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By

Dr Eamonn Butler

Adam Smith,
The Wealth of Nations

From research prepared for

The Adam Smith Institute

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Adam Smith,
The Wealth of Nations

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1. THE PROBLEM OF PUBLIC DEPENDENCE

The Robbins revolution

The growth and present pattern of higher education in the United Kingdom stems largely from the recommendations of the Robbins Committee, which reported in 1963. Set up to review full-time higher education and make proposals for its future development, the Committee adopted as a basic principle that 'courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and wish to do so'. That principle has been the cornerstone of higher education policy for every government since.

In pursuance of it, existing universities were substantially expanded and a number of new ones were created. The then colleges of advanced technology, plus other comparable institutions, were given the status of universities, while other changes took place in the remaining colleges. In a subsequent move, a series of new institutions, to be known as polytechnics, were developed as the main centres for the future development of full-time higher education within the further education system.

With the new finance for this expansion coming from the government, the universities' balance between public and private sources of funding began to change markedly. However, confidence was high that this growth could be continued.

Thus, in the decade following the Robbins Committee Report, student numbers more than doubled. In the optimistic early 1970s, when it seemed that there was nothing that public money could not achieve, it was confidently predicted that the same rate of growth would continue into the foreseeable future. The optimism was short-lived, however, and when the United Kingdom finally had to face financial reality, education had to accept its share of the restraints. As Table 1 shows, growth did continue, albeit at a much slower rate than before.

Today, the position has been reached where there are forty-six universities in receipt of substantial public funding. In the public sector, there are thirty polytechnics with, in Scotland, sixteen central institutions, and more and 440 other colleges providing some amount of higher education. The total cost to the public purse, including research postgraduate work financed

The Problem of Public Dependence

through the research councils, totals around four billion pounds, some £700 million of which is provided in the form of maintenance grants to students.

Table 1 Total student numbers (full-time and sandwich)(,000)

Year	Home	Overseas	Men	Women	Total
1970-71	432.4	24.4	274.2	182.6	456.8
1975-76	466.4	48.5	301.2	213.7	514.9
1980-81	481.6	53.3	318.4	216.5	534.9
1981-82	505.4	50.5	327.6	228.3	555.9
1982-3	521.4	46.8	329.9	238.3	568.2
1983-84	534	47			581

Source: Social Trends

THE FINANCE QUESTION

Cutting costs

In the period since 1981, the universities have had to face up to the harsher reality of reduced income (in real terms) from central government, and the consequent need to pursue economies, staff reductions, department closures and other unpalatable measures. It was not just that the world, including the United Kingdom, was going into recession after the inflationary spree of the 1960s and 1970s, and that governments found they had less to spend. Demand for university places too was falling as the postwar baby-boomers had passed through the system.

After twenty-five years of uninterrupted growth, therefore, the higher education system is at last going through the same kind of painful retrenchment that the rest of the economy has already endured.

The retrenchment is not yet at an end. In 1985, the universities were asked by the University Grants Committee to consider coping with a 2% per annum cut in their funding over the next few years. Their reaction has been predictably and universally hostile. Universities have vied with each other to predict the largest cuts in staff, the biggest programme of department closures, the deepest declines in the quality of education, and the worst annual deficits. Normally reserved academics have gone on record with statements such as 'potentially disastrous consequences', 'appalling prospects of

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staff losses', 'rapid slide into insolvency', and other comments which attempt to arouse the interest of a largely indifferent general public.

Of course, a private business which was forced to accept declining receipts in the region of 2% per annum would be likely to do so with far less worry and outrage. In the private sector, markets quite normally fluctuate up and down, and firms have to be flexible enough to cope with such variations. The remarkable overreaction of the universities to modest budgetary restraints perhaps indicates better than any other measure how dependent they have become upon government sources of income, and how complacent and inflexible that has made them.

More of the same?

The initial response of the universities, therefore, was to adopt the role of political lobbyists, using the power and influence of their own resources and of their graduates in public life. The hope was that public campaigns and some eloquent special pleading would bring political pressure on the government and would gain goodwill with the public.

The University Grants Committee, for example, in its paper A Strategy For Higher Education Into The 1990s, deliberately ignored the implications of declining demand for university education and declining government funding. Instead, it called for an expansion in student numbers and increased government grants. To back up its case, the Committee warned of the dire consequences of further reductions in government grants which could, it was suggested, ultimately involve the 'removal...of institutions completely from the grants list'.

The members of the University Grants Committee could not even bring themselves to say bluntly that what grant reductions could mean was the closure of a number of universities. Nor did they explore ways in which non-government money could be raised to avert any such closures. Instead, they suggested in an evasive manner, with evident distaste for discussing the subject at all, that unless some other source of public money were made available, any institution removed from the grant list 'would presumably be unable to continue to function'.

Paying the piper

Having accepted an almost total dependence on government funding, however, universities cannot expect much sympathy from taxpayers when their elected representatives decide to call the tune. One consequence of relying on public money are that budgetary restraints can arrive without warning, and in strong measure, as governments come and go, as political priorities change, or as previous overspending and inflation needs to be corrected.

The Problem of Public Dependence

Another consequence, applying not just to higher education but to all forms of state activity, is that governments quite naturally expect to have a considerable say in the running of the organizations which they fund. As the budgets increase, the more politicians feel the responsibility for them, and the more control they feel justified to assert.

Their growing dependence upon government funding has robbed the universities, like many other public institutions, of a degree of independence. In higher education, however, the goal of having the freedom to pursue knowledge free from political interference has always been cherished. There is little prospect of such freedom, whatever the colour of government in power, unless the universities seek the real alternative of genuine independence that comes only from the exploitation of non-government sources of income.

There are signs, thankfully, that the universities are waking up to the potential offered by this alternative.

Thus the newly elected Chairman of the Committee of Vice-Chancellors and Principals said recently that the experience of the past eight years had 'not had an entirely deleterious effect on British universities'. Financial stringency, he said, had forced the universities to look hard at their priorities. It had made them think about their sources of income and their relationship with the community outside the traditional channels of government.

Indeed, it is remarkable that despite the gloomy predictions that a large number of universities would have to close down in response to the budget restraint, only one or two have actually come near to bankruptcy. Meanwhile, other institutions, such as the University of Bedford, which faced much larger percentage cuts than the norm, have kept themselves not only afloat but healthy as well by exploiting new forms of non-governmental income. In general, the restraints have made universities less wasteful institutions, more business-like in their approach, and more closely suited to the educational requirements of the 1980s and 1990s.

The constant reassessment of priorities is an everyday feature of any business, and it should be a regular feature too of public institutions, even though the output of their various offices and departments is often harder to measure. None the less, the difficulty in measuring the value of a small academic department, for example, is no reason why it should not be attempted, as a matter of annual accounts, by the febrile minds running our universities. More generally, there has been a widespread awareness in the universities of what resources they have and how they can be used more effectively -- including using their own buildings for commercial conferences, satisfying the well-discussed demand for more continuing education courses, offering

2. SIGNS OF AWAKENING

REASSESSING THE EXPERIENCE

Looking at priorities

Now that the retrenchment is well underway, it is becoming clear that the results of the recent budget reductions are certainly not as harsh as they were predicted to be, and by no means altogether harmful.

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The constant reassessment of priorities is an everyday feature of any business, and it should be a regular feature too of public institutions, even though the output of their various offices and departments is often harder to measure. Nevertheless, the difficulty in measuring the value of a small academic department, for example, is no reason why it should not be attempted, as a matter of annual accounting, by the febrile minds running our universities. More generally, there has been a widespread reappraisal in the universities of what resources they have and how they can be used more effectively -- including using their empty buildings for commercial conferences, satisfying the newly discovered demand for more continuing education courses, offering

Signs of Awakening

business services such as translation, and encouraging more businessmen to place lucrative research contracts with them.

