JRAMifications

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Last year I returned to Oxford after two decades in a large civic Russell-Group University where I was a Senator for twelve years, and was in various ways closely involved with resource allocation and its implications (e.g. developing money-making teaching initiatives, and serving on a committee to assist the Finance Director in adapting the resourcing model). The clearest lesson from this experience was that a financial allocation model has, over time, a profound influence on institutional behaviour and relationships. Consistent incentives, applying their pressure year after year on individual financial units, can powerfully transform how things are done, often in unintended ways. Good "collegial" intentions – even if widely endorsed in theory – can all too easily be eroded as committees within each unit, composed of well-meaning people with varying wider loyalties but united by the desire to improve the unit's bottom line, progressively make decisions that lead inexorably towards patterns of behaviour driven by the allocation model. Each unit is likely, at some point, to experience temporary financial difficulties. When this happens, hard decisions need to be made, and in a resource centre model, the financial interests of the individual unit will then usually dominate any wider collegial concerns. So, for example, one department may feel compelled to stop sending its students to be taught by specialists in another (or to stop allowing its students to make "elective" choices outside the department), in order to retain the relevant teaching income. Over time, such individual decisions accumulate, and are very seldom reversed. A decade or more later one can look back and detect a widespread loss of collegiality and inter-departmental co-operation, but by then it is too late to be easily reversible.[1] The moral of all this is that any new financial allocation model must be scrutinised very carefully indeed before being adopted. Good intentions and optimistic "spin" are no substitute for rigorous and hard-headed game-theoretic analysis of its real implications. In this spirit, let us now turn to examine the recent Joint Resource Allocation Method (JRAM) proposals.

Academic Goals and Financial Incentives

The JRAM document is reassuringly emphatic about the academic focus of its primary aims and objectives. These are to promote:

- Teaching and research to the highest standards (twice);
- Advances in knowledge and understanding (twice);
- The academic goals and objectives of the collegiate University (four times).

The JRAM is designed to do all this through "a clear and consistent set of incentives" which, we are assured, "align the financial incentives behind the achievement of these [academic] goals". The JRAM is "simple and transparent" and "evidence-based", so that its "contribution to the achievement of the academic objectives has been made visible".

Since the JRAM's point, emphasised in no fewer than eight paragraphs, is to create appropriate incentives, it is surprising that the document says so little about what exactly these

[1] A clear example closer to home is given by the existing Resource Allocation Method (RAM), in which – presumably through some initial oversight when the RAM was created, or perhaps an excessive desire for simplicity – a University Lecturer costs a department no more than a CUF post, while yielding more than twice the share of the individual's time. As a direct result, appointments to CUF positions have all but ceased in departments that have spotted this anomaly, with a serious (and, as far as I know, completely unplanned) impact on College teaching.

incentives are supposed to be, and how they are supposed to cohere with the "academic goals and objectives" that they are intended to promote. Only in the case of "QR" funding is this at all explicitly spelt out, with the plausible suggestion that colleges will have more incentive to recruit and foster strong researchers if they share in the financial rewards of the RAE.[2] But with respect to teaching and postgraduate research, we are offered no more than the bland statement that "students will generate different levels of income … varying with individual college fees and subject choice". Nothing is said to justify the implicit claim that the incentives created by such variations will be academically appropriate, let alone desirable. In a document that extols the virtues of "transparency" and "evidence", such a lack seems deeply suspect. One is left with the impression that the prominent emphasis on academic values is mere window-dressing: *no practical role whatever is played by these values*, and what really drives the proposal, almost exclusively, is the financial principle of allocating income "as earned".

Promoting Academic Goals?

If we go on to examine the resulting incentive structure, we might reasonably wonder whether it does in fact promote our academic goals. The most prominent feature of the resulting distribution is a massive increase in resources – of nearly £3,000,000 – to eight graduate colleges, two of which (Nuffield and All Souls) gain over £770,000 each per year. When these are already two of the wealthiest colleges in the University, it seems hard to believe that any such distribution of scarce resources can possibly be well designed to promote the collegiate University's academic goals. At the other end of the scale, a number of far poorer mixed colleges stand to lose up to a sixth of their relevant annual income (e.g. Pembroke which loses over £300,000 or 16.7%, and Keble which loses over £350,000 or 16.2%), while the Humanities Division is set to lose over 8%, or nearly a twelfth, of its current income. Within the last month, the *Times Higher* has contained one report placing Oxford first in worldwide Humanities research, and another report placing Oxford first in British Humanities teaching. It is therefore hard to see how a such savage cut to the Humanities Division can possibly be supposed to "align … financial incentives" with academic goals.

