

Clark's Triangle, Fiscal Incentives, and a new Relationship between the State and Universities

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Introduction

Shortly after Clark introduced his “triangle of coordination” model of higher education in 1983, two practices in the financing of public universities that are based on incentives—performance funding and incentive-based budgeting—began to evolve. Both are known by other names, for example, “incentive funding,” “set aside” funding, “matching” funding and “value centered management,” and “responsibility center budgeting,” and even “every tub on its own bottom.” Despite contemporary timing and similar nomenclature the two practices are not usually associated with one another. Performance funding is an instrument of public policy that is exercised “top down” by government, and corresponds to the “state authority” leg of Clark’s triangle. Incentive-based budgeting is a matter of institutional choice and strategy and corresponds, at least approximately, to the leg variously described as “academic oligarchy,” “academe” (Jongbloed 2003), “managers” (Salazar and Leihy 2013), and “steering core” (Clark 2004). The “steering core” second leg, which is Clark’s most recent terminology, intends to promote market behavior, specifically entrepreneurial behavior in the “market” or third leg.

On closer examination, however, we see underlying organizational principles that are shared by both performance funding and incentive-based budgeting. Both address principal-agent relationships. Both assume that resource dependence determines much institutional behavior. The problem is that governments and universities rarely share the same assumptions. This leads to an as yet unexamined question. Are they on a course to

collision or a course to mutual benefit? Does Clark’s triangle still apply or will they force a re-assessment of the “triangle”?

Performance Funding

It is not possible to discuss performance funding as if it were a single-cell public policy organism. There are several subsets, the most common of which are *performance set-asides* or earmarks that reserve small proportions of public subsidies for higher education to be paid out on the basis of pre-determined metric targets, hence *performance indicators*. Funding thus reserved is potentially open-ended. The public policy objective is to influence institutional behavior by means of financial incentives. The incentives are exactly that: they are fiscal inducements that only coincidentally correspond to institutional costs. In certain cases, primarily in Europe, this form of performance funding is called *payment for results*. The World Bank promotes a *competitive version of performance funding* in which funding is not open-ended for countries with limited discretionary resources to direct to the development of universities (Salmi and Hauptman 2006). As expressions of fiscal policy these two versions of performance funding serve different purposes. The first offers benefit advantages. The state promotes and, hopefully, secures institutional performances that are desirable as public policy. The second, because the funding is a fixed sum, offers cost advantages. As performances improve in response to the incentive within the fixed sum unit costs are either contained or reduced.

The second factor that affects the effectiveness of performance funding in modifying institutional behavior is the match between the amount of funding that is set aside and the “performance” that any given incen-

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tive is put in place to engender. If the match is imperfect performance funding will fail. For example, to improve rates of graduation a university might take several steps that involve additional expense: more academic counseling, writing labs, math labs, teaching assistants, and financial aid. The list could be longer, but the length of the list is not the point. The point is the cost of the list. If the amount of funding set aside does not reflect, at least approximately, the marginal cost of the institutional performance being sought, the incentive will be ignored, as it often is (Chan 2014; El-Khawas and Massy 1996; McColm 2002; Miao 2012; Rau 1999; Schmidt 2002; Schmidtlein 2002).

Matching performance funding is an arrangement similar to performance funding in which the funding is not all public. Governments in order to leverage private funding offer to match charitable gifts that as *de facto* endowments are restricted to purposes designated by the state instead of donors. The consequent performance funding is thus a mixture of public and private funding. Matching funding fits the basic incentive definition because the public portion is never enough to meet total cost (Brooks 2000). In Canada, the federal government through the Canada Foundation for Innovation used matching funding as a device financing research infrastructure (Canada Foundation for Innovation 2013).

None of these versions of performance funding presupposes the market leg of Clark's triangle. Government acts as a market surrogate. In the case of matching funding that is intended to leverage private subsidies, the government uses its authority to determine what initiatives will be matched, not the other way around.

The track record of performance funding is checked. There have been two iterations. The first began in the early 1980s and extended to a peak around 2006, and then began to decline. There are, however, signs of a "second iteration" increase of interest in performance funding (Dougherty and Reddy 2013; McKeown-Moak 2013; Ziskin 2014).

The Rockefeller Institute, in speculating about ebbs and flows the use of performance funding in the United States, said that the volatility of performance funding confirms the previous conclusion that its desirability in theory is matched by its difficulty in practice. It is easier

to adopt than implement and easier to start than to sustain (Burke and Modarresi 2000). What makes performance funding volatile? One explanation has already been mentioned: the amounts of funding associated with specific performance indicators usually do not correspond with the cost structures of the performances that are being measured and putatively rewarded. For instance, given the efforts that a university would have to exert in order to raise rates of graduation—smaller classes, enhanced academic services, supplementary financial aid—the net costs that the university would have to incur might be greater than the additional income that those efforts would generate. In this case, taking Clark's triangle as a point of reference, the center of gravity moves strongly, almost exclusively, to state authority.

