airline.

It is often suggested that certain Member States sign up to the rhetoric of such strategies for reasons of sentiment and to please their domestic constituencies. Whether or not this is true, it is unnecessary to argue here. The UK, however, has a tradition of obedience to such undertakings. It is regrettable that the government not only signed up to the Lisbon guidelines, but delegated much of their implementation to a new agency, the Small Business Service.

CHAPTER FIVE
THE SMALL BUSINESS SERVICE

The Small Business Service was established by the government in April 2000 to "provide a single organisation in Government dedicated to helping small firms and representing them within Government." Its mission, clearly influenced by the Lisbon guidelines, was to:

> …build an enterprise society in which small firms of all kinds thrive and achieve their potential.

Four subsidiary objectives were listed, to:

1. help all small businesses realise their potential;
2. provide world class business support services to enhance the performance of small businesses with growth potential;
3. promote enterprise across society and particularly in under-represented and disadvantaged groups;
4. achieve the highest standards of service delivery and provide value for money.

The money in question consists of about £340 million annually, a considerable sum compared with other DTI industry budgets. Removing an important task from the central bureaucracy and transferring it to an executive agency is appealing, the confusion of commercial and social objectives less so. How effective is the SBS's use of taxpayers' funds?

The regional network of SBS is based on 45 Business Link (BL) branches. These had been intended to provide a one-stop information and consultancy service for small business across England and mushroomed to 81 branches before the chain

was cut back. Behind the rhetoric of BL's April 2000 re-launch as part of SBS, was an awareness by government and business that the network had not delivered to expectations. A government minister boasted that BL had helped more than 300,000 small businesses to "boost their profits, increase productivity and stay competitive." The claim was not supported by accompanying evidence.

Only 3.6% of firms employing between one and nine people were helped by Business Link. The firms it was meant to help have not been helped.

BL has not been a success when measured by results. The Inter-Departmental Business Register for 1999 estimated there were 2.3 million sole traders or partnerships. Of these, in the period October to December 2000, Business Link assisted just over 6,000 or 0.3%. Of the 1.2 million firms employing between one and nine people, fewer than 42,000 or 3.6% were helped by BL between October and December 2000. Of the 156,000 firms employing 10-49 people, fewer than 28,000 or 18.5% are reported to have received assistance or advice. Medium-sized firms did better. 51% of the 24,000 firms employing 50-249 people, and 55% of the 6,700 firms employing more than 250 people received help.[17]

In short, the firms BL was meant to help have not been helped. The firms, which BL was not set up to help, have received some service. The precise nature and cost of the service has not, however, been published.

This disappointing outcome brought a reassessment by government. Borrowing the language of brand management, the SBS intends to improve BL's "market penetration." The authorities have come up with a measure called "successful high-growth business start-up". This is defined as having, four years after start-up, at least ten employees and annual sales of £1 million. Government records show that 12,300 firms, which commenced trading in 1994, met these criteria in 1998. The SBS target is 20,000 successful start-ups by 2005.

To achieve this, funding is to be provided for applicants who can satisfy the government's review processes. In some cases the business plans will have to show commercial benefits, in others the benefits are to be social, and, in a third category, small businesses will conform with government views on best practice and new technology.

The DTI view seems to be that the financial marketplace is incapable or unwilling to act as an efficient source of venture capital or to deliver the social agenda. These assumptions need to be unravelled. Firstly, what is the nature of the venture capital gap? What is the evidence that aspiring entrepreneurs, armed with sensible business plans for products or services with marketplace potential, fail to obtain capital from financial institutions or business angels? If there is such a gap, to what extent can it be filled by encouraging the financial services sector to develop new approaches,[18] and by bringing together entrepreneurs with business angel networks?

---

17 Although the period for this survey was only three months, the DTI has confirmed that the results were representative and similar to the average for the financial year 1999-2000.

18 For example by making available mezzanine finance.

Second, if the problem lies in the poor quality of business propositions, how can training be improved, using the business expertise of the community rather than the state? Third, if the desired output is social rather than economic, how can there be complaint that financial investors are not attracted? It is widely accepted that financial investments made from charitable motives can backfire on both investor and beneficiary.

In direct contrast to the more successful US example, the DTI has decided that private-sector business support groups should not play a leading role in small business development.

The DTI has apparently decided, in direct contrast with the American MBDA, that private-sector business support groups, such as the Federation of Small Businesses, the Forum of Private Business, the Association of British Chambers of Commerce, the Institute of Directors and the Confederation of British Industry, as well as numerous specialist employer federations and trade associations, should not play a leading role in small business development.

SBS has embarked on a host of activities. Some are admirable, some inappropriate, some wasteful, and some duplicating what is already there. SBS provides "tailored business advice" to farmers through the Business Link network at a cost to the government of £21 million. The Ethnic Minority Business Forum advises the DTI and SBS on procurement, access to finance, business support, e-commerce and regeneration. Enterprise Insight, launched by the Prime Minister in May 2000 and costing £150,000, has recruited three hundred Business Ambassadors to "promote entrepreneurship among young people." The *Global Entrepreneurship Monitor* has compared entrepreneurship in 21 countries and asked UK respondents about their attitudes to "entrepreneurship and consideration of starting a business as a career option." SBS has published summary guides on employing staff and setting up in business. With the Cabinet Office, it is promoting the adoption of the *Enforcement Concordat*, which "sets out good practice, principles and procedures for the consistent enforcement of regulations." Initiatives under the evocative titles of Business Buddies, Challenge, Enterprise, Forum, Insight, Link, Phoenix, Smart and Step, contribute to a blurring of the mission, objectives and responsibilities of government in overseeing the business economy.

SBS is actively assisting the tax authorities, helping the Inland Revenue and Customs & Excise in their policing and assisting the Employment Service to "target businesses that are growing quickly." It has published an *Enterprise Guide* "to help teachers to teach enterprise and entrepreneurial skills within existing subjects and across the wider school curriculum." It is "working to raise the importance of Basic Skills issues in the SME workplace through the Business Link National Information and Advice Service." SBS has funded a "liaison point" to enable small businesses to learn about EU developments in Brussels and to represent their voices to policy-makers there.

THE PHOENIX FUND

Social inclusion is high on the list of SBS priorities. A £100 million Phoenix Fund was set up in November 1999 to "encourage entrepreneurship in disadvantaged areas and groups under-represented in business ownership." In the first round of grants, announced in March 2001, £15 million was spread across 50 successful applicants. Three awards give the flavour of the scheme. In the North Derbyshire coalfield area, ex-miners, women and young people will be encouraged to use IT, mentoring and business "twinning" in setting up their own businesses, and pupils will be encouraged to create businesses in schools. In The Mount Prison in Hertfordshire, funding will be used to track ex-offenders who take part in pilot enterprise programmes. In a deprived area of Hastings, a business incubator centre will bring together "lone parents, refugees, the long-term unemployed, those with mental health problems and homeless people."

A further £10 million of the Phoenix Fund has been allocated to a Challenge Fund with loan guarantees to help resource local Community Finance Initiatives. An Enterprise Fund has been set up, expected to be worth over £300 million by 2004. Here, the remit is to:

- deliver and develop the Small Firms Loan Guarantee Scheme;
- establish regional venture capital funds throughout England to provide small-scale equity for growth SMEs;
- establish a national "Fund of Funds" investing in existing venture capital funds for early stage high-technology firms in the UK.

In these activities, there is a useful comparison to be made with the US Small Business Administration (SBA). Independent from the Department of Commerce, the SBA's role is to help small businesses gain access to capital and credit markets. It also provides leads for exports and government contracts.[19]

SBS is providing £700,000 over three years as "pump-priming" for the National Business Angels Network and the Business Angels Network Association. While the encouragement of these networks is sound, the cost is surprisingly high.

SBS will cost nearly £340 million this year, more than double the comparable cost of three years ago. Of this, the local network will cost over £140 million and the Enterprise Fund £120 million. Websites, marketing and back office support, will cost less than £40 million. In the world of the internet, when information can be accessed centrally at low cost, it is hard to justify the high level of regional expenditure.