Some of the reasons for this perverse impact are easy to discern. On the one hand, home or EU undergraduate teaching is notoriously under-resourced. On the other hand, postgraduate teaching is not subject to the same fee limits and can easily attract lucrative overseas student fees, while research is mostly now relatively well resourced under the RAE and "full economic costing". The winners in the JRAM game are those that focus on postgraduates and research; the losers are those that teach home undergraduates. *So if the overriding aim is to maximise short-term income to the collegiate University*, then it is fairly clear what sort of thing we should do:

- Drastically curtail, dilute, or even eliminate the teaching of home undergraduates;
- Pursue overseas students avidly, filling our colleges with taught postgraduate masters programmes designed to appeal to those from America or Asia;
- Commit academic staff almost exclusively to research, recruiting postgraduate teaching assistants to organise the courses that remain, taking advantage of their need to work to pay for their maintenance and our high fees.

[2] However the JRAM implementation of this policy seems highly problematic, tied to the performance of whole departments in the previous RAE and the identity of the researchers who were submitted. This is entirely backward-looking, and moreover fails to give colleges a significantly stronger incentive for investing in future research, since the amount received for each RAE-active researcher will depend equally on the performance of researchers in *other* colleges (with any profit shared amongst those colleges), whereas the cost will be borne by the individual college. Financially, therefore, the direct incentive for each college is to invest only in researchers in "top" departments, and only to the extent necessary to qualify them for RAE submission.

But can it seriously be thought that *any* of this is genuinely in tune with the "academic goals and objectives of the collegiate University"? Surely not! The Panglossian assumption that some invisible hand can be relied on to align financial incentives with academic values is pure fantasy.

Should Income be Allocated "As Earned"?

The principle that "income should be allocated as earned" has a seductive simplicity, and an aura of fairness. But it is not by any means self-evident, and we should not naïvely presume that what is *earned* (i.e. received in respect of activities undertaken) has any automatic correlation with what is *deserved*, especially when some of our activities are rewarded so disproportionately in comparison with others. Here are some other fairly obvious points against the principle:

- It implies that academic values *should not* determine incentives. If income is allocated as earned, then it is at best left to chance whether incentives will align with academic goals.
- It positively *prevents* incentives from being aligned *efficiently* with academic – or even financial – values, because it devotes most of the resources to "rewarding" behaviour that is already taking place, rather than targeting it to desirable changes in behaviour.[3]
- It removes a great deal of scope for academic planning (e.g. fostering fledgling initiatives, or assisting units facing hard market conditions), and makes the University's development subject to volatile changes in the various funding environments.
- It runs the risk of generating gross inequities and consequent tensions, and also incentives for individual academics that may well run counter to the University's interests (e.g. too great a focus on short-term financial results rather than long-term academic achievement; a rush to abandon teaching for research posts, and to leave poorer colleges).
- It cannot be a universal principle, since it would leave administrative and support services completely unresourced.
- It likewise overlooks relations of mutual support between academic units (e.g. where one unit's activities provide a necessary condition for another unit's income).
- It ignores historical contributions, while allocating benefits that evidently accrue in large part from the University's collective historical reputation.

To illustrate some of these points, suppose that a modern graduate college is able to thrive – and to attract lucrative overseas students – very largely because it is part of the historic University. Suppose also that the University is able to retain its place in the world, and in the nation, only if it continues to be seen as a guardian of top-class academic values at the undergraduate level (and accordingly devotes the required resources to expensive tutorial-based teaching of a significant proportion of the brightest young people from Britain, and some from abroad). If these fairly plausible assumptions are correct, then it would be disastrous to turn every college into a graduate college, and probably against even the long-term interests of the *existing* graduate colleges that a system should be implemented giving powerful "incentives" in this direction.

