The contribution model – a school level funding model
Jane Filby and Helen Higson

1. Preamble

"I have nothing" says Head of £20 million business. Why should this be?

Over a number of years, as the Higher Education Funding Council for England's (HEFCE) funding models became more transparent, Aston University was able to discover how its funding for teaching and research was calculated. This enabled calculations to be made on the funds earned by each school in the University, and Aston Business School (ABS), in turn, to develop models to calculate the funds earned by its programmes and academic groups. These models were a "load" and a "contribution" model.

Following the appointment of a new Vice Chancellor in 1996, Heads of schools changed from being elected, to being appointed, and many centralised University functions were devolved to the four Heads of schools, including responsibility for budgets. Heads were seen explicitly as managers, and in the case of ABS, a manager of a large business; £17.5 m 2003/04 (projected to grow to £27m in 2007/08). In ABS some responsibilities were devolved to the heads of the six academic groups (Group Convenors). This trend towards devolved budgeting and increased "managerialism", evident in many universities today (Jarzabkowski 2002) can be traced back to the 1985 Jarratt Report which presented a view of universities as corporate businesses comprising a variety of subsidiary units (Webber 1998).

2. Characteristics of ABS and its load model

ABS offers a full range of programmes: undergraduate (UG) (1894 ftes), postgraduate (PG) (508 ftes), doctoral (82 ftes), management development and research. It has a residential centre for conferences and management development courses. All income from these activities is attributed in the University's funding model to ABS. There are currently 104 academic staff, organised into six academic groups, and 65 support staff (administrative, computing and secretarial).

The ABS load model, which has been in place since the 1980s (Higson, Filby and Golder 1998), is a database, calculated annually, recording the teaching duties of academic staff (full time, part time, and sessional), research activities, and administrative duties.

Components of the load model include teaching - calculated on the basis of student full time equivalents (ftes), supervision of projects, placements and doctoral students (ftes), research – points allocated on the basis of publications as ranked in RAE criteria – national, international etc, and research grant income, and administrative duties - allocated load points.

Each activity is calculated by individual and then summed up for each academic group in terms of ftes earned from teaching and administrative and research points.

The load data informs management processes in ABS, e.g. appraisals, PRP, allocation of tasks, monitoring staff/student ratios, and as the basis for calculating income to the academic groups by means of a financial contribution model.

3. ABS Contribution Model

The introduction of devolved budgeting is often driven by "the view that resources should be made available to the units that appeared to generate them" and also that these units should make a financial contribution (Webber 1998). This was the case in Aston. In 1997/98 the University moved to a contribution model where all income was attributed to schools, based on the HEFCE funding model for teaching and research. A tax was taken to run the University and fund strategic initiatives, and budgets then allocated to each school. Responsibility was devolved to the heads to allocate the budget across all activities with no ring fencing of e.g. salaries, supplies, or IT. Schools were expected to balance each year. If it was predicted that they would not, there was agreement on the use of the strategic investment fund. This decentralised resource allocation model, with school Heads having "control over budgets, with responsibility for strategic direction, income-generation and financial viability " (Jarzabkowski 2002), resulted in ABS introducing in 1999, its own "contribution model". This converted load data into monetary values, which determined the budgets for the academic groups.

The stated purpose of the model was: "Giving Groups freedom to run their own affairs in a pre-planned environment and the ability to distribute their surplus once their core costs are covered. Whilst giving Groups freedom, giving clear responsibility to Group Convenors in the employment and payment of staff. There would be no handouts to Groups beyond the budget, other than for strategic investments and cost emergencies outside the Group's control."

These are characteristics of a decentralised model, where "departments are able to be locally responsive to strategic initiatives within their discipline and to generate, deploy and allocate their own income streams." This model "may be more congruent with traditional expressions of collegiality and university management" than others. Jarzabkowski (2002).

Components of the contribution model

Programmes

Funds are shown coming into the School via the programmes, based on ftes, and the income from HEFCE T for teaching, tuition fees, "premium fees" where charged e.g. MBA, for the UG, PG and Doctoral Programmes, HEFCE R (which is based on amongst other things, the last RAE rating, the number of research active staff and number of doctoral students), the School's

Management Development Programme and Management Development Centre. Excluded from the model are research grants and contracts.