Enterprise is not built by politicians or planners. It is neither a structure nor an infrastructure. Enterprise can, however, be facilitated by governments which help create the appropriate conditions for small businesses to flourish. Trying to "create an enterprise culture" is another matter. To define this as an objective of government policy implies that there is no such existing culture and that it is government's job to impose one.

---

[19] A brief account of the US Small Business Administration is given in Appendix 4.

The Small Business Service initiative has the merit of removing small business support from the central bureaucracy, and the potential to help develop greater dynamism and flexibility in the sector. But the service has an over-ambitious agenda, a flawed philosophy and an excessive cost.

CHAPTER SIX
BRITISH TRADE INTERNATIONAL

The export promotion activities of the DTI and the Foreign & Commonwealth Office (FCO) were brought together by the last Conservative administration into a jointly managed unit called Overseas Trade Services (OTS). British Trade International (BTI) was set up in May 1999 as a continuation of this rationalisation process after a Cabinet Office review of five possible operating models for export promotion, including one transferring it entirely to the FCO. The conclusion was that export promotion and overseas trade services should be linked within a single agency. Trade policy remained within the DTI, but the DTI Export Promotion division ceased to exist and its functions were transferred to the newly created BTI. BTI operates under a chief executive (a former Ambassador to Tokyo), who reports to a non-executive board and to the Secretaries of State at DTI and FCO.

BTI has two service delivery arms, export promotion and inward investment. The former is now called Trade Partners UK (TPUK) and its task is to develop a "seamless link" between the smallest business units in the UK regions and the UK's overseas markets. It supports about 7,000 overseas trade fairs, 3,500 outward missions and 400 overseas seminars annually, with ambitious plans for further growth. The latter, the former Invest in Britain Bureau (IBB), is now called Invest UK (INUK) and its regional delivery network (the former Regional Development Organisations), has been absorbed by the Labour government's new Regional Development Agencies (RDAs).

Prior to these changes, regional aspects of export promotion were managed by government offices in the eight English regions. There were similar arrangements for Scotland, Wales and Northern Ireland. The regional offices maintained contact with businesses, large and small, and with industry lead bodies representing industrial sectors or geographic areas. A lead body might be a regional branch of the Confederation of British Industry, a local Chamber of Commerce, a trade association or an employer federation.

After the creation of the Small Business Service, a decision was made that the Business Links should be the upstream element of BTI's "seamless link". BTI now employs nearly 200 export counsellors based on the BLs. It seemed practical that BTI should use an organisation that was already in existence, and ministers preferred to use a government-owned network rather than make use of the private sector.

Partly as a consequence, BTI's greatest attraction has been to the smallest exporters. In the last recorded survey, 40% of the users of its trade promotion services had 19 or fewer employees, and 91% had fewer than 500 employees. Naturally, small companies without export sales and marketing departments make greater use of BTI services than organisations with in-house resources and experience. Nevertheless, the balance of use suggests that BTI's efforts are being skewed towards small enterprises at the expense of other businesses.

BTI's pattern of expenditure on trade development bears out this picture. Focused help for markets and sectors with "considered potential" accounts for 15% of the total; the provision of information absorbs 17.5%; helping established exporters to exploit opportunities, 22.5%; and "to help new, inexperienced and occasional exporters develop their potential export capability and as a result their competitiveness" accounts for 45%. As yet, the BTI has not worked out what this means in terms of measurable outputs.[20]

The agency argues that its responses are market-specific. Larger companies, it points out, are less likely to need government support and, if they do, usually contact London for assistance. BTI claims to provide young exporting businesses with high quality support which would not be easily or economically available through the private sector.

BTI harnesses the internet to provide information to businesses of all sizes. Its website has over 4,000 pages of information and attracts 60,000 visitors per month with 330,000 page viewings. The Treasury three year Spending Review announced a grant of £20 million over three years for BTI to modernise its IT and communications systems.

[20] The term "competitiveness" is often used in a loose sense in BTI budget bids, in order to justify submissions for financial resource.

INVEST UK

The Invest in Britain Bureau (IBB) became a recognised success under the last Conservative governments, making Britain the European manufacturing location of choice. Some 40% of Japanese companies seeking to put down European roots chose the UK. Nineteen of the world's twenty leading automotive manufacturers invested in Britain, and jobs were created along the supply chain.

IBB's replacement, INUK, has just had a record year, with over 750 inward investment decisions expected to create more than 52,000 new jobs. Britain is now an established location for direct investments in Europe, so the profile of enquiries has changed. More than one-third of the new investment projects have been from companies with an existing presence in the UK, the result of an "aftercare" programme launched by the previous Conservative administration. In its next phase, INUK intends to give fresh focus to attracting knowledge-based industries.

The IBB's regional support used to be provided by the Regional Development Organisations (RDOs), where executive teams worked under the guidance of boards drawn from industry and local government. This work has been transferred to bodies with a similar name but different role. The Regional Development Agencies (RDAs) were intended by Labour, in its first term of office, to be forerunners of regional government and have wide responsibilities in regional economic planning and strategy. For well-publicised reasons, the previous Conservative opposition was committed to abolishing them.

CHAPTER SEVEN
INFORMATION, AUDIT AND THE PRODUCTIVITY GAP

Both the Small Business Service and British Trade International provide a good supply of information on their websites. Electronically supplied information has important advantages over the traditional methods of dissemination through a consultant or printed material. It can be updated at will, is easily corrected and can present not only accurate information, but desired interpretation and responses, too.

The DTI directorates, by contrast, still operate under earlier government directives. Over the years, the amount of information produced for trade and industry has been cut back. This shortcoming is part of a wider picture, caused by a literal application of the Rayner recommendations.[21] Thus, for example, successive governments have been concerned about a perceived productivity gap between the UK and its principal overseas competitors, such as the US, Germany and Japan, but have not had adequate means of measurement. The gathering of import and export volumes by product category has been discontinued in several manufacturing sectors. Production is not benchmarked against effective demand. Output ratios are distorted by the use of inconsistent comparators, for example, in respect of the true capital employed.

---

[21] The then chairman of Marks & Spencer, Lord Rayner, was appointed by Mrs Thatcher to review the government statistical services and was identified with a doctrine that if statistics were not required directly by government, government should not pay for their provision.

Nor is industrial and trading information integrated with information on incomes, spending and housing, or other economic indicators. For example, the Office of Manpower Economics, funded by the DTI, carries out a continuous survey of pay settlements at an annual cost of £3 million, but its purpose is to assist the Pay Review Bodies. The DTI's efforts are fragmented and the work is not seen as part of a whole.

Both Labour and Conservative administrations have failed to understand that the availability of accurate and timely statistical information is a necessary condition for international competitiveness.

The remodelling of the Office for National Statistics represents the beginning of an attempt by government to co-ordinate an effective national service, but much more needs to be done. Both Labour and Conservative administrations have failed to understand fully that the provision to the business community of accurate and timely statistical information is a necessary condition for international competitiveness.

Furthermore, the type of productivity to be measured in the twenty-first century is different from that of the post-war industrial period. Manufacturing industry accounts for only 20% of GDP in the US, and other western economies are following the downward trend. The service sector is now a key area to be addressed. The US is placing increasing emphasis on measuring the corporate and individual outputs and incomes from its service industries. The Department of Commerce views statistical information as a vital part of economic infrastructure and has shown much greater vigour in providing it, with obvious commercial benefits. The Economics and Statistics Administration produces a regular flow of information, which the business community uses to inform its strategies and decisions.

The measurement of costs and outputs is necessary inside as well as outside government. In the US, the Office of the Inspector General carries out a constant audit and performance monitoring function for the Department of Commerce. Audit is an area where DTI is weak.

