

# Comment on Paper

## *Economic Budgeting for Endowment-Dependent Universities*

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The paper by Campbell, Stein and Wu (2024) tackles an important and timely topic that is still largely understudied: How do universities conduct their (annual) budgeting and to what extent does annual budgeting that follows GAP accounting distort the optimal spending and capital allocation out of their endowments? This topic is especially urgent in a time when many universities are accused of not providing enough contribution to the common good or of hoarding their endowment rather than spending from it.

The authors observe that many universities resort to annual budgeting, which treats distributions out of the endowment as discretionary income and encourages short-termism. The authors show how this approach is suboptimal and obfuscates potential, longer-term funding shortfalls. Using data from Harvard's Faculty of Arts and Sciences (FAS), the authors compare the approach used by FAS to a hypothetical intertemporal budgeting framework that takes into account the trade-off of between spending today versus that forgone by the future.

The authors highlight two main insights. First, the current approach encourages short termism on a number of dimensions: (1) the mixing of financial flows and real-side revenues makes borrowing to cover current expenses deceptively attractive; (2) treating depreciation as an expense risk deferred maintenance and upkeep in order to suppress current capital expenditures; and (3) the need to balance the book annually heavily distorts other spending in the face of large, transitory shocks.

I would also add to the benefits of the intertemporal budgeting approach that it allows decision makers to model how (some) expenses or investments can affect future revenue streams. For example, spending on university infrastructure might attract more tuition-paying students, or faculty who bring in more grant money, among other benefits. Looking at the example of MIT, the university used endowment money to facilitate a transition into novel subfields of biotech and nanotech. But of course, the usefulness of this approach depends on how realistic the assumptions and projections are.

One might worry that such longer-horizon modelling as proposed in the paper might increase the complexity and go beyond the modelling sophistication of a typical university administration might have. Separately, I fear that, by providing university administrators with more levers to build in optimistic assumptions, for example, about the expected returns on the endowment, or the ability of the university to smooth future

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expenses, the scheme has the potential to further obfuscate true budget shortfalls in the future.

The second main insight is an emphasis on the interdependence between the level of investment risk taken in the endowment and the underlying operating economics of the university: To balance the budget in the long run, universities’ adjustments in spending must have the same volatility or systematic risk exposure as the investment returns on the endowment. If there are expenses that cannot be scaled with the return on the endowment, they should be discounted with a lower discount factor to reflect the fact that these are compulsory expenses in the future. Alternatively, the university has to be willing to make painful adjustments to its budget, or staffing level, in the future, in a bad realization of endowment returns. The authors also suggest that endowment-dependent universities should opt for lower-risk investment strategies.

To what extent do universities follow the very sound advice that is laid in the paper? Using data from the paper by [Lo et al. \(2021\)](#) on nonprofit endowments, we can see in Table 1 that endowments with more than a billion dollar in assets, had higher annual returns on average than those in lower size brackets, e.g. 6.12% for endowments with above \$1 billion compared to 3.41% for endowments with less than \$10 million. Interestingly, we also see that the standard deviation of returns also increases with endowment size, with one exception. The very largest endowments with assets above \$1B do not have higher volatility than the next size bracket. The explanation for this surprising statistic might be that these largest funds heavily invest in private equity and other alternative assets that are not mark-to-market. Thus, the numbers might not reflect the full volatility of their underlying assets.

<b>Endowment size</b>	<b>Number of universities</b>	<b>Average annual return</b>	<b>Average std. deviation of returns</b>
>1B	54	6.12%	10.27%
[100M,1B]	260	5.10%	10.23%
[10M,100M]	583	4.92%	9.28%
<10M	372	3.41%	6.20%

**Table 1:** University endowment sizes and returns.

**Note:** Data for this table is sourced from [Lo et al. \(2021\)](#).

Maybe more importantly in the context of the current discussion, Table 2, again relying on data from [Lo et al. \(2021\)](#) shows that more endowment dependent universities had higher past returns with only minimally high standard deviations, even holding constant the size of the endowment. Since the level of endowment dependence is a choice of the university, one can speculate that universities with higher returns felt more confident that they will be able to generate high future returns. Thus, they were more willing to lean on their endowments for current expenses.