[3] If a certain amount of money is available to provide an incentive to take more graduate students, for example, then it is obviously highly inefficient to give most of that money to colleges that are *already* taking graduate students and doing very nicely from the business. Indeed such a distribution might well give such colleges a *disincentive* to take more graduates, if there are diminishing marginal returns (e.g. at some point the academics concerned are likely to prefer smaller teaching loads to yet more money for the college's endowment).

Transparency and Conflicting Incentives

Maybe some substantial arguments can be presented on the other side, in favour of the "as-earned" principle, but if so the JRAM document fails to present them. The nearest attempt is perhaps the repeated commendation of the principle's "transparency", but this is a red herring: transparency is a measure of the openness and explicitness of an allocation procedure, not of the specific principles by which it operates. And besides, one can doubt just how "transparent" the resulting JRAM really is (even if one approves of its subordination of academic to financial values), because of the complex web of conflicting interests to which it gives rise. It may aspire to set up a clear structure of incentives that pull in consistent directions, but the reality is very different. In outcome, its "transparency" turns out to be rather like that of a magnetic pendulum toy, in which the external forces applied are straightforward, but whose resulting behaviour – unless the magnets are all placed together – is typically wildly unpredictable and chaotic.

It is easy to find examples of these opaque perversities.[4] In respect of undergraduates, for example, some departments are given relatively strong incentives to increase recruitment, since they "earn" the lion's share of the resulting income. But the department can recruit only if some college agrees to take the students, and the JRAM may provide no incentive for such agreement. Accepting a Fine Art student "earns" the college nothing whatever to compensate for the significant costs of admissions, pastoral support, accommodation, and so forth. Clinical Medicine is also a risibly poor earner for the college, with only £446 per student in a subject which can require the maintenance of expensive specialist teaching. Even an overseas Clinical student brings the college only £1,486. Compare this with the overseas bounty of £9,066 for Humanities, and clearly any college that responds in line with JRAM incentives will rapidly shun precisely those departments that have the strongest JRAM incentives for seeking co-operation. One need not be an expert in game theory to see that this is a recipe for muddle and discord (and the likely demise of Fine Art and Clinical Medicine teaching within the collegiate University).

A different potential conflict awaits those colleges that attempt to cash in on the lucrative overseas undergraduate market in Humanities, because now it will be the department that is inclined to drag its feet. An overseas *postgraduate* is far more desirable for the department, bringing it £8,000 or more, with only around £2,300 going to the college. So the incentive structure is completely incoherent: two partner units, equally necessary to the overall undergraduate and postgraduate operations, have opposite motivations in setting the balance between these operations. Maybe in practice the outcome is likely to be horse-trading, implicitly introducing market principles to share the spoils of co-operation more equitably in the light of respective costs and gains. Thus a college might agree to accept a department's overseas postgraduates (and thus allocate less room to the more profitable overseas undergraduates), but only on condition that it receives a larger share of the postgraduate fee to compensate and to cover its overheads. All this could be very costly in time, effort and tension within the collegiate University.[5] And to go that way is, of course, to reject outright the crude one-dimensional "as-earned" principle which looks only at the income stream.

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[4] In addition to those mentioned here, see also Martin Slater's excellent article in the *Oxford Magazine* for fourth week (pp. 21-3), which exposes a number of perverse incentives both in teaching and in academic staff recruitment (cf. also note 2 above).

[5] Markets also carry serious additional risks, in that the competition *between colleges* for the overseas undergraduates (e.g. in terms of scholarships, housing, other facilities etc.) is likely to drive down the net benefits of taking them, and could potentially hugely favour the rich over the poor colleges.