In the UK, unlike the US, government agencies do not apply directly to a parliament for their finances, and are not called to account for their results. As more operations are devolved to agencies such as SBS and BTI, there is a risk that control and reporting procedures will become less effective. But auditing is not just required for external agencies. Internal programmes also have to be scrutinised for their effectiveness. The new leadership at the DTI is reported to be carrying our a thoroughgoing review of the existing range of programmes and it is likely that this will result in the elimination of some waste. Nevertheless, periodic reviews of this sort should be against the background of persistent and regular reviews, which are part of the process of effective governance. Internal audit and performance monitoring must be more effectively integrated within the DTI's processes.

CHAPTER EIGHT
THE OFFICE OF SCIENCE & TECHNOLOGY

The Office of Science & Technology accounts for annual expenditure of almost £1.8 billion, 39% of the total DTI budget shown in Table 5. Leaving aside the DTI's liabilities for closed nuclear plants and coalmines, and the non-fossil fuel obligation order, the Science Budget accounts for virtually half the departmental expenditure. But any idea that the Office brings a vast array of scientific and technological know-how to the heart of industry is misplaced.

Any idea that the DTI brings a vast array of scientific and technological know-how is misplaced.

TABLE 5: DTI SCIENCE AND NON-SCIENCE DEPARTMENTAL EXPENDITURE LIMIT PLANS, 2001-02

	£ millions
Promotion of enterprise, innovation and increased productivity	983
Legal and regulatory framework and markets	453
Other industrial and trade	118
Science	1,766
Nuclear, Coal and Non-Fossil Liabilities	966
ERDF	235
TOTAL	**4,521**

The Science Budget is used to support the research base in UK universities and research centres. It has only the loosest of connections with the DTI's Innovation Budget, now discontinued, or other expenditure within the DEL.

The Director General of Research Councils, as noted earlier, does not report to the Permanent Secretary. With a staff of 128, he administers most of the funds directed to the UK's six science-based Research Councils, which they pass on for research funding and postgraduate training. The system works as follows.

On the DG's advice, the OST passes almost 90% of its funds[22] to the Council for the Central Laboratory of the Research Councils (CCLRC) and six Research Councils (RCs),[23] namely the:

- Biotechnology & Biological Sciences Research Council (BBSRC);
- Economic & Social Research Council (ESRC);
- Engineering & Physical Sciences Research Council (EPSRC);
- Medical Research Council (MRC);
- Natural Environment Research Council (NERC); and,
- Particle Physics & Astronomy Research Council (PPARC).

The RCs' purpose, set out in their respective mission statements, is not to provide technology transfer or other direct benefits to industry, but to:

- promote and support high quality research and postgraduate training;
- advance knowledge and technology, and provide trained scientists and researchers to continue to make such advances;
- broaden the public's knowledge and understanding of science.

This year, the OST will award grants of nearly £1.5 billion to the RCs. These are summarised gross in Table 6, prior to adjustment for intra-group turnover.

TABLE 6: OST PLANNED GRANTS TO RESEARCH COUNCILS, 2001-02

	£ millions
BBSRC	216.2
ESRC	73.6
EPSRC	441.0
MRC	347.8
NERC	187.9
PPARC	206.9
CCLRC	4.3
TOTAL	**1,477.7**

The Research Councils then make onward grants through an elaborate series of committees and advisory groups to UK universities, as part of the "dual funding" system for research in institutions of higher education.

---

[22] Outside these grants, the largest item in the OST budget is a three-year provision of £125 million annually for the Joint Infrastructure Fund (JIF) to improve research facilities. JIF is supported by other government departments and the Wellcome Trust. By March 2001 over £600 million of awards had been made in support of 110 projects at 39 universities. The OST also supports the Royal Society and the Royal Academy of Engineering.

[23] A summary of the work of the Research Councils is provided in Appendix 6.

DUAL FUNDING

The main provider of finance for the university sector is the Higher Education Funding Council for England (HEFCE). During the current year 2000-01, HEFCE will distribute about £4.4 billion against £4.2 billion in 1999-2000. This will consist of £3,022 million for teaching, £867 million for research, £333 million for special funding, £150 million for capital funding and a £10 million flexibility margin. Grants will go to 356 institutions of further and higher education, including 76 universities.

All but £20 million of the current year's funds will be distributed according to ratings in the periodic Research Assessment Exercise, which awards marks on a seven-point scale. Their purpose is to underpin the research infrastructure in universities and colleges. They are allocated selectively to institutions in the form of block grants, based on the amount and supposed quality of research carried out in the assessment period. These funds cover non-scientific as well as scientific research.

Mechanisms are also in place for the funding of research teaching and infrastructure in Scotland, Wales and Northern Ireland through the appropriate bodies. While HEFCE and parallel bodies fund the teaching and infrastructure, the Research Councils assess the individual projects which, if approved, then receive grants for scientific research and postgraduate training. In 1996-97, the Research Councils provided 5% of the finance for English universities and colleges.

RESEARCH COUNCILS AND INDUSTRY

The UK is widely regarded as a world leader in scientific research. The quality of work produced by the UK science establishment is high and, when judged by the number of academic papers published and cited, the output is second only to the US. In all of the six RCs, expert committees review research proposals, allocate grants and debate future priorities. Some universities, particularly Cambridge, receive high allocations, but there is no evidence of a lack of rigour or of vested interests holding sway.

The RCs support a wide spread of research projects. Some projects, such as the work on the human genome, produce evident benefits as they develop. Generally, however, the nature of research makes it impossible to predict where and when an outstanding result will cause a step-change in human knowledge. The science community is right to demand a long-term perspective and a high degree of autonomy in project funding, regarding these conditions as essential if a high-quality science base is to be maintained. To make, say, the Department of Health or the National Health Service responsible for sponsoring the Medical Research Council, would risk short-termism both in the construction of budgets and the demand for outputs, as well as working against the cross-links between the MRC, BBSRC and others.

The DTI's relatively light hand in controlling their detailed expenditure is of some benefit to the Research Councils. It raises two questions, however. What value does the DTI add to the UK research effort, and what value do the OST and the Research Councils create for a department of trade and industry?

To be a budget-holder and to sponsor research are not the same as to add value. Evidently, the DTI adds little value to the RCs, and such value as it adds is arguably no greater than that of other government departments which sponsor research from time to time. What the DTI adds is a lengthened line of communication, a confusion of authority and a lack of clarity. The American National Science Foundation is clearly accountable to Congress for its budget, but in enjoying greater autonomy, accepts greater responsibility.

With regard to the second question, one might naturally look first to the Engineering and Physical Sciences Research Council in asking what value the RCs added to a department for trade and industry. In 1999-2000, EPSRC received an OST grant of £404 million.[24] Of this, 69% was distributed as research grants and 20% for postgraduate training and fellowship awards. The chairman's statement gives no evidence of any industrial perspective:

> EPSRC has continued to place emphasis on strengthening the science and engineering research that underpins advances in other areas, ensuring that fundamental research undertaken is of world class quality, and that researchers continue to move into new and ground-breaking areas.

In the EPSRC report there is the correct observation that the flow of trained researchers out of academia into the broader work force is critical, if the UK is to respond to future technological change. The report continues:

> Technology transfer is encouraged through a number of mechanisms – most notably the Government's LINK and Teaching Company schemes, the Innovative Manufacturing Initiative, and Faraday Partnerships.

Some £130 million of funding from industry, it claims, is "aligned" each year with EPSRC funding through schemes such as LINK.

LINK is the government's chief mechanism for supporting research partnerships between industry and academia. Currently there are 68 LINK programmes and the total of publicly funded expenditure on them in 1999-2000 was £37 million. The LINK projects announced by the government in 2000-01 give some flavour of this programme:

- Applied Genomics (£15 million), funded by DTI and BBSRC;
- Optical Systems (£11 million), to support collaboration on systems-led projects, funded by DTI and EPSRC;
- Sustainable Livestock Production – extension (£4 million), funded by MAFF;
- Horticulture (£6 million), funded by MAFF and NERC;
- Sustainable Technologies (£10 million), environmental impact reduction project, funded by DTI;
- Mobile Phones and Health (£3.5 million), funded by DH, MRC and others;
- Marine Construction (£2.8 million), funded by DTI.