Example of the UG Programme 2003/04:

Programme	Undergraduate
FTEs	1792
Income	£
HEFCE T	2,981,362
Tuition fees:	
Home	1,788,608
Overseas	1,318,264
Gross income	6,088,234

Taxes

The next set of calculations relates to taxes which are imposed at programme level. One tax is set by the University to run central services and strategic initiatives, currently 35% of fee income, and 10% of income from research, management development programmes and the conference centre. The other is a School tax, set at 6% of income, to meet its central costs.

Programme budgets

The next step in the model is to calculate the budgets for the programmes which cover salaries of staff running the programme, a “supplies” budget, IT costs (the programme’s share of the School’s IT budget which is calculated via a separate model which attributes costs based on staff and student ftes), and payments to the academic groups who provide the teaching and course director roles. These payments are based on the ftes and points earned by each group in the load model.

The payment rates made by the programmes to the groups in 2003/04, were for each UG fte - £1,450, PG fte - £3,300, Doctoral fte - £2,600, and each administrative point - £4,000.

Example of the UG Programme 2003/04:

Direct Programme costs:	£
Salaries	541,233
Supplies	113,343
IT and equipment costs	204,833
Total	859,409
Payments to Academic Groups:	
Teaching/supervision	2,557,776
Administration	204,235
Total	2,762,012

The Programme then had to pay its taxes to the University (35% of income) and to the School (6% of income).

This is the last step of the model for the programmes at which point programmes, are expected to balance.

Academic Groups
Groups receive income from the programmes based on ftes and administrative roles performed, at the rates quoted above. In addition, they receive income from the HEFCE R stream for each research active member of staff. All based on load model data.

From their income, each group has to pay salaries of its existing academic and support staff, a supplies budget, and its share of the School's IT costs. The balance remaining is the group's discretionary fund which it can use, without ring fencing, for additional academic or support staff appointments, additional equipment, to support research, doctoral bursaries and sessional staff, i.e. staff brought in to teach specific classes, to fill gaps, as specialists and practitioners, and to allow sabbaticals to be supported. This discretionary budget for a group can be large e.g. nearly £0.5m. An example of a group's income in 2002/03 is set out below:

Group income:	£
UG teaching	494,301
PG teaching	249,620
Doctoral	10,246
Admin	38,550
Research	163,265
Gross Income	955,983
Expenditure:	
Academic & support staff salaries	500,666
Supplies budget	10,466
IT costs	16,734
Total	527,866
Discretionary fund	428,116

Groups in deficit carry it forward from one year to the next. This has been very rare. Groups in surplus can carry money over in the form of bursaries for doctoral students and sabbatical funds. The University expects each school to balance overall each year. The deficits and surpluses therefore have to balance within ABS. Groups in deficit have to plan to balance over time by for example, developing new programmes, making their offerings more attractive to students in order to increase ftes, taking on more administrative roles, and ensuring that all staff are research active.

There are no taxes at group level. This allows Convenors to calculate easily the value of an fte in the different programmes, or the income from running an additional module. They can calculate the income from different levels of recruitment and how many staff it would support.

A group's destiny is in its own hands. It has to run activities which earn it the income needed to support itself, fund sabbaticals, employ sessional staff,

support research work, pump prime research and bring in academic visitors from abroad.

4. Challenges to running the contribution model

Good management information systems are essential to running the model (Webber 1998). In ABS this includes accurate and timely load model data on which to base the contribution model. The data has to be rigorous and able to be challenged by any individual. Expertise is needed to run these models. This has been achieved in ABS.

Accurate and timely financial information is required to run the contribution model and for managers to monitor budgets. There are improvements needed in this area and it is hoped that an imminent new financial software package will help with this. Timely, also in terms of being able to announce budgets at Easter, for the following financial year beginning in August, for recruitment of staff by October. Correct predictions of salary costs for the year ahead are required, including increments, pay rises, honorariums etc. The model ran one year with average salaries for each grade, but this was not accurate enough to manage the budgets. Accurate predictions of income are also required. The School guarantees each group's income at Easter based on students who will be walking through the door in the following October, so it is essential to have accurate projections of student numbers and income. In reality the Easter deadline has not always been possible to meet because this information has not been available.