Also in terms of cost structures, performance funding often fails to take into account the fact that universities have long production cycles and variable economies of scale. For example, the typical undergraduate program takes four years to complete; many programs take longer. For that reason universities are something like super-tankers: it takes a long time to change their direction, even when they are willing to change in response to financial incentives. Let us again take the rate of graduation as an example. First, the rate of graduation is not a simple sum of annual retention rates. Most graduation rate performance indicators are not calculated until one or two years after the normal program length, for example, after the sixth year for a four-year program (Aud et al. 2013). This allows for the inclusion of students who "stop out" or temporarily switch from full-time to part-time status, but who nevertheless eventually graduate. Thus, even if a university makes every possible effort to increase its rate of graduation, the results of those efforts will not be seen until several years later. But performance funding universally operates annually. This means that a university must incur costs long before it receives supplementary "performance" revenue to cover those costs, and even then usually partially instead of fully. Even the delayed recovery of costs is problematic. One of the reasons most often cited for the disinclination of some universities to take incentive funding seriously is uncertainty about the future. These concerns about stability are not unfounded

(Burke and Modarresi 2000; Callahan 2006; Dougherty and Natow 2010; Hearn et al. 2006; McColm 2002). In Ontario, for instance, the performance funding *cum* performance indicators metric changed four times in eight years. This has a fundamental implication for the use of Clark's triangle as a comparative device: its reliability rises longitudinally. When applied as a single annual event or *tranche de temps*, its use is very limited, perhaps even erroneous.

Performance funding so far has essentially been a system of incentives "bonuses." The public policy "performance" objectives of the incentives have varied over time from jurisdiction to jurisdiction, and from first iteration to second iteration, but the modality of an incentive has not changed. Incentives are not intended or expected to meet all the costs of the "performances" that they promote. In other words, to universities as "academe" or "managers" they are marginal revenue. To government as "state authority" they are the costs of leverage. This exposes a question with regard to Clark's triangle: as percentages are the two—the marginal revenue and the cost—the same? The answer is either no or not necessarily. Unless a university receives all its funding from the state—as Clark in 1998 recognized they do not—the conventional metric will always overstate the arithmetical leverage of performance funding as an instrument of state authority. For public universities that are approaching "public in name only" status, the arithmetic effect could be almost negligible. What is a cost to the state is not necessarily an equivalent incentive to a university president as "manager."

This leads to a second question. Is the median percentage of performance funding revenue across a system the same as the mean? If it is not, as is often the case when funding formulas are based on averages (Lang 2005), what may be an incentive to one institution in the system may be a disincentive to another. This may be why Clark's triangle has been used as a means of comparing systems instead of institutions. But the statistical fact remains: a system compared on the basis of averages may not look the same as when compared on the basis of medians. For some institutions in a system the center of triangular gravity may be "state authority" while for others it may be nearer to a "market"

as other sources of revenue are sought by "managers" trying to balance budgets.

What lessons can we learn from trial and error? Efficiency, which underpins much of the "state authority" leg of the triangle, is problematic in terms of the measurement of institutional cost as seen by "academe" and "managers." Performance funding in the public sector is a monopsony. There is only one "buyer"—the state. When "state authorities" set aside public funds to finance performance funding the amounts are either added to the funds already available to institutions or supplant them by redirection or reduction. In the latter case the result for the institutions is a zero-sum game. Zero-sums in public finance are often assumed to be beneficial because they stimulate competition, which normally would be associated with the "market" leg of Clark's triangle. But monopsonies are inherently inefficient (Cooke and Lang 2009). When under-funding is cited as a cause of incentive failure the discussion does not go far enough to uncover a more basic problem. An inference is still possible that a zero-sum approach might be made to work if more funding was allocated on the basis of performance. That is not so. Monopsonies are always inefficient. Consider, too, that virtually all the metrics of performance funding apply to government as a single financier or nominal buyer. No performance funding program has yet to differentiate incentives or invite competitive bidding for them (Lundsgaard 2002). That is monopsony behavior. It leaves out the competitive "market" leg of Clark's multi-dimensional model.