Decline in initiative

There is, however, much complacency still to overcome. While quite a number of universities are now showing some initiative and enterprise, the improvement has been slower than we might have expected from the country's academic elite. They have put off the search for new sources of income, and have investigated new methods of funding only when forced to do so. There has been a general hope that the government might change its mind and that everything will return to what they have come to regard as normal.

In that sense it came as a sad reflection on the much proclaimed independence of our universities that their initial response to the changing financial circumstances of higher education, pronounced through the University Grants Committee, was the bald statement that 'the financing of the universities is the responsibility of government and cannot be shifted elsewhere'.

Previous enterprise

In fact, it was by no means always so. Before the First World War, there was no regular system of government assistance to universities, although some support was given from time to time.

More systematic government funding began in the aftermath of that war, when substantial grants, of the order of \$500,000, were made available to help universities return to normal operations. The money was distributed by a new body set up for the purpose, the University Grants Committee. Then, as now, it was intended to act as a buffer between the government and the universities, protecting the latter's traditional independence against the political interference that inevitably follows the receipt of public money. In addition, £8,500,000 was made available over five years to provide grants to men returning from the War and who wished to take up academic studies.

Even as late as the 1930s, the universities raised a significant proportion of their budgets from non-government sources, as Table 2 shows.

It is clear, then, that before the massive recent infusion of public money, universities did successfully raised a substantial portion of their funds from independent sources. Today, out of necessity, they are attempting to rekindle some of that former enterprise.

Signs of Awakening

Table 2 Higher education income and expenditure (GB) (£m)

Year	Expenditure	Income from Government	Percent
1937-38	10.2	6.4	63%
1954-55	47.7	40.2	84%
1959-60	84.1	73.6	87%
1960-61	96.6	84.7	88%
1963-63	123.4	111.0	89%

Source: Higher Education (The Robbins Report) Apx 4 pp 103-4

Structural barriers

However, the institutions that are presently in place around higher education seem so steeped in the ethos of public support that it is questionable whether they have the right structure to promote such a change of emphasis. There is within higher education a substantial body of public dependents, whose vested interest is in resisting change or in pressing for increases in public funding wherever they can be justified.

Any objective survey of the higher education system will reveal just how much it is dominated by such lobbies. Of the twenty-two members appointed to the working group to investigate vocational qualifications, for example, only three were directly involved in industry, despite the clear relevance of industrial experience for the discussion of such a subject. Predictably, a report from this group in 1985 recommended a lot more thought, rather than something that businesspeople and vocational guidance experts could use straight away. It proposed that 'machinery must be established to undertake more detailed analysis of existing qualifications, draw up a comprehensive blueprint for and improved structure, introduce it and be held accountable for it'. And it suggested that this could be done by a government department or some form of quango, financed publicly. It even envisaged that some government direction or even legislation would be required.

It is precisely such a commitment to having everything done by the state system that has caused higher education to back itself into its current uncomfortable corner. Largely dependent on declining public funding, it sometime appears reluctant to consider any other course than to demand more money and work through bureaucratic governmental institutions. Such reluctance is unworthy of a university system with six centuries of adaptation and innovation behind it.

3. THE RESEARCH CHALLENGE

An important way in which universities can change the balance of their funding more towards independent sources is to attract research contracts from the business sector.

Scale of state dependence

At present, roughly half the research and development undertaken in the United Kingdom is financed by the government, and something like a quarter of that takes place in the universities.

For their part, the universities claim to 'provide most of the basic, and a very considerable amount of the applied' research undertaken in the country. 'Their staff are amongst the originators of new ideas and basic understanding on which technological and management advances can be founded,' reported the Committee of Vice Chancellors and Principals in its report, Research in Universities in 1980. 'Innovation, questioning, challenges to conventional wisdom: these are their stock in trade'.

Although the universities may be innovative in how they think about research projects, they have not until recently been very innovative in how they obtain them. Government finance has remained the norm for some time.

Bureaucratic structures

Research finance comes in three ways. First, through the normal income of a university from the University Grants Committee. Second, through money given through the five research councils -- the Agriculture and Food Research Council, the Economics and Social Research Council, the Medical Research Council, the Natural Environment Research Council, and the Science and Engineering Research Council -- to finance postgraduate studies or specific projects. The third source is the money which individual government departments pay for the research work they commission.

The amounts of money involved are large. Spending by the universities from their own funds amounts to roughly £600 million per annum, while roughly £550 million is being spent through the research councils. The money for these councils comes from the

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Department of Education and Science's 'science budget' and is allocated with the advice of a quango that includes UGC and government representatives among its number.

Reinforcement of orthodoxy

In research, therefore, as elsewhere in higher education, it has been to the state that the academic community has looked for its finance, rather than to the outside world which might be expected to appreciate the long-term potential value of the work that it is doing.

Thus, when in 1980, the universities became concerned at the 'acute strain' their research funding was under, it was at the government they aimed their report, Research in Universities, pointing out the value of fundamental research, praising their own efforts in the field, and setting out the details of some of the best projects they were currently working on. They noted that thirty-two of the then total of forty-eight Nobel prizes awarded to British citizens since the Second World War had been gained by people working at the time in the universities. Again, they were playing to the political audience, not to those in the private sector who might make use of their research and thus who might legitimately be asked to help.

Peer problems

Some research council funds are distributed directly to universities to finance postgraduate research project. Other funds are allocated on the basis of peer-group review, a system whereby those already active and eminent in any field decide whether a proposal for a research project is likely to prove worth pursuing or not.

It is a system to which, at some level at least, there may well not be any realistic alternative; but it has the inevitable drawback that there is an inbuilt tendency towards orthodoxy. Any project which seriously challenges conventional thinking in any particular field is unlikely to commend itself to those who collectively constitute that very orthodoxy. Equally inevitably, there are persistent complaints that whether or not a project is approved may depend more on the membership of the review body than on the merits of the research itself.

THE BENEFITS OF PRIVATE RESEARCH FUNDING

Heterogeneity

The prevailing view is that the government's research activities, presently fragmented between the research councils, government departments, and other bodies, should be brought together under a more co-ordinated strategy. Although appealing, the danger of this approach lies in the fact that 'co-ordination' leads

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inevitably to centralized decision making and hence to ever greater conformity and uniformity -- the very attitudes which inhibit innovation.

Some of this problem could be overcome if universities found their funds for research more from non-governmental sources. One happy consequence would be that there was no need for a lengthy bureaucratic justification of each and every project at the outset; another would be that the monitoring of research projects as they were underway would become less distant, and more in the hands of the university department concerned; a third would be that universities had a greater range of potential supporters to choose from, and could start more quickly.

Although orthodox opinions guide the selection of research topics today, it is by no means clear that all orthodox lines of research are guaranteed to success, nor that they are necessarily more fruitful than novel approaches. The wider the variety of research funding available, the greater the likelihood will be that unconventional ideas will receive some support. The work that will be done with the money Catherine Cookson is providing for medical research at Newcastle University might well have taken place somewhere else, but the investigation of the paranormal that is underway at Edinburgh University, financed out of the late Arthur Koestler's estate, would certainly not have been funded by any government agency.

Grassroots control

Any shift towards private funding would lead to a saving in the money currently spent by the research councils on their staff, who process applications for grants, rather than on research itself. It is worth noting that the staff of the UGC is very much less than that of the smallest research council. But more importantly, perhaps, there would be the added benefit of introducing both a greater concern within each institution for the relevance of its research to the real world and a welcome widening of the number of individuals and groups involved in deciding what research should take place, who should do it, and where it should be based.

