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City of Innovation Enabling Strategy

Investment Metrics

Academic Paper

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1 City of Innovation Enabling Strategy – Investment Metrics

1.1 Purpose

The purpose of this paper is to outline an alternate investment analysis framework that accounts for a wide range of benefits beyond (but including) traditional financial investment metrics.

1.2 Problem Statement

Traditional methods look at comparative rates of financial return on alternate uses of scarce capital. These methods examine the likelihood of future cashflows for well-understood activities, with higher discount rates for riskier projects. Examples include:

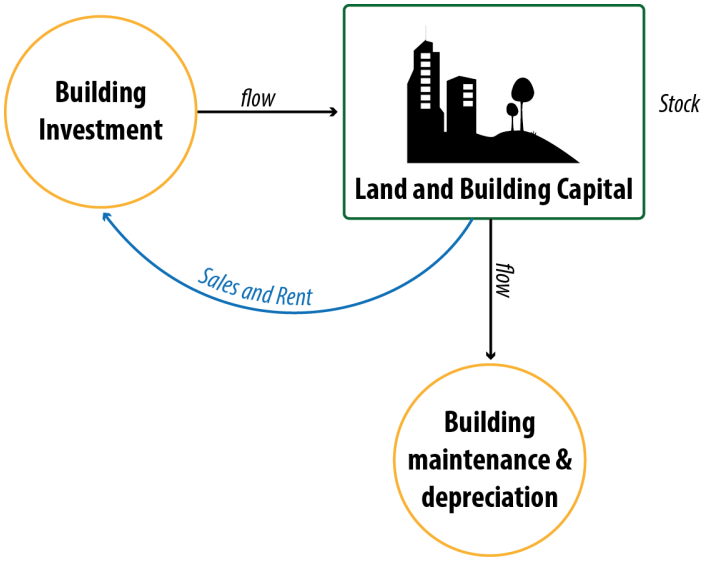
- Simple Return on Investment (ROI)
- Internal Rate of Return (IRR)
- Net Present Value (NPV)

This approach tends to perpetuate relatively conservative, low-risk models of investment, driven by property projects with certain financial outcomes. If projects under assessment do not meet conventional financial investment return thresholds, they are typically not pursued.

1.3 Land and Building Development at Curtin

Simply represented in Figure 1, the stock of land and buildings at Curtin is added to by inflows of new building investment and subtracted from by maintenance and depreciation.

Figure 1: Simple Land & Building Stock and Flows



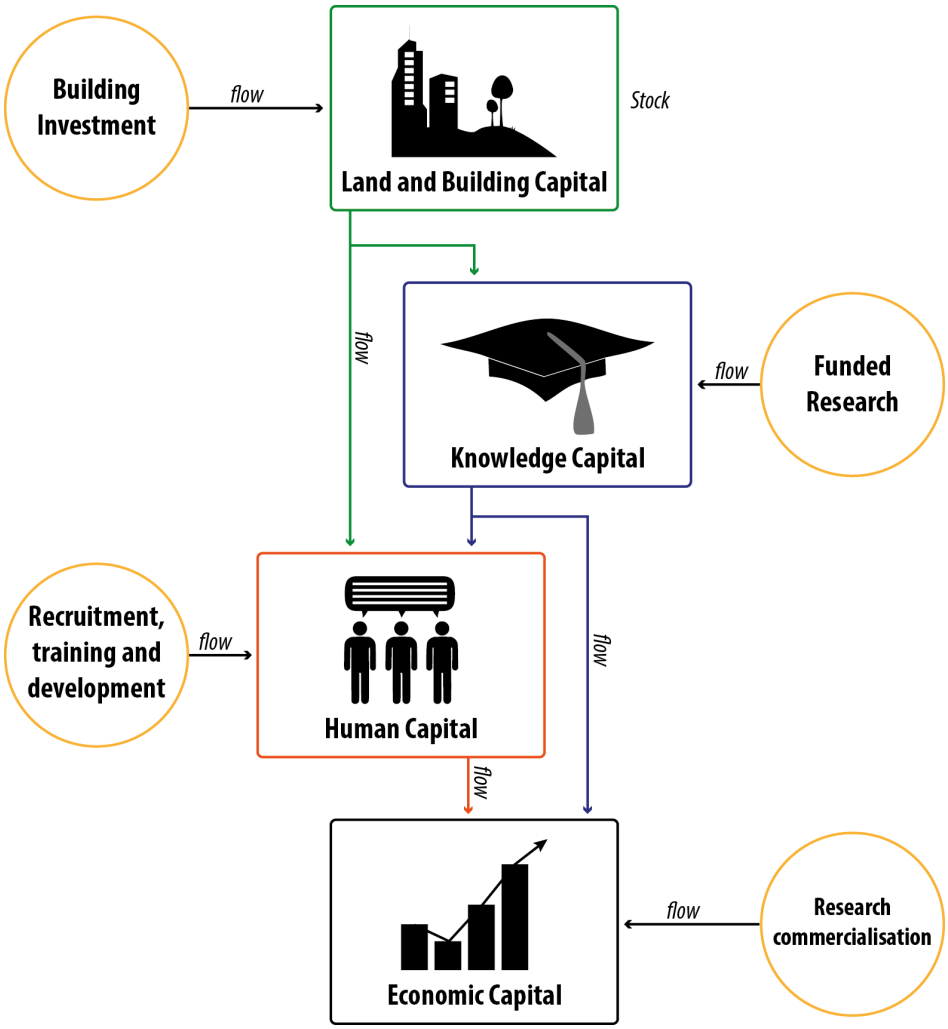
Traditional financial analysis would consider the building investment required to generate sales and rent revenue after outgoings and depreciation. If the return on the building investment were sufficient to meet the financial return goal, then the project would proceed. Projects that do not show sufficient commercial return (measured by ROI, IRR and NPV) would not proceed, even if there were other good reasons to go

