

The Role of Flagships in National Research Performance

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Governments increasingly create flagship universities to raise research visibility, attract talent, and signal national ambition. Comparative evidence from six young institutions suggests that this strategy can produce real institutional advantage but not automatic systemwide transformation. The policy challenge for countries creating and supporting flagship universities as policy instruments for systemic reform is to transform institutional advantage in research into systemic spillover impact across their respective higher education systems.

States increasingly concentrate funding, governance flexibility, international talent recruitment, and research infrastructure in a small number of “flagship” institutions with the aim of raising national performance. This concentration strategy, however, also creates a persistent tension. If flagship universities succeed mainly by pulling resources, status, and talent away from other institutions, they may become symbols of excellence without becoming engines of system development. Using Merton’s framework of cumulative advantage (or the so-called “Matthew effect”), we examined whether the gap between flagships and national systems widens over time, narrows through spillovers, or remains stable.

A Comparative View of Young Flagships

We examined six universities created since 2000: Nazarbayev University in Kazakhstan, King Abdullah University of Science and Technology (KAUST) in Saudi Arabia, Universidade Federal do ABC (UFABC) in Brazil, Singapore University of Technology and Design (SUTD), Botswana International University of Science and Technology (BIUST), and the University of Luxembourg. These universities are new state-enabled projects designed to build research capacity, international engagement, and national innovation in a relatively short period.

Using Scopus and SciVal data from 2010 to 2024, our comparison benchmarks each flagship against its national system across four indicators: citation impact, highly cited publications, publication in leading journals, and international collaboration. A university may be modest by global league-table standards and still be transformative in its own national environment.

The Uneven Flagship Advantage

Across most cases, the selected institutions outperformed their national systems on several research indicators. Nazarbayev University, for example, achieved citation impact levels close to twice the national average and produced highly cited publications at more than two and a half times the national rate.

UFABC also maintained a substantial lead over the Brazilian system across several measures. These patterns show that concentrated investment can create a research-performing institution in contexts where national averages remain lower.

The size and meaning of the advantage, however, vary sharply. The University of Luxembourg operates much closer to national benchmarks—not because it lacks quality, but because it is embedded in a relatively mature and internationally connected research environment. In that context, the flagship is less a dramatic outlier than part of a strong national research ecology.

Pathways to Flagship Status

The cases point to different institutional pathways. KAUST has built much of its reputation through influential research and publication in leading journals. BIUST and SUTD show a different profile, with international collaboration as a more prominent area of strength. Nazarbayev University and UFABC appear closer to a balanced model, outperforming national systems on several indicators rather than relying on a single distinctive advantage. For governments, the lesson is that flagship policy cannot be reduced to institutional design alone; it also depends on how the institution is connected to research funding, doctoral education, labor markets, and the broader higher education sector.

Spillover Effects

The most important policy finding concerns spillovers. We therefore tracked the distance between each flagship university and its national system over time for four research performance indicators, yielding 24 flagship-system trajectories across the six countries examined. Only three showed a clear tendency for the flagship to pull further ahead over time. Convergence appeared in seven cases. The most common pattern was stability: in 14 cases, the flagship sustained an advantage, but that advantage neither expanded dramatically nor disappeared.

While encouraging, the result is also cautionary because a stable advantage is not the same as system transformation. A successful flagship may raise national visibility, create pockets of high-quality research, and attract international partners while leaving the underlying distribution of research capacity largely unchanged. In terms of cumulative advantage, the issue is not simply whether elite institutions get better. It is whether their resources, practices, networks, and training functions become available to the wider system in ways that support parallel growth.

From Flagship Success to System Strategy

Governments therefore need to distinguish short-term research gains from long-term system development. If flagship policy is judged by its contribution to the broader research capacity of the national system, institutional performance indicators are too narrow. They must be complemented by evidence on doctoral training, shared infrastructure, research collaboration, faculty mobility, teaching capacity, and policy engagement.

Nazarbayev University, for instance, operates collective-use laboratories open to researchers from other institutions. Other spillover mechanisms include study-away programs, research internships, visiting faculty schemes, and joint doctoral supervision. These activities are less visible than rankings, but they may matter more for system development because they move people, practices, and research capacity across institutional boundaries.

National grant systems can strengthen sustainability, but they may also create new inequalities if competitions reward indicators that flagships are already better positioned to produce, such as Q1 and first-decile publications, high citation profiles, or internationally connected principal investigators. If public funding systems do not account for these asymmetries, the flagship may win not for its research excellence but because it begins the competition with infrastructure, teaching loads, and global networks unavailable to most peers.

A Broader Lesson for Higher Education Policy

The broader lesson is that flagship universities should be designed as part of a system strategy, not only as symbols of national aspiration. It is unrealistic to expect newly established flagships to transform the wider system immediately. But it is equally risky to assume that spillovers will occur naturally once institutional excellence has been achieved.

Flagship universities are not a substitute for broader investments in doctoral education, research infrastructure, competitive funding, institutional governance, and quality improvement across the sector. The next generation of policy that capitalizes on flagships while investing substantively and substantially in the rest of higher education will create the conditions for the desired spillover effect.

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