FINDING THE FUNDING

Although recent proposals to trim the research council's budgets were greeted with even more shock and outrage than the earlier reining in of university budgets, it is not obvious that public sources of research funding are irreplaceable.

The American example

Academics who look wistfully to the incomparably better funding of research in American universities often seem to forget that those institutions are almost all dependent upon private money,

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and that business sponsorship of research programmes is both normal and generous.

Part of the reason for their healthier research position is that American colleges and universities have had to attract outside sources of support because they have always been less dependent on the government: many are completely independent and yet are still able to attract research funding. Another reason is the tax and incentive structure that encourages American industry to invest in new research and development -- and that is a point from which the United Kingdom government can learn, a system which can be replicated in this country.

Business sources

Private individuals and foundations are obvious sources of new research funds, but by no means the only ones. In addition, there are clearly major opportunities for universities and other institutions to attract much greater commercial and industrial support for their postgraduate research, though it requires some new thinking by both business and the universities, and some new government measures to encourage new partnerships.

At present, it is not surprising that industry is reluctant to support basic and fundamental research to a larger degree. Long and heavy dominance of the public budget in the operation of the universities has created a rift between them and business. The attitude of business is only too well expressed in some observations which the CBI made to the UGC as part of the latter's review of the future of higher education: 'The state must continue to support higher education. It cannot get out. It is unrealistic to expect anything more than marginal funding from business, which is, after all, only one of the users of the higher education system'. In other words, if the taxpayer is prepared to foot the bill, the business community can opt out of its obligations.

Personnel funding

Nevertheless, partnership can be attractive, and can be encouraged by well designed measures. The cost of financing a research student for three years would be of the order of £15,000 to £20,000, an insignificant amount in most company accounts and a small amount to pay for all the advantages of access to current advances in knowledge. Tax incentives could make this even more attractive; or research appointments might be made through the mechanism of a temporary secondment of business experts to university departments, putting them at the centre of stimulating new research developments, could be an even more beneficial method of support. Businesses might well find this investment of time an enriching one for their employees, and even for their shareholders.

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Specific projects

Additional funding could be raised, and indeed is being raised on a large scale by some universities, from the commercial exploitation of research projects. Not only can the universities sell their research services to businesses that need specific research undertaken for commercial ventures, but those research topics already underway can be exploited commercially if they have some kind of business application.

The scope for productive co-operation between the academic and industrial world was explored in a 1983 government publication, Improving Research Links Between Higher Education and Industry, which has given the whole approach a significant boost.

Other steps which are needed include the removal of a number of existing constraints over the organization of academic research. The decision to end the automatic right of first refusal over the handling of inventions financed by the research councils, which the state-owned British technology Group enjoyed, is a welcome development. In future, those who have produced an idea will have the responsibility of promoting its commercial exploitation, and some universities are pursuing this new opportunity with gusto.

Table 1 Research income by source, 1984-85

Source	Highest	Lowest	UK Average
Research grants	78.9%*	27.0%**	54.8%
Research grants and contracts	25.6%***	3.2%**	16.1%
Income for services rendered	51.1%**	6.8%***	4.8%

Source: University Statistics 1984-85

*University of Ulster **Manchester Business School
***University of Oxford

Despite these caveats, it seems that some universities at least could do very much more to raise non-government income. Even if they became no better than the average, it could mean an enormous boost to their budgets and their independence.

At the other end of the scale, the importance of getting the business and academic communities back together again has been recognized very firmly by a number of universities which, faced

4. THE POTENTIAL FOR GROWTH

As Table 3 shows, universities in the United Kingdom receive, on average, roughly 60% of their recurrent income from exchequer grants, about 16% from research contracts (including some government research projects) and a mere 5% or so from 'other sources', which would include conferences, commercial services, and so on.

However, there is a good deal of range between the best and the worst performers on these measures. To some extent, of course, these figures are not strictly comparable: some which appear to have a large non-government income are actually medical schools with much of their funding coming directly from the NHS. Others are business schools which have only some of the characteristics of conventional universities and which have always raised their budget largely from fee courses in continuing education.

Table 3 Recurrent income by source, 1984-85

Item	Highest	Lowest	UK Average
Exchequer grants	78.9%*	27.0%**	59.8%
Research grants and contracts	25.6%***	3.2%**	16.1%
Income for services rendered	52.3%**	0.4%****	4.8%

Source: University Statistics 1984-85

Notes: *University of Ulster **Manchester Business School
 University of Oxford *University of Hull

Despite these caveats, it seems that some universities at least could do very much more to raise non-government income. Even if they became no better than the average, it could mean an enormous boost to their budgets and their independence.

At the other end of the scale, the importance of getting the business and academic communities back together again has been recognized very firmly by a number of universities which, faced

The Potential for Growth

with reductions in their UGC and home-student fee incomes, have made strong and successful efforts to boost their other sources of revenue, and have shown remarkable enterprise and energy.

The prime example

The most celebrated example is that of the University of Salford. Although it is a technologically-based university and therefore able to exploit a range of activities not available to the arts-based universities, its size is roughly average and the general structure of its approach may well be instructive.

In the 1980-81 Public Expenditure Survey, which implied a 17% reduction in the universities' budget when both expenditure reductions and changes in overseas-students' fees were considered, Salford fared much worse than most. The net cuts asked of it were a financial reduction of 41% between the years 1980-81 and 1984-85, and a reduction in student numbers of 30%. Since some 70% of a university's budget goes in salaries, Salford forecast the cuts to mean a 31% reduction in staffing.

Salford's response -- which included a high-profile public relations campaign, better outreach into schools and industry, more businesslike management, new self-financing courses, profit-making conferences, and the encouragement of income from research grants and commercial contracts -- proved enormously successful. Its total income from non-UGC income has nearly tripled, enabling it to maintain an overall budget broadly in line with inflation.

Table 4 Salford's income by source, 1981-85*

Source	1981		1986	
	(£'000)	(%)	(£'000)	(%)
UGC & Home Students' Fees	18,044	84%	16,317	57%
Outside Sources	3,417	16%	12,552	43%
Including:				
consultancies	150		274	
companies (SCEL, SUBS Ltd)	536		5,103	
courses and conferences	80		1,202	
research grants, contracts	1,175		3,068	
self-financing students	1,005		2,302	
other	18		48	
Total	21,461	100%	28,869	100%

Note: *Includes the University of Salford and its business subsidiaries Salford University Business Services Ltd and Salford Civil Engineering Ltd.

The Potential for Growth

Other examples

Salford, with a ratio of science (and engineering) to arts (and social science) of 2:1, is often dismissed as an inappropriate example for institutions with an opposite leaning. However, the evidence suggests that the same general strategy of encouraging non-UGC sources of income can work and has worked in universities of very different balance, style, age, and size.

For instance, the University of Southampton, with a roughly 1:1 ratio between science and arts students, raises nearly 30% of its income -- roughly £15 million -- from research grants, contracts, and income for other services rendered. The research grants and contracts come not only from industry but from government and commerce. In addition, Southampton's dozen or so consultancies (some set up with support from the Wolfson Foundation) achieve an annual turnover of more than £2 million.

The University of Leeds raises one-eighth of its £68 million budget from research grants and contracts. Its further 'income for other services rendered', although inflated by NHS payments stemming from its medical school, nonetheless includes £2.8 million derived mainly from self-financing courses, departmental services, sales, and royalties.