ahead with the development. It is because these other justifications are unknown or not properly measured that many meritorious projects never occur.

1.4 Alternate Approach

Universities and their urban environments are distinguished from other locations because of the high quality, knowledge-based activity that occur within them. In other words, there are many stocks of capital created within a university that do not occur at a shopping centre, light industrial area or other activity node. Figure 2 shows how these other stock of capital might be related.

Figure 2: Knowledge-based Land & Building Stock and Flows



Unlike shopping centres, universities exist and are developed for reasons other than straight return on property investment. The stocks of knowledge capital, human capital and economic capital that are the hallmark of universities are inherent in the teaching, learning, research, and commercial exploitation of knowledge assets. Funded research flows from government and private sources increase the stock of knowledge capital. Knowledge capital can in turn flow into economic capital if the research is

commercialised. If the knowledge capital is simply used to publish peer-reviewed academic papers, the economic effect is minimal.

Knowledge capital also flows into human capital – effectively by accumulating talented researchers, teachers and commercial people. Rich stocks of human capital serve to attract and develop more talent, so the stock increases over time. These self-reinforcing systems are called positive feedback loops. Successful multi-functional university precincts have lots of positive feedback loops across all types of capital stocks.

Buildings are important contributors to the success of university precincts in two ways.

First, they provide the specialist facilities and equipment that researchers need to generate knowledge capital and turn it into economic capital. Economists use the term 'localisation economies' to describe the extra capital created by placing the right mix of buildings, people and knowledge together.

Second, buildings provide high-amenity environments where people of all types want to work, live and play – whether or not they are engaged in localisation economies. So, great buildings housing restaurants, supermarkets, cinemas, hotels, sports facilities, etc., set into beautiful landscaped areas; supported by excellent transport systems together provide an attractive environment for residents and businesses to locate alongside university activities. Economists call these environments 'urbanisation economies', which have their own positive feedback loops.

1.5 Outcomes

By combining the positive feedback loops associated with interlinked stocks of built, knowledge, human and economic capital (localisation economies) with wide and varied amenities in an easily accessible land legible layout (urbanisation economies), the whole system can become self sustaining.

1.6 Conclusion

So if this systems-based approach to university precinct development can produce self-sustaining, high level economic results, why isn't it being used at Curtin today?

There are many successful places where these systems do operate effectively. They are chracterised by:

- Clear commercial goals based on an appreciation of the commercial value of their knowledge capital
- Tight and deliberate links with commercial and government enterprises required to deliver that value
- Coordination of teaching, research and commercial activities under a single strategic mission
- Access to flows of private and public investment funds based on a track record of high-value returns to investors

Curtin needs to reflect on whether or not it shares these characteritics.