How does the DTI approach its responsibilities for innovation and technology transfer in the broadest sense, and what resource does it apply?

---

[24] The figure of £441 million in Table 6 refers to the plans for 2001-02.

CHAPTER NINE
INNOVATION & THE EXPLOITATION & APPLICATION OF SCIENCE

The DTI's policies, priorities and budgets for innovation and the exploitation and application of science in industry are set out in the Government's Expenditure Plans.[25] If one looks for a sense of strategy and purpose, there is some disappointment. It is tempting to let it pass as a summary document, containing journalistic headlines and abbreviated financial tables, and to expect that fuller information may be available within the department. But this is meant to be a serious document, presented to the House of Commons so that spending plans of £4 billion each year for the next three years can be considered.

If one looks for sense of strategy and purpose, there is some disappointment.

The description of the DTI technology spend is accompanied by reasonable statements of principles. Innovation is defined as "the successful exploitation of new ideas." Where the exploitation and application of science are concerned, government should be:

- an intelligent investor in basic scientific and technological research;
- a facilitator of the exploitation of knowledge and new technologies; and,
- a regulator of science and innovation.

[25] Cm 5112: Chapter 4, *Innovation*; Chapter 7, *The Exploitation and Application of Science.*

The US's Technology Administration has a similar approach. The differences lie in the detailed applications of the principles and are illustrated by the DTI's choice of innovation highlights for the past year:

- Launch of the largest ever LINK programme – £15 million for applied genomics;
- Nissan's £440 million investment in Sunderland safeguarding 4,000 jobs;
- Investment of up to £250 million in Rolls-Royce aero-engines sustaining 7,000 jobs;
- Publication of a White Paper with an active industrial policy for skills, technology and regional growth;
- Investment of £3 million to promote British creativity and innovation using Millennium products.

Safeguarding jobs and investing in the automotive sector is not the same as an innovation policy.

Safeguarding jobs and investment in the automotive sector, whatever the merits, is not the same as an innovation policy. A skills education or regional policy is not the same as an active industrial policy for technology. The DTI support of Millennium Products ill accords with DTI's policy that the benefits from its funding should be sustainable over time.

The innovation priorities for the three-year period 2001-04 are also a mixed assortment of headlines, some of them without internal logic or justification:

- a £25 million programme on basic technologies to help business commercialise "key new capabilities";
- a £25 million Harnessing Genomics programme, for industry to apply research findings to new products;
- a Manufacturing Advisory Service in partnership with Regional Development Agencies;
- the inward secondment of foreign technologists, to encourage best business practice;
- a Community Patent, presumably to create a common EC standard;
- becoming a leading player in "green" markets, supported by a Waste and Resources Action Programme and a new solar photovoltaic demonstration programme.

The DTI has agreed to invest £25 million over three years to complement the Research Councils' work on sensor instrumentation. Under the heading of Innovation Expenditure, it promotes communications technology, biotechnology and aerospace, and supports the struggling textiles and shipping industries. The allocation of funds is set out as in Table 7, and the unwary reader may suppose that £316 million is a ring-fenced innovation budget.

TABLE 7: DTI INNOVATION EXPENDITURE, 2001-02

	£ millions
Industrial Exploitation of Science	58.3
Support for Competitiveness	87.3
Space	90.0
Technical & Design Infrastructure	76.4
Expert Advice etc.	3.8
TOTAL	**315.8**

The Innovation Budget has been abolished. The Government's figures are merely a conflation of programmes from other sources.

On examination, however, the budget appears not to be a budget. A footnote in the expenditure plans reveals that the figures are a conflation of plans from other sources. They include programmes from SBS and the e-commerce budget. The Space budget seems to include support for CERN which has been covered by PPARC. It is questionable whether a co-ordinated budget for innovation exists in the commonly understood sense. Indeed, a table on the exploitation and application of science, reproduced as Table 8, informs the reader that the Innovation Budget has been abolished.

TABLE 8: EXPENDITURE ON THE EXPLOITATION AND APPLICATION OF SCIENCE

	2001-02 plan £ millions	2002-03 plan £ millions
Innovation Budget[26]	Budget abolished*	Budget abolished*
OST initiatives	3.5	3.1
Foresight/LINK	0	3.0
University Challenge	0	5.0
Science Enterprise	0	5.0
Cambridge/MIT	14.0	14.0

* The Innovation Budget is abolished as from 31 March 2001.

£30 million of programmes remain under the heading of the exploitation and application of science, and most of them enjoy the DTI's habitually evocative titles. The "Foresight Panels" are to forecast the world of the future and its impact on the economy. The University Challenge Fund will receive a further £15 million over three years to provide seed funding for researchers' ideas to be taken up by industry. There will be new Faraday Partnerships to involve universities, research organisations, firms and suppliers of capital, with support from DTI, EPSRC, PPARC and MAFF, and using existing schemes like LINK and TCS to "provide more coherent Government support for new ideas." The Science Enterprise Challenge Fund will release £15 million over three years to "stimulate scientific entrepreneurship and incorporate the teaching of enterprise into the scientific and engineering curricula." The Cambridge-MIT Institute, launched in July 2000, will run joint programmes between Cambridge University

[26] The full heading is "Innovation Budget: knowledge transfer and collaboration

and the Massachusetts Institute of Technology in "Integrated research, Undergraduate exchange, Professional Practice and National Competitiveness Network (to) adapt MIT's expertise to the UK environment with the aim of increasing competitiveness, productivity and entrepreneurship in the UK."

It is not the purpose of this paper to argue for or against particular programmes, but to press the case for clarity, consistency, logic and transparency within an agreed departmental mission and agreed objectives, which connect with the UK business community. The objectives, where the DTI is concerned, should be primarily economic.

There is no effective organisation, budget, methodology or leadership within the DTI to further the application of science and technology within British industry.

There is at present no effective organisation, budget, methodology or leadership within the DTI to further the application of science and technology within British industry.

CHAPTER TEN
ISSUES, RECOMMENDATIONS AND CONCLUSION

The Department of Trade and Industry has a remit that is even wider and more complex than the department's title suggests. Its activities are of three generic types. First, there are the mainstream directorates that report to the Permanent Secretary. Second, there are new agencies, spun off under separate management.[27] Third, there is the Office of Science & Technology and the management of the UK Science Base.

OVERRIDING ISSUES

The overriding issue concerns the remit of the department within government. The DTI activities, taken as a whole, come across as too broadly framed, internally fragmented and confusing to the outside world. Five major questions arise from this paper:

1. Should there be a DTI at all?
2. If so, what should be its mission and remit?
3. If a principal part of its remit should be to help the nation's commerce improve its competitiveness and create wealth, should the DTI's perspective be economic, socio-economic or social?
4. Does the supervision of the science base fit within a department for business?
5. Do the Research Councils fit within a department for business?

---

[27] Companies House and the Patent Office, however, operate as Trading Funds and report to DGs.

A pertinent question is what would the DTI look like if it were indeed a department for business. The answer is that some of its functions would be cut, some simplified and some transferred. It would be an altogether slimmer and more effective body, delivering better service to the community at lower cost.

If the DTI were a department for business, it would be a slimmer and more effective body, delivering better service to the community at a lower cost.

The conclusion of this paper is that a national department for trade, industry and business is necessary. Government has a responsibility for maintaining a favourable economic environment for business, for technological, economic and statistical infrastructure, for trade policy, for regulation and competition policy, and for identifying and, where appropriate, advising on national industrial and commercial needs.

The DTI should be remodelled as a department for business. The US Department of Commerce should be the starting point for the model. Commerce is the term that encompasses trade, industry, commerce and e-commerce in the modern world. A departmental name-change should be considered to help change the internal culture and external perceptions of the department.

The department should develop internal skills in examining more rigorously the programmes of other government departments which impinge on the UK's business competitiveness, so as to give more robust ministerial advice and present a stronger voice in government.