Situated in West London, Brunel University has built up strong industrial links through its 'thin sandwich' system, and has a relatively high proportion of students on industrial sponsorships. More centrally, the City Polytechnic has set up a Business Enterprise Unit which has established research contracts and consultancies with many companies, and seems well poised to exploit new commercial opportunities from within the growing Docklands development. The City University, meanwhile, runs successful conferences and short courses aimed at business leaders, which make up the bulk of the £3.4 million item for services rendered within its £28.2 million turnover. Of its £2.5 million worth of research grants and contracts, some £1.4 million comes from private sources.

The Manchester Business School, as might be expected, obtains roughly 70% of its gross income from non-government sources, primarily from running a wide range of post-experience teaching programmes. Similarly, the London Business School raises about 75% of its turnover from non-UGC sources. Some 40% of its work comprises post-experience programmes for executives; in addition, it has five research institutes which are funded completely from outside through grants and donations, a subsidiary company which organizes its own programmes, and a number of units providing business information such as risk management and lease evaluation.

The University of Birmingham has an overall arts bias, but

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still manages to be a leader in raising non-UGC income. Much comes from health authorities once again, but the 1986-86 figures show £1.3 million in commercial and industrial research grants and contracts, and £4 million from trading activities which include patents and royalties, materials testing, geological surveys, the supply of films and videos, and the hire of sophisticated equipment for a variety of purposes.

In Scotland, the University of Aberdeen, roughly in line with the national average, drew in £7.2 million from research grants, contracts, and other services in 1984-85. An 'aggressive policy on overhead recoveries' in respect of grants and contracts secured by academic staff gained it a total of £178,000 last year. Meanwhile, Aberdeen's industrial services company, capitalized entirely from non-public sources, covenanted £110,000 to the University and made another £35,000 available in research grants. Turnover is now in excess of £1 million.

The University of Edinburgh, meanwhile, raises about £12 million of its £70 million budget from research grants and contracts, £2 million from grants and donations, and another £2 million from services rendered. It produces an impressive array of leaflets, booklets and brochures aimed at attracting business sponsorship of teaching and research appointments, commercial research contracts. It has raised an additional £7 million in covenants and donations from 4,000 members of its large body of graduates, the General Council.

Sections of a university - teaching, research, and the transfer of expertise - the absence of agreed aims and objectives will produce only an unmanageable confusion.

A clear statement of aims will not only help the university's own personnel to rearrange their activities efficiently, but will send a clear signal to outside organizations that the university is prepared to deal with them in a businesslike way. Private firms, public bodies, and other institutions almost certainly have different priorities from a university and seek different outcomes from any relationship; the individuals on each side probably have quite different motivations, expectations, and criteria for judging success; and in addition, universities have a different legal status and therefore very different management and decision-making processes. Once the university's aims and objectives are explicitly defined, however, such differences can be resolved and it becomes possible to set up new management structures appropriate to achieve the agreed targets.

Examples in action

Universities differ, however, in terms of the completeness of the framework they lay down. Perhaps most formal was the 1986-87 statement of aims and objectives agreed by the Senate at Oxford, which has been made available to staff, the business

5. THE NEW STRATEGY IN ACTION

The universities which enjoy a sizeable income from non-UGC sources display a remarkable similarity in their general strategy, despite obvious and profound differences in the exact services and facilities they are able to exploit.

STATEMENT OF OBJECTIVES

The successful universities all emphasize the need for a clear statement of objectives that is well communicated to the staff and the outside world.

Once the decision to seek more outside income has been taken, it is vital that both administrators and academics have a common understanding of the university's order of priorities and know what is expected of them. Since the new strategy is likely to involve novel activities (and will therefore require the revisions of customary priorities) in all of the traditional functions of a university -- teaching, research, and the transfer of expertise -- the absence of agreed aims and objectives will produce only an unmanageable confusion.

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Examples in action

Universities differ, however, in terms of the completeness of the framework they lay down. Perhaps most formal was the 1000-word statement of aims and objectives agreed by the Senate at Salford, which has been made available to staff, the business

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community, public bodies, and enquirers generally. It details how the university expects to serve (a) its students and (b) industry, commerce, and the public sector, in terms of teaching, research, professional enhancement, and the transfer of technology and special skills.

Starting from that document, each department at Salford has adopted similar but more specific statements of its own aims and objectives, expressed in managerially useful terms that describe the allocation of resources, the roles of individuals, the evaluation of results, and the reward of achievement.

Much less formal, but evidently effective, is the approach of the University of Surrey. There, departments have been given a straightforward incentive to increase revenues in the face of budget cuts: they are offered the alternative of a 5% reduction in funding, or they can produce an equivalent in extra revenue. The university authorities have been surprised by what this framework has achieved. Much more attention, for example, has gone on how research contract are actually priced.

The same key role of incentives is stressed by the University of Reading, where departments that are able to raise income from independent sources are able to keep much of what they earn for their own discretionary spending. Reading produces a range of one-page leaflets on each department -- from Agriculture to Zoology -- describing its work and research capabilities, and giving a contact name and telephone number for potential clients.

The University of Birmingham is also providing more central impetus and direction into the links between academic departments and external organizations. In common with other universities that are successful at raising non-UGC finance, it has established a new institute to promote its research and development capabilities; and it has appointed three individuals to co-ordinate its continuing education and research links with industry and commerce.

The University of Southampton, recognizing that consultancy work can cut across traditional teaching and research activities, insists that staff spend no more than thirty days per year on consultancy business.

PUBLIC RELATIONS OUTREACH

Another characteristic feature of the universities which raise a significant proportion of their income from non-public sources is their commitment to advertising, public relations, and outreach.

It might seem odd for a university facing financial cutbacks to spend tens of thousands of pounds on redesigning and republishing its leaflets, newsletters, and other publicity materials; but the success of such exercises suggests that the last thing an

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organization in crisis should do is cut back on its marketing budget. Indeed, an increase might be wise: if a university wants to enter into new forms of commercial relationship with business, with other public-sector bodies, or with the general public, it must first be noticed by its potential partners and customers. In the process, it must exude professionalism, must show how its objectives are relevant to potential clients, and stress its commitment to address them with determination.

Examples

The University of Salford, again, has been highly innovative. A four-page colour newspaper, Brainwaves, describes a wide range of university activities that may be of value to business -- and includes a reply-paid postcard for those wishing to know more. With existing and future partnerships in mind, Salford produces a range of well-illustrated two-colour reports of roughly 16-20 pages, describing its work with industry and public bodies. A six-page annual report, professionally designed and glossy once more, gives a brief and digestible overview of its business links, projects, publications, staff, exhibitions, and courses. For schools, it has developed two new publications, a Schools Magazine and What Salford Graduates Do.

The University of Birmingham publishes a monthly magazine, Biotechnology News, which describes what is going on in its Biotechnology Management Group and how its expertise is available to industry. The quarterly University and Industry, describes specific projects and services to industry in more detail and has a circulation of 20,000. Both have professional design and full-colour covers.

Birmingham's commitment to self-financing specialist courses and conferences is strong, and a six-page, full-colour leaflet, employing the highest standards of design, promotes this element.

The University of Leeds is also proud of its six-page, full-colour brochure describing its Service to Industry. It outlines the university's services in testing and evaluation, continuing education, consultancy, innovation, advanced training, language skills, social science, conferences and exhibitions, graduate recruitment, and research support.

More modest, but also effective, is the City of London Polytechnic publication, Working With Business, a four-page spot-colour glossy brochure, designed by the Polytechnic's own Media Services department. It describes the range of industrial liaison work underway and invites business enquiries.

However, the University of Edinburgh probably carries off most of the awards on the design stakes. Its annual Industrial Bulletin is a twelve-page, full-colour magazine describing its industrial and commercial liaison. It is circulated to 10,000

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selected companies. There is a 90-page directory of the services its various departments can offer -- with a glossy cover, of course. Individual four-page leaflets describe the personnel and projects underway in each department. A folder contains a selection of more than a dozen professionally designed leaflets, some in full colour, describing specific projects which need sponsorship -- laser research, a new building for artificial intelligence research, mid-career fellowships, the electronic music studio, the chair in Scottish politics, and much more. All carry a special logo and the heading of the University of Edinburgh Development Fund Campaign.

