資料3

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Presentation to Council for Science, Technology and Innovation

Focus on <u>financial aspects</u> of running a top tier teaching and research university

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<u>Outline</u>

- Financial Dynamics is what matters not "the budget"
- Public vs. Private Universities in USA
- National Univ. of Singapore vs. US Universities
- Role of Fund Raising & Endowments
- Funding Research and Innovation
- Overall governance, role of "CFO"/"COO", professionalization

Financial Dynamics is what matters - not "the budget"

- Universities tend to focus on:
 - the "core or central budget"
 - incremental budgeting
- These are both serious mistakes
- Need an "all funds" budget that provides a clear "line of sight" into all revenues and expenditures and ties back to the audited financials
- Develop a comprehensive "P&L" of all business units. Transparency into internal taxes and subsidies? What is *net* revenue? School specific endowments and carry-over?
- Need to develop a multi-year financial forecasting capacity, present a 3 year rolling-budget that is linked to Medium-Term Strategic Plan and measurable Key Performance Indicators (KPIs)

Public vs. Private Universities in USA

- Governance is very different
- Financial dynamics different key drivers, vulnerability, politics:
 Private Univ: rely on annual giving + endowment payout + high tuition + significant "other income" (e.g. Exec. Ed., Patents/Equity stakes).

 Public Univ: rely on volume not price + out of state students + state funding + modest endowment + weak "other income"
- Research competitive: public universities finding it difficult to keep high quality faculty, provide cutting edge facilities, form partnerships
- Endowment private university have tradition of "giving back", size of gifts, compounding matters, impact on operating budget, governance
- Post Script Athletics can matter in the US can be significant negative or positive

National Univ. of Singapore (NUS) vs. US Universities

- Financial support At NUS government support set within medium term rational framework, varies enormously in US public and private universities
- PG and "life long learning" courses receive significant government support in Singapore – unfunded mandates in the US public universities
- Research funding and research centers centralized in Singapore, decentralized in the US
- Innovation: much larger pipeline in US and strong links to private investors via innovations hubs/incubators/venture capital – scale and diversity is key
- Capital planning long term in Singapore, including maintenance, not always the case in US Public Universities
- Culture top down vs. participatory + "risk aversion" significant

Role of Fund Rasing & Endowments

- Key for US private universities US public universities started late, e.g.
 Princeton University payout per undergraduate was over 24 times larger than UC Berkeley (about US\$100K vs US\$4.2K)
- Fund raising done by professionals strongly linked to university; i.e. its strategic plan, impact on society, important thematic issues (e.g. medical breakthroughs, AI, aging, etc.) "legacy" giving important at US privates
- Fund raising needs direct involvement of the Senior team focus of President/Chancellor, Provost and top level teachers and researchers
- Endowment must be professionally managed the CIO makes the investment decisions
- The "board" sets realistic return targets, risk/reward parameters and ensure "payout" target is sustainable rules over medium-term due to multi-year commitments

Funding Research and Innovation

- Structure Decentralized in US: Centralized in Singapore:
 - US has multiple federal and state agencies with different agenda's e.g. NIH (medical), DOE (environment), DOD (hard science), NEH (humanities) + multiple private foundations/corporate
 - Singapore has 3 central "mechanisms": (i) regular flow to research universities; (ii) competitive grants linked to broad themes; (iii) competitive large strategic grants to address national priorities
- Ability to attract top level staff, start-up packages and cutting-edge facilities, young potential "stars"
- International recruitment, joint appointments, "openness"
- "Overhead" cannot be ignored
- Strong links to applied development of research important role for private sector (but basic research is necessary and must be funded)
- Incubators & Accelerators have important role
- Large pipeline needed to attract "seed" investors, then venture capital and more traditional investors to take to scale – US has advantage
- Role of Government and/or university as investor?

Overall governance, the roll of the CFO/COO and professionalization

- Decision rights who decides what? If government funding is important, it should focus on a few key strategic goals, leave campus with the autonomy to implement, adjust quickly, be nimble
- Three legged stool better than two legged stool. Chancellor/President (overall strategic plan and fund raising) + Provost (academic issues/research) + COO/CFO (all administration and finance functions)
- COO/CFO has to play a major role in developing and monitoring the strategic plan and have clear insight into all of the financial aspects of the university (operational, research and capital budgets)
- A strategic plan that is not financially viable is not a strategic plan it is wishful thinking
- Administrative functions have to be "professionalized". Recruit staff with functional expertise and experience.