The DTI's perspective should be primarily economic.

The role and responsibilities of the Government Chief Scientific Adviser do not fit within the DTI. They belong to an independent office reporting to the Prime Minister.

The Research Councils should be reconfigured in an autonomous National Agency for Scientific Research, similar to the US National Science Foundation.

More detailed recommendations are made in the paragraphs that follow.

DIRECTORATES GENERAL

The main functions of the present directorates are Trade Policy, Industrial Competitiveness, Regional and European Policy, Corporate and Consumer Affairs, and Energy (including regulatory arrangements for the privatised utilities). Each of these should be managed in a way that is purposeful, focused and clear, through transparent processes and an accountable chain of command.

The directorates' titles should, as in the American model, denote the tasks rather than the desired result. To give divisions titles that are imprecise and overlap gives a sense of confused mission and is not conducive to a clear understanding by MPs, the media or the taxpayer of what is being done and who is responsible.

The recording of the non-science Departmental Expenditure Limits (DEL) under only two broad headings in the Government's Expenditure Plans (Promotion of enterprise, innovation and increased productivity, and Legal and regulatory framework and markets) is inadequate. Greater transparency is necessary in describing the department's activities and costs.

The directorates have a mixture of less aggressive administrative tasks and more aggressive change-management tasks. For example, the present DG for Business Competitiveness is responsible both for innovation policy and for the National Weights & Measures Laboratory. The DG for Competition & Markets is responsible for competition policy and the Patent Office. Policy and change-management should be distinguished from specialist administration and services.

DTI policies and economic programmes are being distorted by social guidelines from Brussels which are implemented before being adequately sifted. The DTI's core work should be for business. Where social programmes are introduced, the objectives and programmes should be clearly delineated, and budgets should be transparent. The US Economic Development Administration and Minority Business Development Agency are useful models.

Great caution is required in any assumption that entrepreneurship can be taught as a by-product of the curricula in schools or universities, or as part of social programmes in the community. The particular elements of business studies that could be practically relevant need careful definition.

The provision by DTI of statistical and economic information for the UK business community is inadequate. To help create an environment where business can prosper, government should provide world-class economics and statistics. The Office for National Statistics, or the DTI itself, should be required to produce statistical information for British commerce. Such information should recognise the shift in the economy from primary industry and goods to services.

The UK pays £235 million annually to the European Regional Development Fund (ERDF) and should endeavour to secure an adequate return. Applications to and grants from the ERDF used to be handled by the Government Offices in the English regions and should continue to be handled regionally. In general, however, the DTI's regional communications are hampered by excessive levels of regional and local administration and should be streamlined.

US development agencies look first for economic outputs based on marketplace delivery, and only second for spin-off social benefits. They also use greater leverage in their use of private sector funds and alliances. As a result, they believe they achieve greater sustainability of jobs, wealth and social integration. These are models to be further considered.

In the management of technology, innovation and technology transfer, government should focus on facilitation, stimulation and, where necessary, regulation. The DTI's attempts to create and control budgets for innovation and the exploitation and application of science are inadequate, and there are no sustainable and robust mechanisms for technology transfer. The US's Technology Administration is a model to be studied.

The Patent Office and Companies House operate as Trading Funds with defined output targets. The strategy of converting divisions and offices to agencies and trading funds with greater independence and accountability should continue, as recommended below.

The department's audit function should be given greater resource and independence, particularly as new agencies are created.

STAND-ALONE AGENCIES

The creation of discrete, task-oriented agencies such as SBS and BTI is in keeping with the aim for a smaller state bureaucracy and greater flexibility and responsiveness in the public sector, and should be continued.

The locus and accountability of the Radiocommunications Agency and the National Weights & Measures Laboratory should be reviewed, to see how they could benefit from greater independence and openness.

The Small Business Service's social tasks are not clearly identified as such, and its economic focus and dynamism are weakened by them.

It is not appropriate that the chief executive of SBS should be singled out for direct access to the Prime Minister. The SBS budget is excessive compared with other DTI programmes and should be reduced. The range of activities is too widely drawn, for example its management of TCS and the Phoenix Fund. SBS has too many programmes of dubious value, which should be eliminated.

SBS's social tasks are not clearly identified as such, and its economic focus and dynamism are weakened by them. While governments may wish to initiate programmes for deprived communities and such programmes can include plans for nurturing commercial activities, a national small business service is not the appropriate incubator for them.

The UK is known for its vigorous, successful private banking and venture capital sectors, and business angels already benefit from tax breaks. The Phoenix Fund should not compete with or replace this funding, but obtain leverage from it.

The economic aspects of the Phoenix Fund should be distinguished from the social. Social programmes are best managed by other departments of state or local authorities.

BTI's export promotion efforts are unevenly managed with too much resource being directed via the Business Link network towards the needs of small business. National effectiveness is hampered by the enforced use of BL and the failure to make full use of private-sector partners and trade associations.

THE SCIENCE BASE

There is no advantage to industry in the Chief Scientific Adviser having a formal role in the DTI or in his budget being administered there. The OST's principal expenditure is in the provision of grants to the Research Councils. The OST does not add value or quality to the DTI of a level to justify its being a part of it.

Although some of the work of the Research Councils is connected with technology transfer, it represents a very small percentage of their budget. Their principal role is in the funding of research and postgraduate training in British universities. There are risks that, if the group of six science-based RCs is split up, the quality of UK's long-term research effort and the critical mass of national commitment to excellence in science will be diminished, and individual RCs will become prey to short-termism by sponsoring departments.

The arguments for keeping the Research Council group intact are not arguments for keeping it within DTI. The Research Councils should be managed by a stand-alone agency, similar to the US National Science Foundation, and be subject to parliamentary scrutiny.

The DTI gives too little priority to the exploitation and application of science in business, and to technology transfer. It should, as recommended above, accept greater responsibility for these tasks, while relinquishing its direct responsibility for research funding.

FINANCIAL IMPLICATIONS

Whitehall's support of UK business will be more effective if the DTI is remodelled as a department for commerce.

Other government departments or agencies would then pick up many of DTI's current costs. There would be cost savings, but the purpose of the changes would be to create a better, not a cheaper, model.

The current departmental budget of £4,521 million would fall to about £2,850 million.

The financial implications would be:

- The Science Budget of £1,766 million would be transferred out of the department;
- A Technology Budget would be created within the department;
- The Small Business Service budget, including the Phoenix and Enterprise Funds, and the Small Business Loan Guarantee Scheme, would be reduced by some £125 million, reflecting a tighter remit and greater economic focus and leverage;
- Extra cost would be generated in the provision of business-related statistics and data.
- The net effect of these changes on the current departmental budget of £4,521 million shown in Table 5[28] would be to reduce it to about £2,850 million. This would include annual "operational" expenditure of about £1,850 million, and nuclear, coal and non-fossil liabilities of about £1,000 million.

[28] On page 34.

APPENDIX 1
DTI RESPONSIBILITIES

As Table 1 shows on page 7, the responsibilities of three Director Generals were described prior to the June 2001 general election by titles that were evocative and interchangeable. Until two years previously, the directorates were Trade Policy, Export Promotion, Industry, Energy, Enterprise & Regions, and Corporate & Consumer Affairs. The roles of the Directors General are not revealed in the Government Expenditure Plans or on the DTI website, but have been explained in the text.

MINISTERIAL RESPONSIBILITIES

The ministerial structure differs from the official structure. Before the 2001 election, the Secretary of State was assisted by three government Ministers and three Parliamentary Under-Secretaries, as shown in Table A. After the election, a new Secretary of State created four new ministers and three under-secretaries, as shown in Table B.