Equally innovative in design is Edinburgh's material sent to graduates. Its General Council Appeal Fund published regular reports, showing it to have been a successful enterprise; and graduates are exhorted to give generously to the appeal and are provided with clear standing-order forms and covenant documents to help them.

Perhaps the prize for innovation should go to the converted double-decker buses from Salford's 'mobile education centres' which can take the university's message to companies, schools, and other organizations. The lower decks are equipped for displays and demonstrations, while the upper decks can accommodate up to a dozen people for seminars, training courses, or film and video presentations. The buses are used for carrying displays and demonstrations showing what Salford has to offer potential students and potential business partners, and for taking experts and equipment out to give on-the-spot training to the staff of industrial clients. When not in use by the university, the buses can be hired out by organizations wishing to organize their own travelling exhibitions.

INDUSTRIAL LIAISON

A number of universities have founded companies, charitable trusts, or campaigns aimed specifically at building up their links with the business community and public bodies which may benefit from the services the university has to offer. Such centres provide a platform from which those services can be advertised, and a meeting-point in which existing contacts can be refreshed and kept abreast of developments.

Range of examples

A number of different approaches can be found in respect of this element. The University of Surrey, for instance, has established the 'Surrey Network', a subscription service through which firms can be placed in contact with the university's research activities and receive a short report on any area in which they are interested. Often, this contact leads on to larger and more formal research contracts.

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A roughly similar venture is the Brunel University' Executive Club', designed to build contacts with the local business community. It holds regular meetings with a speaker on topical issues in the industrial and academic area, so making new contacts and reinforcing existing ones.

The University of Leeds sees academic departments as the key component of its interaction with the business community, and has established the University of Leeds Industrial Services Limited to support them. A commercial office has been opened recently, and funds have been invested in a sports hall and exhibition complex so that large-scale events directed to the business sector may more easily be held. In Leeds as in many other successful universities, continuing education courses are seen as providing a flow of businesspeople onto the campus, who can then be made more aware of what services the university has to offer.

The University of London has set up a Development Advisory Group to help 'extend its links with industry through research and development and the provision of advice', and importantly, to look for ways of 'extending provision of all forms of external education to help meet the needs of society and industry'. It includes business executives, trade union leaders, management consultants, and academics among others.

The Scottish universities have always kept close links with their graduates, being under a statutory obligation to to maintain current address lists for them. Most of them now keep these lists on computer, making possible a high degree of selection in the mailing of appeals and liaison materials. Scottish universities see their graduates not as a statutory inconvenience, therefore, but as a well-heeled group having a special affinity with their alma mater, which can be a potential source of funding and business contacts.

There are difficulties, however. The fact that most of the appeals followed the period of budgetary restraint has meant that some Scottish university graduates have thought that they were being asked simply to replace government funding, and naturally resented it: the most efficient fundraising comes in response to appeals for specific projects that would be clearly outside the mainstream of public funding anyway. And raising money from graduates still remains a novel idea in the United Kingdom, though some institutions, such as the University of St Andrews, under its new American-experienced Principal, believe that novelty can be overcome through persistent and effective appeals procedures.

Like Edinburgh, Heriot-Watt University and others produce their own clear documentation to help solicit graduate support. The University of St Andrews, meanwhile, has had an appeal going for many years, supported with full-colour brochures reminding graduates of the peculiar charm of the City and its University.

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Its full-colour industrial liaison leaflet, Research and Industry, which describes its research potential, has been circulated to all graduates with a letter from its Industrial Liaison Officer asking them to bring it to the attention of colleagues.

Affinity groups of graduates can be more specific. The University of St Andrews has graduate groups in London and other key cities, although their function is chiefly social. Edinburgh, for its part, has two organizations, the American Friends and the Canadian Friends of the University of Edinburgh, which maintain their own graduate databases and which can be used for more systematic outreach. Hong Kong and Australasian groups are planned for the future.

Deeper involvement and outreach

At a slightly deeper level of involvement, Leeds has opened a science park on a site immediately adjacent to the campus. It offers 'unrivalled facilities for the small high-technology enterprise' and, in the process, the exchange and development of ideas between business and academe is boosted. The University of Surrey has £40 million worth of building going on at its own installation, the Surrey Research Park. The University of Southampton has fostered more contact with business enterprises by establishing a science park for start-up companies, based on land two miles away from the campus. The City Council is now helping to support and promote this facility. With the help of the Wolfson Foundation, it has appointed a Director of Industrial Affairs and has set up a number of industrial advisory units. Other universities, such as Cambridge also maintain close links with growing companies through science parks and other facilities attractive to small companies.

The University of Birmingham, along with 58 other institutions throughout the country (six in Scotland) is actively involved in the Teaching Company Scheme, which aims to give businesses a greater access to university expertise and facilities, to improve business performance through the application of technological and human skills, to train graduates for careers in industry, to develop and retrain existing company and academic staff, and to give academic staff broad and direct involvement with the business community. Self-financing research projects and consultancies often stem from this initial contact.

In Scotland, Aberdeen has recently appointed its first Industrial Liaison Officer who will help to develop contracts between business concerns and university departments.

The examples of CAMPUS and CAVE

Characteristically, Salford might boast the best-developed system to foster its contacts with industry, although others have caught

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up fast.

Salford formed a separate charitable organization, CAMPUS (Campaign to Promote the University of Salford), with a board of prominent business and community leaders, covering its expenditure from individual and corporate membership fees. It spreads information about what the university can do, using the opportunities of advertising, personal contacts, and the widespread distribution of high-quality magazines and leaflets. Successful summer meetings keep up the dialogue between the university and its corporate subscribers.

CAMPUS provides the first point of contact between the business community and the university, and it discusses and develops new projects to the point where they can be handed over to the appropriate academic department. Through the campaign, the university has discovered friends and sources of support which it did not know even existed before. University staff are rewarded for their participation in CAMPUS through temporary lectureships and access to funds for professional purposes such as books, equipment, the payment of travel and conference fees, and so on.

The Campus Academic Venture and Enterprise (CAVE) fund has been created from UGC and CAMPUS money. University staff seeking extra finance for research are invited to put their proposals to the CAVE committee, which acts as a kind of research council, drawing on the expertise of academics and business subscribers to help allocate funds effectively and to encourage enterprise and relevance in the choice of research topics.

A third innovation at Salford which again helps to foster close relations between the university and the business community is the 'integrated chair'. The holders of such professorships have managerial responsibilities both in the university and with its industrial or commercial partner, with the salary and other costs being shared between them in the ratio in which the professor divides his or her time. Not just engineering, but arts and social-science departments are seen as viable candidates for this kind of arrangement.

SELF-FINANCING COURSES

Many universities, such as Southampton, promote a 'vigorous' conference trade to fill their residential and teaching facilities outside term-time and to bring in extra income during slack periods. Some go beyond the self-organizing conference trade, and design their own adult or 'continuing education' courses and seminars, again as a way of filling up available space during vacations.

The universities which have the most success in raising income from non-UGC sources, however, see both self-organizing conferences, training seminars, and continuing education courses

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as having another, equally important purpose: that of attracting onto campus a stream of professional people who can then be informed of what services the university has to offer, and who may well be in a position to initiate subsequent commercial partnerships between the university and their own organizations.