This raises an important issue about the interaction between the budgeting function

Endowment size	Endowment dependence	Average annual return	Average std. deviation of returns
>1B	High	6.68%	10.64%
>1B	Low	5.99%	10.19%
[100M,1B]	High	5.19%	10.36%
[100M,1B]	Low	4.96%	9.97%

**Table 2:** University endowment sizes, dependence and returns.

**Note:** Endowment dependence is defined as the fraction of total expenses covered by the endowment fund. ‘High’ and ‘low’ are defined as above and below the median, respectively, within the subsamples of endowments with over \$1B AUM and [100M, 1B] AUM. Data for this table is sourced from [Lo et al. \(2021\)](#).

and university governance. In an ideal world, universities are well-governed and they efficiently trade off the utility of future generations against that of today’s students and faculty. Having more transparent budgeting should only have positive effects. However, anyone who has stepped foot into a university (or any big institution) for that matter, knows that organizations are difficult to govern given their sometimes decentralized structures and multi-faceted constituencies, who often have varying or opposing objectives. For example, making trade-offs between investments in different research areas and cutting back staff who has are unproductive can be very difficult, especially since returns from many academic activities are intangible and therefore hard to measure. In these situations, it is often easier to keep spending for the sake of harmony, even when that is known to be unsustainable in the long run.

In such a second (or even third) best world, one might argue that a budget crisis is a welcome chance to force universities to tighten their budget and bring back some discipline to the budgeting process. However, the question is how budget discipline will be applied in these situations. If indeed a crisis leads university leaders to cut unnecessary slack and unproductive activities, a budget crisis induced by short-termist budgeting might serve as a second-best governance mechanism. If, in contrast, a budget crisis shifts bargaining power to the already entrenched and unproductive parties, it might have exactly the opposite effect. To answer this question, we would like to know who the most vulnerable stakeholders are in a crisis, and whether improved governance actually emerges in the resolution of budget crises.

While much more research is needed on this topic, some suggestive evidence is provided in [Brown et al. \(2014\)](#) published in the *American Economic Review*. This paper examines how universities respond to financial shocks to their endowments by adjusting their annual payout and staff employment. The authors find that a year with a -10% endowment return, leads to an 8.2 % reduction in payouts as a means of budget smoothing. Remarkably, there is a stark asymmetry in the response to positive versus negative shocks. In former cases, universities leave their payouts unchanged, rather than increase them, pointing to potential endowment hoarding. This finding is surprising as

it is in contradiction with most of universities' written payout policies which would imply much smoother payouts from year to year.

In addition, the paper shows starkly different cuts across personnel employed in different parts of a university. A 10% negative endowment shock leads to a 5.1% decline in employment of support staff, such as secretaries, which is the biggest concurrent reduction among all categories employed. The next largest reduction is in tenure track faculty with a nearly 5% reduction in the year following the return shock. In contrast, university administrators are largely unaffected, which paves way for the suspicion that a tighter connection to the leadership acts as a protective cushion in times of crises. While, of course, there might be compelling organizational reasons why university administrators are exempted from staffing cuts in a crisis, it at least raises the possibility that closeness to the decision power becomes useful in a crisis. Similarly, it appears short-termist to disproportionately cut faculty positions during a crisis given that they provide the core of the university's services and intellectual outputs. While far from being the final word, this evidence raises the question of whether indeed universities use budget crises to impose better governance on the operations. It weakens any argument that year-to-year budgeting can have unintended positive governance consequences. Thus, it further supports the intertemporal budgeting framework laid out in this paper.

To conclude, the paper, "Economic Budgeting for Endowment-Dependent Universities", provides a profoundly useful framework to help university administrators move from a myopic planning and budgeting process to an intertemporal approach. Overall, this paper brings much needed rational thinking into an important yet sometimes politically difficult subject. I hope that its insights will be adopted by university leaders and help them think more sophisticatedly about their budgeting choices.

## References

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