A More Plausible Approach

More plausible is a general allocation procedure that combines a number of different criteria. Rather than looking only at the incoming bottom line, we should also bear in mind the impact of activities on the University's achievement, reputation and future (i.e. the "academic goals" that the JRAM supposedly serves), the *cost* of these activities, the extent to which they bring wider benefits or losses to other parts of the University, and the *marginal utility* deriving from their increase or decrease. The last of these points comes closest to justifying some sort of "as-earned" principle, since a powerful incentive for change can be provided by allocating most of the income from new activities, or changes in current activity, directly to the unit responsible. If the University as a whole will benefit financially from a development within some unit (e.g. investment in staff to support more postgraduates), and financial considerations alone are in question, then it makes sense to ensure that the financial incentives for that unit correlate closely with those of the University (e.g. so that the cost of the additional staff to the unit will indeed be covered by the additional postgraduate income). But three important points should again be emphasised here. First, this argument applies only to *marginal* income. Secondly, its logic implies that the incentives for each unit should be aligned with benefit to the University as a whole, which will *not* necessarily involve only financial considerations (and even when it does, cannot be measured purely in terms of *income*). Thirdly, the same logic implies that these incentives should apply to *all* relevant units, including those providing accommodation and other services as well as tuition (so that if, for example, a department is given an incentive to increase postgraduate numbers, colleges are also given a direct incentive to support them).

Conclusion

The JRAM document starts well, by emphasising that incentives should be aligned to academic values. It then, perversely, declares as a principle that incentives should instead be aligned to income, without any argument whatever to support its assumption that the two coincide. There is in fact no such coincidence, and even if there were, we have no reason to suppose that it would continue. Our University should be governed by academic rather than purely financial values; indeed in the long term it is likely to be academic reputation that determines its prosperity. That reputation is built on its history as a community of academics, students, colleges, and departments. This evolving synthesis, despite its sometimes unruly complexity, has been extraordinarily successful, and any revolutionary change requires strong justification. A move to strict budgeting by income "as earned" could seriously disrupt its workings, setting different parts of the University at odds, and encouraging each to focus on its own narrow income stream. Such a development would be particularly damaging to an institution that depends so largely on staff with multiple allegiances, and where common purpose between colleges and departments is correspondingly essential. Taking this risk would therefore be folly unless, and until, we have been given very powerful reasons. But so far from providing these, the JRAM document offers no substantial reason at all, and does not even discuss, let alone answer, the very obvious objections, some of which are evident on a cursory glance. It is beyond belief that the University's central academic goals, or those of the country at large, are best served by shifting millions of pounds each year from poor undergraduate colleges to wealthy graduate colleges. And it is hard to see how this can seriously be suggested as a prudent policy when we are consistently telling the government that the undergraduate fee is far too low, and trying to "sell" the image of Oxford as enthusiastic about widening access rather than as a bastion of donnish privilege.

This huge mismatch between declared goals and reality is puzzling, and might even appear sinister, but the recent article by Donald Hay, chair of the JRAM Working Group (JRAWG),[6] helps to explain how it has come about. The Group's initial discussions "suggested that there was support generally for an allocation mechanism based on the 'as-earned' principle", especially in cases where "income … can be traced directly to the activity of a single college, department or faculty [such as] college endowment income and research grants and overheads." Inspired by these examples (which probably most of us would indeed agree with), the principle then seems to have taken on a life of its own. "The Group developed the 'as-earned' principle [as implying that] ... allocation of jointly earned income should be based on the relative contribution of each party in attracting that income",[7] and their subsequent work seems to have been almost exclusively "concerned with working out the mechanisms by which those allocations can be made". At no point – apparently – has the Group gone back to ask whether the premise might be misconceived; whether this exclusive focus on the income from each activity is actually in tune with the academic goals that they seek to foster. In the JRAM document these academic goals were highlighted as the genuine motivation behind the whole thing, but the repeated claims of harmony between the resulting incentives and these goals were an expression of wishful thinking rather than careful analysis. Again this might seem sinister, or sloppy, but that would be to overlook the document's role as part of an ongoing exercise from which the Working Group is keen to learn. "The consultation", we are assured, "is genuine", and the Group "needs to know whether there are any mistakes of principle". So the proposal can be seen as an experiment to discover what consequences follow from the systematic application of an initially attractive principle. This experiment has been a resounding success, with a clear and decisive result: the principle has been tested to breaking point, and we can now infer that a different approach is required.

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[6] In the *Oxford Magazine* for fourth week, pp. 19-20.

[7] Note a tension here: in the case of jointly earned income it is accepted that relative *costs* should play a role in dividing the spoils, but the overall principle is based purely on *income*. Problems arise because often the ratio between costs and income varies radically between activities (e.g. teaching home undergraduates as opposed to overseas postgraduates). Hence if we wish to foster a balanced mix of these activities, a more integrated approach is needed.