Some examples

A number of universities and business schools have long been adroit in raising extra income from short courses of a week or less, aimed at business. The City University, for example, raises £3.4 million per annum from its 'services rendered' activities, largely conferences. The University of Reading has its own conference officer, while the University of St Andrews raises income not only from conferences but from renting its student accommodation to holidaymakers in the summer.

Each year, the University of Birmingham attracts some 50,000 people onto campus for courses of various length which it tailors to suit the needs and interests of many different organizations. Groups attending include both public-sector and private organizations, such as health authorities, IBM, the Sports Council, TI Group, the DHSS, Lucas, each of the armed services, every major health authority in the country, the World Bank, magistrates, and voluntary social workers. The university is also prepared to organize courses off-campus for those who cannot get away from work for any length of time. Many of the contacts made in these various courses lead to subsequent research contracts, consultancies, and the development of yet further self-financing courses later on.

The University of Surrey is pursuing an active policy to encourage self-financing courses, with several elements:

- (a) it has recently appointed a Dean of Continuing Education with a remit to encourage the development of short courses, particularly those for industry;
- (b) it has encouraged departments to participate actively by arranging to split any surplus on courses in the ratio of 60% to departmental funds and 40% to central funds;
- (c) part of the university's site has been leased for a Post House Hotel, with the idea that this would encourage conference and short-course activity through delegates being able to stay there during term-time;
- (d) the university is looking at ways of changing the dates of its terms in order to increase the opportunities for conference activities;
- (e) the sports facilities have been opened for community use and Surrey now has one of the highest incomes from this source in the country.

The University of Leeds also recognizes the value of sports facilities, using them for exhibitions as well as sports; and it maintains its strong links with health authorities through a

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successful centre which it has established for training staff in health-service management. The university has set up a special Centre of Adult and Continuing Education to develop the principle even more widely. Meanwhile, the Manchester Business School has established its own centres to help tap particular specialist markets and improve its contact with particular types of business: centres such as the Small Business Development Unit, the International Banking Centre, the Financial Control Research Institute, the Creativity and Innovation Group, and the Computer and Work Design Research Unit. Specialist subsidiary companies exploit particular strengths. Similarly, Leeds keeps its Industrial Unit of Tribology separate for administrative and fundraising functions; and Salford has set up a Public Service Research Centre, which draws on non-science expertise in history, sociology, anthropology, economics, and languages.

Several universities see language departments as an excellent bridge between arts faculties and the business community. Short language courses aimed at the travelling business manager often provide the first meeting with decision-makers who can then see what the university has to offer more generally and perhaps bring their own organizations into a more durable business partnership. The University of Surrey offers translation bureau services to business enterprises and has established an English Institute to help teach business English to overseas visitors.

Properly planned, course income can grow sizeably, even excluding these longer-term spin-offs. For its part, Salford has seen its income from self-financing courses rise from £80,000 in 1981 to over £1.2 million in 1986.

COMMERCIAL DEVELOPMENT COMPANIES

The universities which are most expert at raising outside finance have invariably set up a limited company, or a group of limited companies, to manage their contacts with business and other outside bodies.

The benefits

Perhaps the prime reason for this is that universities have a traditional system of academic management that it is thought important to maintain; but this way of operating, and the special legal status of universities, often makes it hard for them to deal directly with outside bodies where objectives and decision procedures can be quite different. In the past, relationships between universities and business clients in particular have failed, purely because the management structure and competence of the two partners have been incompatible. The committed university therefore needs an appropriate structure through which it can mesh with the requirements and expectations of industry, and through which projects can be effectively marketed and managed.

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There are other advantages. Such a company can help train departmental heads to think more in commercial management terms; it can check more thoroughly than academic managers that overheads and staff time are properly accounted for when research projects are initiated or consultancy contracts are drawn up; and it can help academic staff to register patents and exploit these and their general expertise to its full potential.

Where the client is a public-sector body, such as a department of government, however, even this arm's-length approach may not work perfectly. Some universities have found that official bodies tend to be slow to draw up the specifications for their research projects, are indistinct about their objectives, and change goals while research is running. Perhaps this suggests that some similar arm's-length commercial attitude should be adopted on the part of the clients as well as the universities -- particularly public-sector clients.

Many universities have found recently retired staff (some of whom may have taken early retirement) to be a valuable asset in both their public-relations campaigns with industry and the operation of their commercial development companies.

Trading companies in operation

Recognizing the merits of a commercial approach, Salford set up what is now Salford University Industrial Centre Limited (SUIC) as long ago as 1967. It has a full-time general manager and roughly fifty other full-time employees. Its board, comprising part-time directors including local industrialists, the Vice-Chancellor, and other university officers, has a part-time nonexecutive chairman drawn from the business world. It has its own building, financed partly from the local authority and Department of the Environment grants.

SUIC sells technology and consultancy services to industrial, commercial, public, and other organizations. Its staff locate and tap the scientific knowledge which its business customers require, charging clients for the service. As an ordinary company, it can be sued if it does not deliver the specified service on time and within budget. However, SUIC's businesslike approach to marketing and managing consultancy operations is good news for the university's departments: in some periods, over 80% of the individual consultancy earnings of Salford staff members has passed through SUIC's books.

With Department of Trade and Industry help, SUIC appointed a full-time marketing manager to seek out new business partners and uncover staff projects that might be of value to industry. Today, Salford's income from SUIC and other analogous companies has risen from £0.5 million in 1981 to a sizeable £5.1 million in 1986.

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Table 5. Some elements of the strategy mentioned in the text

Salford	Campaign:	CAMPUS (charity); CAVE (venture fund); integrated chairs; mobile exhibitions; <u>CAMPUS Report</u> (magazine); <u>Brainwaves</u> (newspaper); schools magazine, etc
	Companies:	SUIC (Salford University Industrial Centre); SCEL (Salford Civil Engineering Limited); etc
	Centres:	Public Sector Research Centre, etc
Aberdeen	Campaign:	Industrial Liaison Officer
	Companies:	AURIS (Aberdeen University Research & Industrial Services Limited), income covenanted; eight subsidiary companies; three joint-venture companies
Leeds	Campaign:	Teaching Companies Scheme; <u>Service to Industry</u> and other brochures; sports and exhibition complex
	Company:	ULIS (University of Leeds Industrial Services Limited)
	Courses:	Language courses; adult and continuing education, etc
	Centres:	Science park; centre for training health-service managers
Birmingham	Campaign:	<u>University & Industry</u> (magazine with 20,000 circulation); <u>Biotechnology News</u> and other magazines; PR budget rise; Institute of Research and Development
	Courses:	Varied: 50,000 participants per annum
	Centres:	Institute of Local Government Studies; Health Services Management Centre; Biotechnology Management Group; etc
Surrey	Campaign:	Surrey Network (business subscription scheme); Teaching Companies Scheme, etc
	Companies:	Consultancy company, plus specialist companies taking forward particular developments
	Courses:	Various, planned by Dean of Continuing Education; languages speciality
	Centres:	Translation bureau; English Institute; science park
Southampton	Campaign:	Development Office and Trust; Director of Industrial Affairs; Industrial Advisory Units, etc
	Companies:	Limited company for science park, patents, consultancies, etc
	Centres:	Research Centre (science Park)

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The University of Leeds has also recognized the importance of developing an organization to support the interaction of academic departments with industry, as manifested in the University of Leeds Industrial Services Limited and its new commercial office. The University's glossy leaflet on its services to the business community advertises the role of ULIS in the following terms:

'ULIS (University of Leeds Industrial Services Ltd) is a marketing and development company owned by the University of Leeds. Its function is to help industry, commerce, and the public sector by making available the expertise and facilities of Leeds University in a professional manner to meet customers' requirements -- ensuring that assignments taken on are completed to the schedule, price and specification agreed...Quotations are provided without obligation or cost.'