TABLE A: DTI ORGANISATIONAL STRUCTURE – MINISTERIAL LEVEL (PRE-JUNE 2001)

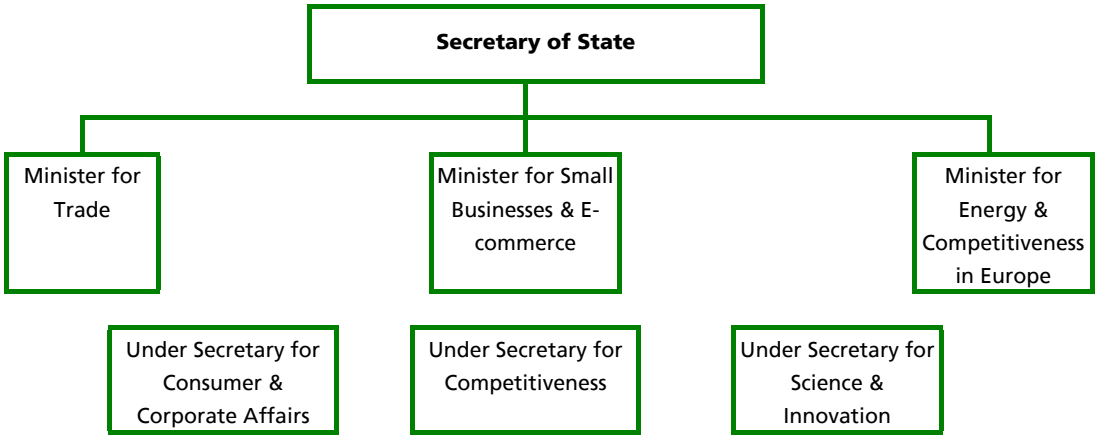
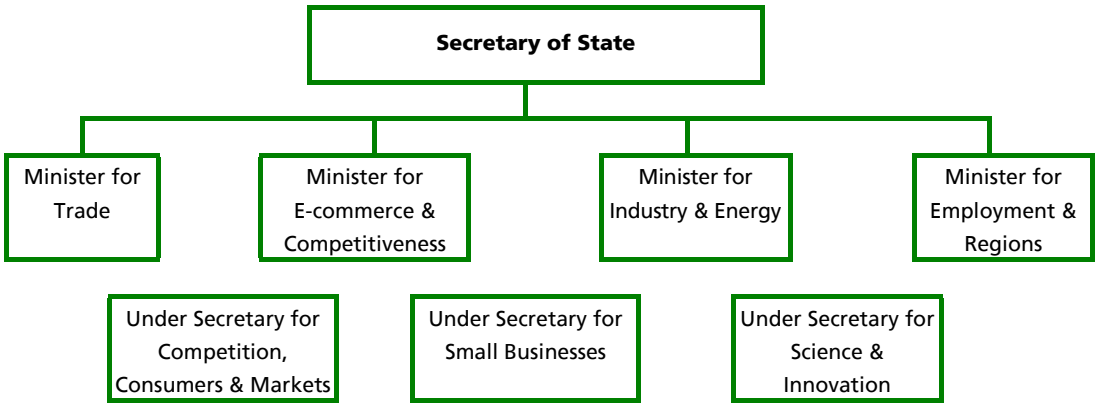


TABLE B: DTI ORGANISATIONAL STRUCTURE – MINISTERIAL LEVEL (POST-JUNE 2001)



It is uncertain whether the changes in nomenclature are due to changing focus or changing vocabulary. It is possible there will be some clarification when the results of the DTI's internal review are announced.

APPENDIX 2
US DEPARTMENT OF COMMERCE: ECONOMIC DEVELOPMENT ADMINISTRATION

MISSION STATEMENT

The Economic Development Administration (EDA) was established under the Public Works and Economic Development Act of 1965, as amended, to generate new jobs, help retain existing jobs, and stimulate industrial and commercial growth in economically distressed areas of the United States. EDA assistance is available to rural and urban areas of the Nation experiencing high unemployment, low income, or sudden and severe economic distress.

In fulfilling its mission, EDA is guided by the basic principle that distressed communities must be empowered to develop and implement their own economic development and revitalisation strategies. Based on these locally and regionally developed priorities, EDA works in partnership with state and local governments, regional economic development districts, public and private non-profit organisations, and Indian tribes. EDA helps distressed communities address problems associated with long-term economic distress, as well as sudden and severe economic dislocation including recovering from the economic impact of natural disasters, and the closure of military installations and other Federal facilities.

COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY (CEDS) GUIDELINES

The CEDS must be the result of a continuing economic development planning process, developed with broad based and diverse community participation, and contain the following:

- An analysis of economic and community development problems and opportunities including incorporation of any relevant material or suggestions from other government sponsored or supported plans;
- Background and history of the economic development situation of the area covered, with a discussion of the economy, including as appropriate, geography, population, labor force, resources, and the environment;
- A discussion of community participation in the planning efforts;
- A section setting forth goals and objectives for taking advantage of the opportunities and solving the economic development problems of the area serviced;
- A plan of action, including suggested projects to implement objectives and goals set forth in the strategy; and
- Performance measures that will be used to evaluate whether and to what extent goals and objectives have been or are being met.

APPENDIX 3
THE NATIONAL SCIENCE FOUNDATION, US

The NSF is authorised by legislation to:

- Initiate and support scientific and engineering research, and research and educational programmes at all levels, and appraise their impact on industrial development and general welfare;
- Award graduate fellowships in the sciences and engineering;
- Foster international information exchange on science and engineering;
- Foster the development of computers and other scientific technologies for science research and education;
- Evaluate the needs of the sciences and engineering and take them into account in correlating NSF programmes with others;
- Maintain a register of scientific and technical personnel and provide a clearinghouse for the collection, interpretation and analysis of data on scientific and technical resources in the US, and a source of information for policy formulation;
- Record the federal funds received by universities etc. for basic and applied scientific and engineering research, and the construction of facilities, and report annually thereon to the President and Congress;
- Recommend and encourage national policies for the promotion of scientific research and education;
- Support activities to increase the participation of women and minorities in science and technology.

APPENDIX 4
US SMALL BUSINESS ADMINISTRATION

The SBA focuses on two main tasks: securing the provision of finance; and securing government contracts for small businesses.

Since its founding in 1953, the SBA has delivered about 20 million loans, loan guarantees, contracts, counselling sessions and other forms of assistance to small businesses. In the period 1991-2000 it has helped almost 435,000 small businesses obtain nearly $95 billion in loans, making it the largest lender in small business financing. Last year it supported over $12 billion of such loans. It also helped small businesses secure more than $40 billion in federal contracts.

The 7(a) loan guarantee program is the SBA's largest program. These enable small businesses to take out a loan after failing to gain financing through normal lending channels. Banks can make loans up to $100,000 with an SBA guarantee of 80% and up to $1 million with a guarantee of up to 75%. In 1999, the SBA guaranteed almost 49,000 small-business loans, valued at $12 billion. The 7(a) loans comprised $10 billion of this total, of which $3.4 billion, or 28%, went to more than 12,000 minority businesses.

The current goals of the SBA are to:

- Expand through partners the provision of innovative, cost-effective and electronically accessible credit;
- Double government-stimulated export sales by small businesses from $250 to $500 millions;
- Eliminate by telephone-registration all disaster-related home loan paperwork for 100,000 applicants;
- Expand from 20.9% to 23% over 3 years the small-business share of federal procurement;
- Increase the share for women-owned small business from 1.7% to 2.5% over 3 years with a target of 5%;
- Create a national directory of 200,000 small businesses accessible through the internet;
- Reduce processing times through use of electronic media.

APPENDIX 5
JAPAN

In Japan, MITI, the government department for trade and industry, has still failed to resolve structural problems in the economy; for example, the keiretsu system of cross-shareholdings restricts the operation of free capital markets and the pace of industrial change.[29] The Japanese authorities recognise that they are in transition from a protected post-war system to a more competitive world environment. To improve their ability to compete in the sciences, they have recently merged the Monbusho (Ministry of Education, Science, Sports and Culture) and the Kakagu Gijutsucho (Science and Technology Agency) into a single agency, the Monbu Kagakusho. A public debate has taken place on the government's new Science and Technology Basic Plan.