There is a political as well as economic version of the triangular connection between "state authority" and the "market." In some jurisdictions performance funding is becoming less attractive to government as they are beginning to realize that incentive funding can work in two directions. If a specific performance target is set, benchmarked, made visibly measurable by a metric, and financed by earmarked funding, the effects of inadequate funding on the part of "state authority" can be measured as well the performance of "academe" and its "managers." In other words, the performance of government as a funding agent becomes visibly measurable too, and may just as easily become a political liability as an asset.

Incentive-Based Budgeting

By the end of the 1980s, coincidentally at the same time that performance funding was being introduced and only shortly after Clark's "triangle of coordination" first appeared, a number of large, research intensive universities in North America began experimenting with an organizational and budgetary concept the principal objectives of which were to enhance responsibility for planning and budgeting, usually by decentralization, and in turn improve institutional performance in the allocation and generation of resources, and the delivery of services. Three decades later between 50 and 60 universities in the United States and Canada, and a few in Europe, follow the practice, albeit using several different but similar names, but most commonly called Responsibility Center Budgeting/Responsibility Center Management.

Whatever nomenclature is used it involves the total cost and total income attributable to a university academic division. It gives a campus, faculty, or department control over the income that it generates and the expenses that it incurs, including indirect and overhead costs. Control over income may include the determination as well as the receipt of fees. Control over expense includes local options for securing goods and services that otherwise would be available only through central university service units. This has a highly decentralizing effect by locating many decisions involving the generation and management of resources at different locations in the university, locations at which, in theory, there is greater familiarity and knowledge about the connections between budgets and programs. This implicitly redefines the conventional understanding of "academic oligarchy," "academe," and "manager," depending on which view of Clark's triangle is taken. What it suggests is that an institution and, in turn, a system that comprises a series of sub-triangles in which the center of gravity among the three legs can vary (Maggio 2012; Musselin 2004; Salazar and Leihy 2013).

A major difference between the nomenclature of performance funding and that of incentive-based budgeting is the meaning of "cost." Cost in terms of incentive funding means the cost to government, and means

only the cost of inducing a particular performance on the part of institutions as a "market" otherwise would. Cost in terms of incentive budgeting means all costs—direct, indirect, and overhead or infrastructure—and because of the inclusion of revenue, also means *net* revenue or cost.

Incentive-based budgeting emphasizes and exposes costs that are often known but not recognized, or are deliberately not known because of their strategic implications (Gillen, Denhart, and Robe 2011). While this demands a sound methodology for attributing costs, its ultimate purpose is not to account for costs. There are other reasons for an institution to want to know about its cost and income structures. The most obvious of these reasons are to account fully for the costs of research and to ensure that ancillary services that are supposed to be self-funding really are. Less obvious but perhaps ultimately more important is to understand better the dynamics of marginal costs and marginal revenues. This is exactly the type of decision that universities have to make about responding to performance funding incentives. It is also the type of decision that governments, as designers and proponents of performance funding, often do not, in Scott's (1998) terms, "see." Said another way, the fact that Clark saw a triangle of coordination does not mean necessarily that each leg saw the other legs as being part of the triangle, or even that in terms of cost what each leg saw was the same, as Spence (2001) has said is typical of imperfect markets in higher education.

In terms of budget planning, incentive-based budgeting has a salutary but often upsetting "nowhere to hide" effect. When we consider that the basic political economy of any university is to optimize the intersection of quality and cost for every program we see a necessary and almost automatic connection to performance funding. The costs thus identified are the costs that the university "managers" can connect to the marginal income generated from "state authority" performance funding. Having made that connection the university can make an informed decision whether or not to respond to the performance funding incentive. In other words, the university at the "academe" leg has information that enables it to change the vectors of the

triangle by either complying with or abstaining from the incentive.

This in turn motivates entrepreneurial behavior and the generation of revenue, much along the lines of Clark's later discussions of entrepreneurial universities in 1998 and 2004. In most other institutional planning and budget regimes, the generation of revenue is regarded mainly as the responsibility of the university's administration. That, as well, is how governments envision incentive funding working. To "academic oligarchies" most services, for example, libraries are free goods. Because income as well as cost is attributed to campuses, faculties, or departments under incentive-based budgeting, the effect on principals, deans, or chairs as "oligarchs" or "managers" is virtually immediate: the generation of revenue (and the reduction of cost) counts. This is the level at which performance funding enters the equation. Mistaken decisions or even wishful thinking about costs *versus* benefits under incentive funding makes real differences close to home.

Challenges at the Interface

What happens when the two forms of incentive bump into one another, as they are already beginning to do in some jurisdictions? Some challenging behavior is endemic at the interface.