The University of Wales College of Medicine in Cardiff has also avoided the problems of commercial conflict with its charitable status by forming an associated company limited by guarantee

which will covenant any profits to the college. Although most business contact comes through individual heads of department, the college, through its company, has a policy of encouraging inventors to make known to the college any material which may be patentable, so that it can then take out patents on a strict profit-sharing basis and make arrangements to help the commercial exploitation of the invention.

The University of Surrey has registered a consultancy company so that academic staff are encouraged to put their consultancies through this arrangement. It tries to ensure that academic staff obtain reasonable fees for their services, and that the use of university resources is adequately accounted for. A number of specialist subsidiary companies have been created ad hoc to take forward particular commercial developments.

Scottish innovation

The company formed by Aberdeen, the Aberdeen University Research and Industrial Services Limited, was capitalized from non-public loans and endowments of £50,000 and (as already mentioned) covenanted £110,000 to the university last year. It has eight subsidiary companies, and three joint-venture enterprises.

St Andrews has formed a limited company, STARDEL -- St Andrews University Research Developments Limited -- a wholly-owned company with the principal remit of dealing with the licensing of products developed within the University.

Also in Scotland, the University of Edinburgh corporate link with industries, UnivEd Technologies Limited, is a growing concern. In 1985-86 it negotiated contracts worth £4.6 million

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to the University, one-third up on the previous year. Run as a normal company, its Chairman is a retired senior manager from BP, and the University's Director of Finance is a key member of the board. Its Managing Director is a former lecturer in Business Studies whose speciality is in marketing; he has a duty to maintain contact with University departments to seek out exploitable discoveries or to advise on contracts and consultancies, and to field researchers or other University officials to present the case to industrialists where it might be useful. The activity is self-funding and the profits are ploughed back into extending the service.

Of course, as in all universities, many members of staff in their own departments often develop contacts with commercial companies through their research interests. UnivEd provides them with supporting materials which they can use to negotiate for specific projects or to present themselves more widely at professional seminars and conferences outside Edinburgh. Any individual contacts made in this way are regarded as fortuitous, though UnivEd then takes on the responsibility of further exploitation of the research.

UnivEd is also promoting BEST, the databank of academic staff available to industry and government, derived from questionnaire returns made by UK academics.

The new businesslike attitude, which such arm's-length companies are intended to promote, is perhaps well summarized by the Public Relations Officer of the University of London:

'It is our observation that success depends on the conjunction of academic distinction (especially quality of research...) and the capability or willingness to deliver, in terms of what the outside body wants, at the right time and price.'

Overhead recovery

A number of universities stress the importance of proper pricing in research contracts, and a quasi-independent company is plainly a way of helping this objective. Academics, quite simply, are neither businessmen nor business accountants, and they may have little true idea of the cost of their overheads or how to account for them properly in pricing consultancy services or research contracts.

The University of Southampton notes that 'unless adequate overheads are recovered, or funds provided for the maintenance of donated equipment, [non-Exchequer] support could even result in a net drain on resources'. It is worth recalling that the University of Aberdeen brought in £178,000 last year through 'an aggressive policy on overhead recoveries'. The University of Reading, also, has a policy of trying to make sure overheads are

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properly accounted for, and encourages departments to price their services properly. Other universities are following suit.

Problems of management

The universities which raise the largest amounts from non-UGC sources are clear about the advantages of such outreach programmes: better staff contact with business, new student projects, additional finance for staff, for equipment, and for the university as a whole, an enhancement of the university's reputation in the community and at large, and a more secure financial base for future planning.

However, they are equally clear that strong management is needed to capture these gains. The Finance Officer at Birmingham, for example, says:

'Some of the problems encountered include identifying sound ground-rules on which to operate, persuading industry to meet realistic overheads as well as the direct costs, co-operating in appointments, and possible restrictions on the publication of results.'

The University of Southampton also recognizes the problems that can arise where there are conflicts of interest between academic and business requirements, or where time is spent on routine service work, just for the sake of earning outside funding, at the expense of teaching and research -- hence its rule restricting academic staff consultancy work to no more than thirty days per year. Recognizing that outside consultancies should be relevant to the main work of the university, Southampton encourages departmental heads to keep a benevolent eye on the nature of the work undertaken, as well as its extent.

The Bursar at Leeds takes the point a step further, observing that strong management is required not just to control the total volume of work undertaken, but to make sure that the value of the work to the university is maximized and opportunity costs are minimized:

'I would suggest that the main difficulties lie in costing and monitoring all this enterprise. It is possible that we are, in some cases, sacrificing much-needed net contributions to university funds in our enthusiasm to attract a higher volume of business. This is an area which exercises most universities as well as the UGC and the Committee of Vice-Chancellors and Principals.'

Other concerns

It is not just the time of the academics in the departments which can be eroded by this new activity. Vice-Chancellors and Principals are often asked to present their institution's case to business leaders, and when this is combined with their other traditional duties, their diaries can become overfull. Some,

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such as the University of Edinburgh, are considering the need for some senior colleague who will be in the Principal's confidence and have roughly similar standing as far as the outside world is concerned, so that the business aspects of the university can be more efficiently presented.

Many universities would still like to be almost exclusively reliant on public money. Some complain that contract work has the disadvantage of being mostly short-term and easily 'turned off', or that national pay awards can seriously damage the profitability of a particular venture. However, it is questionable whether public funding, disposed at the whim of politicians and subject to exactly the same wage pressures, is really much different.

At the other end of the scale, some universities which have seen the potential for wider liaison with the community voice the opposite complaints -- not that they are having to rely too much on non-public sources of income, but that they lack the resources to develop their commercial activities as they would like. Much of the money from outside sources raised by UnivEd in the University of Edinburgh, for example, is being reinvested in more staff in order to extend their commercial base.

One problem which the universities may feel in the future, of course, is that of increased competition as more and more of them find the ability to present themselves effectively to the outside world. Most seem not to have thought about this point in much detail, but the Director of Marketing at Brunel University, as one might expect, is particularly aware of it:

'These have been years of considerable market buoyancy as universities have increasingly turned to non-UGC sources in an attempt to maintain or hopefully increase real income. I have no doubt that after the initial surge, the market for research is becoming increasingly competitive. Only those institutions who plan their overall strategy and then harness and market their expertise in a businesslike manner will continue to make headway on the industrially related research contracts which offer the greatest potential.'

Such a campaigning organization needs a separate identity within the university structure, and an adequate investment budget to get started.

Many universities have appointed an Industrial Liaison Officer who naturally has an interest in this campaigning function, but who might also be expected to head a commercial company through which business contracts are managed and fostered.

The Commercial arm is a company set up by the university in order that it can deal in a businesslike way with commercial

6. THE ROAD TO INDEPENDENCE

THE UNIVERSITIES' INITIATIVES

Established structure

From the experience of the last few years, a familiar structure is now emerging -- a roughly standard framework which has evolved in several universities in response to the need to raise more income from non-government sources. The key elements of this structure are the Campaign, the Commercial arm, the Contracts and consultancies, the Courses and continuing education, and Centres for the development of specific technical interests.

The Campaign element is essential. Universities have been able to operate with only a marginal contact with the community, because their public funding has been secure. The views of politicians and bureaucrats had sometimes been of more interest to them, and a larger target for their marketing skills, than the students and the public they were supposed to serve. Now, the universities have to market themselves more effectively with the general community, particularly the business community.

A common technique is to set up a local club or loose affiliation of businessmen who are kept in touch with the university's current activities. They provide a useful commercial input into the discussions of the academics, and can suggest better ways of getting the message across to other companies. Newsletters, leaflets, and other public-relations materials are needed in order to inform customers, either businesses or public-sector institutions, that the university has something to offer.