It is important that the weightings in the model reinforce the strategic objectives of ABS, and do not just import without reflection, the weightings used by HEFCE. For this reason, payments to groups for doctoral and postgraduate students are higher than the mechanistic use of HECFE income would imply, because the School wishes to encourage these activities. Also, what is appropriate at one time in the School's development may not be appropriate at another time.

"We have to find some way of using a simple model, while being able to be sufficiently nimble to adjust it to what's right for the strategy of the School." Convenor.

There needs to be clear plans for the future and clarity of vision and mission, so that the models are not responding haphazardly to changes in the internal and external environment. This has to be supported by the University's senior managers.

Convenors are professors with teaching and research loads and are now expected to monitor and plan budgets in excess of £1m. This is an interplay of professional (academic) and managerial hierarchies (Webber 1998). They need accurate and timely information to allow them to make budget calculations, monitor them and predict ahead. They need to understand the model and to be able to do scenario planning. This has training and development implications for Convenors and other senior managers. They

should also be able to influence the model. This is one area that needs consideration in ABS. "There is no mechanism that I know of to influence it." Group Convenor

The lack of experience of Convenors has lately been addressed by running briefing sessions for Convenors on their appointment. There is no formal mechanism though for them to influence the model.

Accurate information is needed on HEFCE funding models. Different staff running the models in the University, in Registry, Planning, Finance, Personnel and schools, have to use the same information database. Five years after its introduction, this is still an issue, and has been difficult to achieve because of the different purposes and bases for fte calculations e.g. for December HESA statistics, different time phases of tuition fee invoicing and income for part time students. All figures in the model have to have an audit trail. Most importantly, the assumptions underlying each set of figures have to be made explicit, and this has taken time to document and understand.

Robust quality processes are required. The load and contribution models do not address issues of quality. Hours taught are not in the contribution model. Groups are paid on the basis of ftes earned. This could lead groups to teach larger and larger classes, and reduce the hours taught, so it is essential that feedback and quality monitoring processes are put in place to counterbalance this. This is done, for example, by specifying learning hours and minimum contact hours in module outlines, by analysis of feedback questionnaires, staff student consultative committees, the personal tutoring system and formal reviews of the programmes.

Income need to follow performance. It is essential that new initiatives and additional students brought in, are rewarded in the relevant year and demonstrated to be so, if not, morale is affected.

The models need to be able to change as the environment changes. Mechanisms need to be in place to monitor the environment, to review models and change weightings and rewards as necessary. But care is needed when changing elements in the model because these impact on groups differently, because of their different portfolios, and also because there is a need to retain predictability in rewards for activities.

5. Impact on Behaviour

The load and contribution models can encourage instrumental behaviour. Staff measure rewards for different actions and make rational decisions accordingly. "Most of the time, most people just get on with the job because they are professionals. Danger that people think what's in it for me, what's in it for the Group? But I do not think it's a major problem." Convenor

Groups may wish to retain ownership of courses in order to protect their income, when there may be good academic reasons for cross group

collaboration or dropping a course. “People hang onto courses longer than they should do. People may fight to retain things which it’s not good for the School to retain, because their resources will go down.” Head “Makes friction points more explicit – not a bad thing.” Convenor

Where groups are in a surplus, they may choose not to take on activities, for example, launch a new programme, take on more students or teach students in smaller groups, when there may be good reasons related to the student experience for doing so. “ There is the possibility that the student experience may be compromised.” Programme Director Mechanisms need to be in place to counterbalance these pressures; resolution comes via the committee structure.

When groups can choose how their staff are deployed, it is of benefit to the programmes and students. All can see the income generated by their activities. Convenors negotiate with Programme Directors for inputs which make the most efficient use of their staff. Groups can therefore plan in a predictable environment, their future size and composition. The portfolio for each group can be different. Groups become entrepreneurial. “It has been the major source for innovation.” Head “The degree of freedom as a Group to run our own affairs is really quite remarkable.” Convenor

The impact of the model is more painful when groups are in decline because the model ensures that money is not taken from others who have been successful, in order to shore up declining areas. “It stops the School robbing areas of success to keep failing areas doing what they want to do. I cannot comprehend managing without one.” Head However, “There are some subject areas which cannot respond very well to incentives in the model because their subjects will never appeal to mass markets of students.” Programme Director The model allows investment in new programmes by allocating income to groups for “product champions”.