The Japan Society for the Promotion of Science (JSPS) carries out programmes to "foster young researchers, conduct international scientific exchanges and promote cooperation and linkage between the scientific community and society." In addition, it has recently begun to implement activities under the Research for the Future Program, the Grants-in-Aid for Scientific Research Program and the matched-funds Research Development Program of University-Industry Alliance. JSPS's budget has tripled over three years to 135.2 billion yen (about $11 billion).

Last year, about 108,000 applications for grant-in-aid were received by the Monbusho and JSPS. These were reviewed by the Science Council and a JSPS Committee, and 37,000 grants were approved for a total of 98.8 billion yen (about $8 billion). Of these, 48% went towards the Biological Sciences (mainly medically related), 39.8% towards Physics and Engineering and 12.2% towards Humanities, Social Sciences and others. The University of Tokyo received the most research funding (11.5 billion yen), followed by Kyoto University (7.5 billion yen).

---

[29] For an analysis of why MITI should not be regarded as an inspiring model for a Department of Commerce, see Ramesh Ponnuru, *The Mystery of Japanese Growth*, Centre

for Policy Studies, 1995.

APPENDIX 6
RESEARCH COUNCILS

BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL (BBSRC)

Most of the work carried out by the BBSRC is in the non-medical health sciences, particularly pharmaceuticals, healthcare and food safety. It includes, for example, work on human genomics, genetically modified foods and bovine spongiform encephalitis (BSE). The British pharmaceutical industry is second only to the US's in size and both contributes to and benefits from research programmes sponsored by the BBSRC.

BBSRC's gross annual expenditure on research funding is £210 million, split across Agri-Food, Bimolecular Sciences, Genes & Developmental Biology, Plant & Microbial Sciences, Animal Sciences, and Biochemistry & Cell Biology. A Strategy Board chaired by the BBSRC chief executive determines broad priorities and special initiatives, while sector committees approve grant funding. Most committee members are high-ranking academics, while a minority come from private sector companies such as GlaxoSmithKline and AstraZeneca.

In 1999-2000, Cambridge University was the recipient of the largest tranche of funds, receiving £8 million for research and capital grants, and £2.5 million for postgraduate training. Liverpool, number 25 on the list, received £1 million for research and capital grants, and £170,000 for postgraduates. During that year a high priority was given to functional genomics, economic and environmental sustainability, and biological systems and processes.

BBSRC is a sponsor of the Babraham Institute (BI) in Cambridge, the Institute of Arable Crops Research (IACR) in Hertfordshire, the Institute for Animal Health (IAH) near Newbury, the Institute for Food Research (IFR) and the John Innes Centre (JIC) in Norwich, the Institute of Grassland and Environmental Research (IGER) in Wales, the Roslin Institute (RI) in Edinburgh and the Silsoe Research Institute (SRI) in Bedfordshire. The combined assets of these institutes exceed £200 million and their annual turnover is £140 million. About 2,400 people are employed in the institutes and at BBSRC's headquarters.

Although BBSRC is a sponsor of these institutes, it is only a part-sponsor, funding about 35% of the total requirement through its competitive strategic grant process, while funding a further 7% through other, smaller programmes.

MAFF was the other most significant government sponsor, accounting for 24% of the funding. Other government departments, the European Union and international sponsors added a further 20%. Industrial sponsorship produces nearly 10% of total.

The funding from multiple sources is claimed to keep the institutes in touch with their markets and make them responsive. It can also result in a lack of clarity.

TABLE A: FUNDING OF BBSRC INSTITUTES, 1999-2000

	Total £m	BBSRC Core	BBSRC Other	MAFF	Other Gov't.	Indust-rial	Other support	EU & Int'l	Sundry
BI	**13.9**	8.3	0.7	0.4	1.4	0.6	0.8	0.2	1.5
IACR	**25.8**	8.2	2.0	6.4	0.9	3.5	0.2	2.6	2.2
IAH	**25.4**	6.1	2.5	8.1	1.7	1.8	0.3	1.3	3.8
IFR	**12.5**	7.5	0.4	1.8	0.2	0.7	-	1.2	0.7
JIC	**20.0**	9.5	2.2	1.2	0.6	1.4	1.4	2.3	1.3
IGER	**14.8**	3.2	0.5	7.6	0.2	1.5	-	0.3	1.5
RI	**12.5**	2.7	1.1	4.1	0.2	2.1	-	0.8	1.6
SRI	**9.7**	2.6	0.4	3.1	0.6	1.4	-	0.4	1.3
TOTAL	**134.7**	**48.1**	**9.6**	**32.6**	**5.8**	**13.0**	**2.7**	**9.1**	**13.9**

OTHER RESEARCH COUNCILS AND PROGRAMMES

The other five RCs can be considered more briefly. They have similar missions, methodologies and outputs, awarding most of their funds to research and postgraduate training.

ECONOMIC AND SOCIAL RESEARCH COUNCIL

The ESRC's budget is a relatively small £70 million. Some have questioned how the social sciences fit within a group of research councils based on the physical sciences, but it is arguable that the ESRC falls legitimately in a group that includes medical and natural environment research.

ESRC describes the datasets provided by its National Child Development Study, British Cohort Study, British Household Panel Study and British Social Attitudes Survey as among the most sophisticated resources available to policymakers anywhere. The *Britain 2010 Foresight* study has, it claims, provided ministers with valuable information on "the likely continuities and discontinuities in the changing social structure."

It cites, as a spectacular success, the work of its Centre for Economic Learning and Social Evolution which used game theory and mechanism design for the mobile phone licence auction, which raised £22 billion for the Treasury. Whether the broader public interest was met in the process is a matter for debate.

Other research centres funded by the ESRC cover economic performance and development (including Africa), global environmental change and sustainability (including the management of traffic growth), globalisation and regionalisation, governance, regulation and accountability, innovation and organisation, knowledge, communication and learning, lifespan, lifestyles and health, social inclusion and exclusion, and technology and people.

Essex University and LSE each received about £4 million in research and training grants last year.

ESRC participated in the TCS and awarded 18 grants, typically of £59,000 each for a three-year period. Many of these were for sales and marketing studies. It also awarded 74 collaborative studentships under the CASE scheme, but most awards for work in public sector and voluntary bodies.

ENGINEERING AND PHYSICAL SCIENCES RESEARCH COUNCIL

EPSRC is the largest research council with an annual budget of over £400 million. Of this, £383 million was spent in 1999-2000 on grants, 72% for research projects, 21% for postgraduate training and 7% for facility upgrades, high performance computing and international subscriptions. Its research grants cover general engineering, engineering for manufacturing, engineering for infrastructure, the environment and healthcare, physics, chemistry, materials sciences, information technology and computer science, and mathematics.

Cambridge University and Imperial College, London, each receive more than £50 million in grants; Oxford, Southampton, Leeds and Sheffield, more than £30 million each. Derby and Staffordshire get less than £500, 000.

EPSRC says it encourages technology transfer, but stresses that it does not retain any rights in the intellectual property generated by the research which it sponsors. About £130 million of funding from industry is "aligned" each year with EPSRC funding through schemes such as LINK, which is the government's principal mechanism for supporting research partnerships between UK industry, universities and members of the research base. EPSRC has launched an Innovative Manufacturing Initiative within the LINK programme,[30] and will manage the Basic Technology cross-Council programme designed to assist British industry.

EPSRC participates in the Faraday Partnerships, designed by the DTI to encourage new product and process development in key areas of the economy, and the Teaching Company Scheme (TCS) which involves high-quality graduates, supported by academics and company personnel, implanting new knowledge into companies over a two-year periods.

The TCS has, however, been transferred to the Small Business Service, which leads the government's involvement on behalf of DTI, two other government departments, three devolved administrations and five research councils. The total government spend on TCS in the current year will be £24 million, to which DTI will contribute £16 million.