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The Commercial arm is a company set up by the university in order that it can deal in a businesslike way with commercial

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clients. The motives of academics and businesses are different, and the interposition of a subsidiary company to negotiate contracts, price research properly, and exploit achievements more widely, is essential.

Contracts and consultancies are likely to be the major source of private research funding for some time, which requires that the university and all the members of each department have a clear statement from the institution's authorities about what their priorities are, what is appropriate and inappropriate in terms of such development, and why they should attract such support at all. Importantly, academic staff must be given good incentives to extend their commercial contract work.

Courses can grow to be a large part of the income of any university, if nurtured sufficiently. All have their own strengths in terms of location or expertise, and the market for short courses and conferences is growing among potential business and public-sector clients alike. Again, this probably needs a staff specifically devoted to the effective utilization of university property and manpower for this purpose.

Some universities have the ability to grow special Centres to act as a focus for specific research or sponsorship support. A donor might be more willing to support a definite cause, but unwilling to support a general academic department or the university as a whole. Furthermore, centres dealing with high technology development or language skills, for example, can grow into useful bases with their own buildings and staff, acting as a magnet to draw in commercial support. Events can be held within them which help build new contacts with potential clients.

GOVERNMENT SUPPORT NEEDED

Because many of these things are having to be learnt afresh by each university, it is common to find that mistakes are being repeated or that the required expertise is simply hard to find. The government may play a role in helping the universities acquire some fresh marketing talent and administrators with business skills, and in disseminating information about the successes of one university to the others.

Finding the facts

A useful first step would be to require the universities to state what they are doing to raise funds from non-UGC sources, so that their needs, strengths, and deficiencies could be identified. Such a survey, presumably carried out by the Department of Education and Science, would seek information about the structure and success of the universities' campaigning activities, whether they had established commercial companies, how they developed course and conference trade, and what centres they had to focus commercial and sponsorship interest.

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Such an exercise would certainly help to find out what further help was needed to encourage more independent financing, but it would have a useful by-product. It would enable the Department of Education to compile a useful and comprehensive register of the research abilities, and of the marketing team, that could be found at each university. That would enable it to act as something of a clearing house for commercial enquirers -- although that function should be seen as a lucky adjunct to the universities' own efforts, rather than as a replacement by them.

Flying squad

Using professional marketing and public-relations firms, the Department could organize a flying squad of experts to evaluate the activities of each university and to offer advice on how it could develop. The experts would have to judge the best forum: whether to meet with university officials independently, to promote the concept of wider community relationships through seminars aimed at the whole university academic and administrative staff, or even to hold national conferences round the country at which several universities could learn and exchange information.

Not only would such advice include advice on promotion, design, outreach, business links, and other public-relations work. It would also have to include a management consultancy function by which more efficient use of conference facilities, better management structures, and new course designs could be introduced with greater ease.

Another aspect of the advice which universities might need is legal and accounting. Some may be unaware of the merits of forming a subsidiary company to handle commercial clients, while others may not know precisely how to form such a company in law. Questions about how companies can be constituted to give maximum tax advantage to the university (probably by covenanting their profits to the charitable section of the institution) could be discussed with the administrators directly, using the flying squad technique.

Target levels

Armed with some background information about what the universities have achieved so far and what they think is possible, it should be practicable to set targets for each institution.

A realistic target for the majority of universities in the United Kingdom would be to have roughly 20% of their income generated from independent sources, although there would be wide variation at first -- some, of course, are already well ahead of that target.

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Another useful technique would be to extend the statutory obligation of universities to keep in touch with their graduates. Attention to this could provide a useful potential source of sponsorship income for many universities, and a useful list of sympathetic contacts in industry.

Public bodies

Another useful step might be to encourage public bodies to be more businesslike in their dealings with universities. At present there are many research projects being conducted for government departments and other public-sector institutions, but the bureaucratic nature and objectives of these bodies can make life hard for the university concerned.

Again, it must be assessed whether some intermediary body would be useful between public institutions and the universities which research for them -- a body which is more commercially orientated than the departmental officials themselves.

TAXATION AND OTHER CHANGES

Business start-up

The government has enjoyed much success with its Business Start-Up Scheme, designed to encourage the introduction and growth of new businesses.

To some extent, the activities of the universities can be seen in much the same light. They have plenty of ideas, but sometimes lack the capital or the encouragement to exploit them fully. A version of the Scheme could well be deployed to help new commercial ventures in the universities on a systematic basis.

Help for endowments

Another way of encouraging self-reliance is to make it easier for businesses, foundations, and individuals to sponsor university staff and give general support to research centres and science parks.

At present, universities require support in the form of a covenant, guaranteeing a stream of payments, before tax relief can be claimed. In the United States, even one-off payments to charitable and educational organizations are tax deductible, with the result that there is significantly more giving. The same sort of boost could come to the universities if one-off donations attracted tax relief.

The taxation of the subsidiary companies which universities set up could also be reconsidered with benefit. The fear that special terms for university-owned companies would be an

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unworkable anomaly is unfounded: There is no problem about giving them special treatment, because universities are constituted by Act of Parliament or Royal Charter and are thus an easily identified and compartmentalized class of institutions. Most people would think it right that the universities should have special treatment because of their important educational role -- that is why most are charities already. This generosity could spread even to their commercial arms, and any such help would have the added benefit of encouraging invention.

Government grants

With the UGC being reconstituted into a body with more business representatives involved, it seems likely that funding will in future be skewed more to those universities which take an active role in promoting the community use of their research abilities and other facilities.

If such developments are to be encouraged, it suggests special arrangements are necessary to split university grants into separate items for separate activities, applying different rules for each segment. For example, some part of the budget allocation can be made on the basis of matching the funds raised by the university's own contract or course income; other parts might be earmarked for specific research centres, continuing education development, and so on. Such an approach would allow more direct encouragement of self-financing arrangements than simple block grants calculated according to broad and imprecise formulae.

THE UNIVERSITIES, GOVERNMENT, AND BUSINESS

Course structures

There is a strong case for getting the universities more in tune with private-sector needs through the revision of university course structures.

The concept of the 'thin sandwich' course, where students spend a small proportion of their time gaining active industrial experience, seems a valuable one which could be extended. All such measures have the added advantage that they bring business executives closer to the workings of the university.

Some universities have already experimented with novel term structures, making their courses shorter for students who want to gain qualifications and go quickly into business. Another prospect might be to make the summer vacation into a more structured part of the course, with the university department arranging summer work with specific companies where the student would acquire practical course-related skills.

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Secondment

A normal principle in the United States is for business executives to be seconded to a university for a year, with the company continuing to pay their salary. This principle could be encouraged in this country.

The benefits for the university are plain enough -- they get an extra staff member with a knowledge of what is going on in the outside world and a number of business contacts who might help provide additional contract work. Yet the benefits to the company are also large, despite the fact that they are not commonly seen -- that the staff member gains new experience, has to learn new presentational skills, is in on the latest research developments, and might even become a better manager in the process.

Naturally, this requires something of a change in attitudes, for business executives must be able to return to their company without loss of seniority, and their bosses must be willing to spare them and to recognize the potential gains of their sabbatical. However, the system works well elsewhere and could certainly be encouraged. As far as the companies are concerned, it provides a good and tax-free way of helping academic research.

This intermixture of the academic and business communities can be helped in two ways. Firstly, the government can encourage it as a policy measure, and it would seem reasonable that some form of honour should attach to companies taking up the challenge: they should be given due credit for helping the education process. Secondly, organizations such as the Institute of Directors or the Confederation of British Industry could form their own clearing house to encourage the secondment principle and to match business executives to university departments.