6. Impact of the model

The model enables the Head to account for the use of scarce resources e.g. academic staff, and to support cases to the University for additional resources. This would be by negotiating on University tax levels and the services delivered for this tax. The model frees the Head from being lobbied for resources and for special deals. “It removes a huge burden of time consuming one to one negotiation and deals. It liberates the Head to concentrate on strategy and think about the consequences of decisions.” “It stops begging.” “We can evaluate strategic options very very quickly and argue cases to the University for investments.” Head It “transmits reality” for decision making. Head,

The Head has to ensure that the model gives appropriate incentives to support the School’s vision and strategic direction. “The model provides appropriate incentives. It sends out signals which are very clear.” Head The model sets clear targets for the programmes for student numbers and income,

and “makes it clear for everyone to see that it is the programmes which generate the income.” Programme Director

Groups are “masters of their own destiny.” “It helps pick the real priorities, what we really want to do.” Convenor “If groups want to grow and develop, it helps to foster that, and that helps the programmes to grow, be stronger and more successful.” Programme Director

The model is open, fair, transparent, and is as predictable and stable as it can be given changes in government funding. It enables scenario planning to be carried out. Strategic priorities can be reflected; it is not a mechanistic model. It forces discussion on these issues. “It’s liberated a lot of the professoriat, and excited them. Given them an incentive to develop a group as they have wanted to. The professoriat understand they are all in the same boat. Mutual understanding that they are all facing the same issues. It helps greatly that one is not more favoured than another.” Head

7. Way ahead

Operationally, there needs to be greater integration and rigour of databases across the University and School. This will reduce the load on staff inputting the data, and make running the models more efficient. This is an area still needing attention. There are no shared University financial data bases. Multiple inputting of data and cross checking has to take place and errors in assumptions made, still emerge. There is a shared understanding of the funding models, there is also increased pressure on each area, Registry, Planning, Finance and ABS, to get the data right in exact detail. There is significant input of administrative staff time required to run the models, but the commitment is there, as is top management support, without which the models would not be successful.

There needs to be continuous monitoring of these models and contributions from a wide range of staff, more so than at present, so that those managing the academic staff can influence the models. In these ways the models will be congruent with “traditional expressions of collegiality and university management” Jarzabkowski (2002)

In ABS, strategy is driven by academic and business needs. The models need to be academically driven, not driven by the administrative staff managing the databases so that they align with the School’s strategic direction. Strategically, there is the danger to guard against of “goals/means displacement, in which a procedure intended to aid strategic choice begins to dictate the choices available.” These models are “inherently problematic when carried to extremes; therefore internal fit is, ideally, flexible to changes in the university and the wider environment” Jarzabkowski (2002). This is the challenge for the senior management ABS.

References

BURGESS, T.F., LEWIS, H.A. and MOBBS, T. (2003) Academic workload planning revisited. *Journal of Higher Education,* **46:2.**
HIGSON, H., FILBY, J. and GOLDER, V. (1998) A critique of a model for an academic staff activity database developed to aid a department in strategic and operational decision-making. *Perspectives*, **Vol 2 Number 1**, 28-32.
JARRATT, A. (1985) *Report of the Steering Committee on Efficiency Studies in Universities* (London, CVCP).
JARZABKOWSKI, P. (2002) Centralised or Decentralised? Strategic Implications of Resource Allocation Models. *Higher Education Quarterly,* **Vol 56, No 1**, 5-32.
MARCHINGTON, M. and WILKINSON, A. (2002) *People Management and Development: Human Resource Management at Work,* second edition*,* (London, CIPD).
MULLINS, L.J.(2002) *Management and Organisational Behaviour,* sixth edition, (Harlow, Prentice Hall).
SCHLUTER, S. (2004), *Managing Staff Performance in British Higher Education: A Case Study, unpublished diploma thesis,* (University of Trier).
WEBBER, G. (1998) Devolved budgeting – challenging the new orthodoxy. *Perspectives*, **Vol 2 Number 2**, 64-67.