Finding the right level of aggregation is as essential as it is difficult. Michael E. Porter said that diversified companies do not compete; only their business units do (Porter 1996). This applies to universities and university systems. They are much diversified. Porter's proposition is fundamental to most forms of incentive-based budgeting, which in effect push planning and budgeting down to the level of faculties as "business units." If we examine individual performance indicators carefully, we see that most of the "performances" that the indicators measure do not really operate at the institutional level. Here we learn an important lesson: although the momentum of incentive-based budgeting is in direction of decentralization, the effect of incentive funding is in the direction of centralization.

Is this a problem to be solved or a lesson to be learned? As a problem it is unsolvable, at least by any

currently known form of performance funding. Programs are diversified for good reasons. That is one of the reasons, when speaking about entrepreneurial universities that Clark offers for a tri-lateral paradigm.

Let's say that the absence of institutional differentiation is an institutional behavioral problem that a system using its "state authority" could solve by offering incentives. Here we enter a problematic middle ground between system performance and institutional performance. Performance funding can have externalities that are a consequence of an activity between two parties—for example, a government and a university or system of universities—that has an unintended effect on other parties or "performances" (Lahr et al. 2014). In this case, using rate of graduation as an example, if program diversification were reversed by the incentive of performance funding students might end-up with less curricular and program delivery choice, and employers might end-up with graduates whom they regard as less prepared. This explains the need to insert "markets" and "users." Are they the same? In the case of professional programs, third-party regulators (of which government often is one) have powerful influences on the structure and content of programs. There is plenty of evidence that program structure and anticipated employment have strong effects on retention and graduation (Adams and Becker 1990; Angrist, Lang, and Oreopoulos 2006; Lang 2009). Professions in this context as users could be just as reasonably described as curbs to market behavior as promoting market demand. In other words, they could belong to the "market" leg or to the "state authority" leg.

Performance funding as an incentive to change institutional behavior works when performance funding matches, at least approximately, the cost of performing. That sounds like common sense, but it is the shoal on which performance funding most often founders. It founders for three reasons.

The first is that governments confuse the outputs and outcomes that they hope performance funding will achieve. Let's take the graduation rate again as an example. There are three reasons for the state to desire higher rates of graduation. The economic objective is to expand the supply of human capital. The social objec-

tive is equity through access to higher wages and, in some countries, higher social standing. The budgetary or cost objective is to realize a cost advantage by producing graduates at a lower unit cost. Each of these objectives requires a different metric. More significantly, each requires a different amount of funding. “Mix and match” will not work. In some jurisdictions in which this problem is recognized governments rationalize the mix and match practice by assuming that institutional autonomy—the “academe” leg—will enable individual institutions to offset negative mismatches between performance and the cost of performing according to one performance indicator with a positive mismatch according to another indicator. This is a rationalization. It becomes even more so in undifferentiated systems. This is another example of Scott’s description of “seeing like a state” (1998). In terms of Clark’s triangle, the state knows that there is an “academe” leg, the behavior of which it wishes to change, but does not see the mismatches that the “steering groups of academe” see. As for the “market” or “user” leg, the state acting as a surrogate does not see what the users see either because it does not believe it needs to or because it believes that in an imperfect market, users would make bad choices. This is a position taken by the province of Ontario in the 1990s (Lang 2005).

Until relatively recently universities did not understand their costs fully. “State authority” was the trump card in the triangle. Incentive-based budgeting, which analyzes costs more systematically than previous practices was in wide practice in public universities by the latter half of the 1990s (Dougherty and Reddy 2013; Gillen, Denhart, and Robe 2011; Lang 2002). Thus when we now talk about the match between performance funding and the costs of performing, universities know a lot more than they previously did about the costs of the various performances for which performance funding indicators call. In other words, they now can “do the math,” which in many if not most cases means a realization that marginal performance funding is less than the marginal cost of performing. When universities “do the math” and, in turn, either one responds or not to funding incentives, they send a clear signal to

the government leg of the triangle about the adequacy of the funding.

A reasonable case can be made that two legs of Clark’s triangle exemplify a principal-agent problem between states as principals and universities as agents. Principal-agent relationships become problematic when the following conditions are present. Agent and principal have different objectives, or at least construe the same objectives in different ways. Principals have conflicting or incompatible objectives, as might occur when outcomes are confused with outputs. Information is asymmetrical in which case the principal lacks information about the agent’s behavior or outcomes of that behavior or the agent lacks information about the principal’s objective.

When performance funding was introduced much of the theory behind the principal-agent problem was theoretical insofar as higher education was concerned. Government, as a principal, provided or otherwise controlled nearly all funding received by public colleges and universities. Universities, as agents, were managed centrally or “top down.” There was one principal and one agent (Van Vught 1993). This explains well two of Clark’s triangles three legs.