MEDICAL RESEARCH COUNCIL

The Medical Research Council has a budget of £350 million. Of this, £180 million was spent last year in its institutes and research units, including the National Institute for Medical Research, the Laboratory of Molecular Biology and the Clinical Sciences Centre, and £152 million, 43% of total, on project and strategic grants, training awards and fellowships in universities and other institutions. Central costs are £13 million and there is a small surplus. It has been given £53 million extra funding for genomics in the 2001-04 period.

Research covers wide-ranging studies into population health, physiology, genetics, neuroscience, cell biology and immunology. In 1997, the allocation of funds by topic is shown in Table B.

---

[30] There are currently 68 LINK programmes operating nationally. Since 1997, 362 LINK projects have been approved by the DTI, involving over 800 companies.

TABLE B: MRC ALLOCATION OF FUNDS

Macromolecules, cells and development	22%
Infections, immunity and inflammation	20%
Neurosciences and mental health	18%
Organ systems and cancer	16%
Genetic blueprint and health	14%
Health services and public health	5%
Nutrition, radiation, chemicals, trauma	5%

MRC has recently opened a functional genetics unit and a human immunology unit at Oxford, and a cancer cell unit and a resource centre for human nutrition research in Cambridge. It supports the Human Genome Mapping Project Resource Centre and has plans with the Wellcome Trust and the Department of Health to develop a national DNA collection.

Last year, six companies with know-how arising from MRC technology received investment capital through the MRC's £40 million investment fund UK Medical Ventures. Technology transfer is managed by a non-profit-making company which brings together the expertise of the MRC collaborative centres and its technology transfer group.

NATURAL ENVIRONMENT RESEARCH COUNCIL

NERC deals with earth-system science. Its grant from OST has recently grown at lower than the rate of inflation. Last year, it had a budget, including externally generated funds, of £230 million, which was allocated under the headings set out in Table C.

TABLE C: NERC ALLOCATION OF FUNDS

Marine science	26%
Polar science	26%
Earth science	20%
Terrestrial and freshwater science	17%
Earth observation	7%
Atmospheric	4%

About half the budget supports research and training in universities, where the most significant beneficiaries are Southampton, Cambridge, Reading and Imperial College, London. The remainder funds five centres and surveys. The largest of these are the British Geological Survey, which carries out work in the UK and overseas at an annual cost of £35 million, and the British Antarctic Survey, costing £25 million, which has received publicity for studies on the ozone layer, as well as on arctic birds. The other units are the Centre for Coastal and Marine Sciences, the Centre for Ecology and Hydrology, and the Southampton Oceanography Centre, a partnership with Southampton University.

NERC has an international perspective. In 1999, it had land and buildings at a balance sheet cost of £118 million, and ships, aircraft and vehicles valued at £92 million, and employed some 2,600 staff.

PARTICLE PHYSICS AND ASTRONOMY RESEARCH COUNCIL

PPARC's budget growth has also been restricted at just over £200 million. It supports high quality research in astronomy, planetary science and particle

physics, and maintains the UK's Astronomy Technology Centre. It pays about £30 million annually towards the European Space Agency Science Budget, and £75 million to CERN, the European Laboratory for Particle Physics, mainly to support the Large Hadron Collider. It is the second largest contributor to telescopes in Hawaii and Chile.

PPARC's annual expenditure on research and training in UK universities is therefore less than £100 million. To administer these funds it has formed a large number of committees, namely Science, Astronomy, Particle Physics, Education and Training, Industrial Policy Advisory, Public Understanding of Science and Technology Advisory, Particle Physics Grants, Particle Physics Theory, Particle Physics Experiments Selection, Astronomy Research Assessment and Theory Assessment.

COUNCIL FOR THE CENTRAL LABORATORY OF THE RESEARCH COUNCILS

CCLRC is a central resource for the Research Councils. It has laboratories in Oxford and Cheshire, and is actively involved in synchrotron research. Although it has only a modest grant from OST, it has an annual "turnover" of about £95 million as it receives 80% of its funding through service level agreements with the science-based Research Councils. It owns land and buildings at a 1999 book value of £113 million, and plant at a book value of £137 million after depreciation.

The Research Councils' long-term technology review of the science and engineering base, published in April 2000 highlighted the need to establish partnerships between the Research Councils to develop sensor instrumentation and technology for the future. The aim is "to establish new world-wide markets for an extensive range of innovative products." There is no satisfactory evidence that the current institutions and structures of government are capable of achieving this objective.

A SUMMARY OF RECENT POINTMAKERS

CAN CONSIGNIA DELIVER? The Post Office in the 21st Century **£7.50**

Stuart Lyons

The British Post Office may be a much-respected brand. Yet it is also the last unreformed nationalised industry in the country -with many of the problems to match.

Lyons argues that radical reform is needed if the Post Office is to compete effectively in the future. The first step should be to split the distribution businesses – the Royal Mail and Parcelforce – from the Post Office Counters network. The second is to privatise these distribution services quickly. The third is to remove the current uncertainties which are undermining the Post Office Counters businesses, introduce commercial efficiencies and prepare for privatisation of Post Office Counters in the medium term.

Faced with the choice of becoming a global competitor, or remaining as a national player in a shrinking traditional market while the Germans and Dutch pick up the cream, politicians of whatever political colour must surely choose the former.

POST OFFICE MUST BE BROKEN UP AND PRIVATISED – headline in *The Independent*

MIRACLE OR MIRAGE? Labour's economic record in perspective **£7.50**

Keith Marsden

The last Labour Government enjoyed the benefits of a strong economic inheritance and exceptionally favourable global conditions. But did it take full advantage of this golden legacy? The international economist Keith Marsden analyses OECD, World Bank and ONS data and reveals that under Labour Britain's GDP growth rate fell; productivity worsened; and share of world exports dropped sharply. At the same time, taxes rose substantially and household saving ratios declined.

Marsden does wield his statistics in a manner that punctures some of the more mythical aspects of new Labour's achievements… The problem is that, despite all Gordon Brown's talk of the need to drive up productivity and improve competitiveness, British business is just so busy dealing with all those extra regulations and taxes that it is failing to respond to his clarion calls. Productivity growth has actually fallen under new Labour. Under John Major's regime, it averaged 2.3 per cent a year whereas in this Parliament it has averaged 1.8 per cent. That has enabled other countries to steal some of our export markets: Britain's share of world exports has tumbled over the past four years, from 5.1 per cent to 4.5 per cent.

– Patience Wheatcroft in *The Times*

EUROPEAN TAX HARMONISATION: the impending threat **£7.50**

Theresa Villiers MEP

Theresa Villiers shows that Brussels is pursuing an active, if gradualist, programme of tax harmonisation. Each small step is steadily enlarging the involvement of the EU in tax matters. The EU is pursuing a large number of different tax projects and is pressing particularly strongly for the harmonisation of VAT, Corporation Tax and fuel duties (which currently raise £114 billion - 35% of the total tax take - for HM Treasury). If only one in ten of the multiple proposals listed by the pamphlet are adopted, she warns, the consequences could be dire for the UK taxpayer. Not only would harmonisation cause taxes to rise, she argues, but there would be virtually no prospect of any future reductions in tax: as she points out: "tax harmonisation is a one-way street."

MEP Theresa Villiers, in a detailed and well-researched publication from the Centre for Policy Studies out today, shows how the agenda is being pursued gradually, each small step steadily enlarging the involvement of the EU in tax matters – Bill Jamieson in the *Sunday Business.*

BECOME AN ASSOCIATE MEMBER OF
THE CENTRE FOR POLICY STUDIES

The Centre for Policy Studies runs an Associate Membership Scheme which is available from a minimum subscription of £55.00 per year (or £50.00 if paid by bankers' order). Associates receive all publications (of which there at least 15 in any 12 month period) and (whenever possible) reduced fees for conferences held by the Centre.

We also welcome donors who are prepared to subscribe additional amounts to help to support our ongoing policy work.

For more details, please write or telephone to:

The Secretary
Centre for Policy Studies
57 Tufton Street, London SW1P 3QL
Tel: 020 7222 4488 Fax: 020 7222 4388
e-mail: mail@cps.org.uk Website: www.cps.org.uk