Today many public universities are “public” only in the sense that they are eligible for state funding. As governments cutback funding for higher education they become minor shareholders and create a financial vacuum into which other principals or “users” are drawn, sometimes as a matter of public policy that encourages universities to seek alternative sources of income. Different principals have different objectives. If they have different objectives they will, for good reason, expect different “performances” from universities, and devise different performance funding incentives and indicators. Universities as agents either with “academic oligarchies” or with “managers” are forced to trade-off among principals or, more problematically, among their principals’ performance indicators. This of course blunts the effect of performance funding. As performance funding become less powerful for these reasons, incentive-based budgeting becomes more powerful because it encourages and rewards efforts to diversify

and expand revenue to replace reductions in public subsidies.

Universities have also changed in ways they perform as agents. They have become de-centralized in budgeting and planning, and have brought more stakeholders into governance. Some stakeholders, for example fee-paying students, are in practical effect principals. As users, however, they belong to the “market” leg of the triangle. Agency as measured by several commonly used performance indicators has moved from the institutional level to the faculty level. Deans instead of presidents and provosts become the “academic oligarchs,” and thus the real respondents to performance funding incentives.

Donors are becoming more frequent principals, often with the encouragement of government. This in turn engenders further confusion. While institutions see donors as principals governments may see them as agents whose private wealth may be leveraged to replace public subsidies as incentives. This is the public policy concept that underpins government “matching” programs that function as *de facto* performance funding.

Collision or Symbiosis: the Future of the Triangle

There are several possible scenarios of the relationships among the three legs of Clark’s triangle. In the first “state authority” will not be able through performance funding to communicate sufficiently to influence the behavior of “academe.” “Managers” empowered by incentive-based budgeting, may respond more to “users” than to the state. In others, Van Vught’s (1993) two dimensional paradigm moves symbiotically in the direction of Clark’s multi-dimensional “triangle” as an entrepreneurial third leg develops. This is an evolution that Clark himself anticipated in his 1998 and 2004 discussions of entrepreneurial universities.

In another we can draw some generalizations from the experience in Canada. In some respects this has already happened in two provinces. Performance funding in Alberta and Ontario is still in place, but both of those provinces in different ways have moved on to prescriptive measures that are more compliance sticks than incentive carrots. Additionally, in Alberta, as in

Switzerland, the view seems to be that the most effective way to force universities to operate more efficiently is to reduce their funding. This coincides with Martin’s (2012) view that as long as additive revenue is not available universities they will not reallocate existing resources in response to public policy preferences. In this—a collision scenario—Clark’s triangle will “churn” as envisioned by Jongbloed (2003) as government, acting on behalf of or in nominal response to “users,” will in turn compel “academe” to modify its behavior in conformity with government policy, which in Burke and Modarresi’s (2000) may become more “political.” This view coincides with Van Vught’s (1993) schematic observation that strong state bureaucratic intervention renders Clark’s (1983) three dimensional “triangle” model two dimensional by eliminating the entrepreneurial or “market” leg, and thus reinforcing monopsonistic behavior.

If declines in public funding for higher education further weaken the impact of public performance funding on university behavior resource dependence will shift to other sectors: corporate and private philanthropy, students and parents, foundations, and “private partners”—all of whom will seek “performances” that advance their interests. Performance funding will cease to be a monopsony as there will be multiple “buyers” of performance. Some American states are beginning to include private philanthropy as a metric for performance funding (Jones 2013). This fits Clark’s “triangle of coordination” in the sense that philanthropy and other sources of private funding strengthen the third entrepreneurial leg and weaken the state and academic oligarchy legs. This is a transition that universities can better manage by incentive-based budgeting. In that case, the outcome will be symbiotic.

In the final scenario, as some voices are already starting to argue, that public systems of higher education will become too big, too centralized, and too complex to be managed “top-down” successfully (Berdahl 2000; Callan 1994; Gaither 1999; MacTaggart 1998). Clark himself points to this possibility in his analysis of entrepreneurial universities (Clark 2004). There is considerable evidence that allowing greater autonomy may be a more powerful incentive than performance funding

(Altbach 2004; Clark 1998; MacTaggart 1998; Maxwell, Proven, and Fielden 2000). Governments may continue to use incentive funding, but will allow more permutations and combinations among performance indicators in order to promote diversity over isomorphism (Jones 2013). This scenario will encourage incentive-based budgeting as “managers” and “steering groups” seek to optimize revenue among more numerous possibilities, such as those that Clark cited in his 1998 and 2004 studies of entrepreneurial universities.

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