

Strategic Resources Investment Planning for Growth and Development: An executive training model

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Abstract

A lack of Resource Based View (RBV) effective understanding in strategy courses and a quick feedback learning style of the new generation of Business Administration students demand more than a traditional lecture teaching strategy. Based on two educator research questions: How could my students achieve an effective understanding of the RBV concepts? How could my students experiment quick financial impacts of their strategic decisions? and one student question: How could I develop strategic resources in order to achieve the maximum Cash Flow?, an Interactive Learning Environment (ILE) is proposed with the following learning objectives: understand the RBV concepts, identify relationships between strategic resources and financial performance and experiment the financial impacts of several resource development strategies, as an iterative process. The proposed ILE is tested based on a laboratory experiment that was conducted with the participation of graduate and undergraduate students to evaluate some key performance measures differences due to student investment strategy profiles between these two groups. The experiment results suggest that graduate students were more aggressive, getting worst results at the beginning but, at the end they achieve better results with some less aggressive strategy plus assigning more resources to productivity versus capacity than undergraduate students did.

Keywords: Strategic resource investment, Growth & Development, Interactive Learning Environment, Laboratory experiment

Introduction

Organization growth and development policies are based on combinations of capacity expansion and productivity gain, as a function of the absolute and relative strategic resources levels, their development, combination and exploiting strategies (Warren, 2008). The convenient combination of these resources for a specific firm depends on the firm's strategy, industry structure, timing and available resources and capabilities.

Following Hambrick & Fredrickson (2005), vehicles are one of the five critical elements of the strategy (the other four are arenas, differentiators, staging and economic logic). Vehicles are the means of reaching the target market. How the firm is going to accomplish their growth and development strategic objectives? It could be via internal resource development, joint ventures, acquisition, outsourcing, etc. These decisions are based on an efficient and strategic resource development management.

Sometimes managers don't have the knowledge, skills, time, ability or sensibility to effectively allocate investment in order to develop these strategic resources because, among several causes, this allocation problem behaves as a complex dynamic system with feedbacks, time delays and nonlinearities that could be misperceived (Sterman, 1989; Forrester, 1995; Cronin, et al., 2009; Moxnes, 2004) as a result of their bounded rationality and limited mental models (Simon, 1979;

Sterman, 2000; Richie-Dunham & Puente, 2008). A mental model “is a conceptual representation of the structure of an external system used by people to describe, explain and predict s system’s behavior” (Johnson-Laird, 2005; Capelo & Ferreira, 2009; Groesser & Schaffernicht, 2012). It seems that many times managers use intuition that follows heuristic rules in their decision-making process (Bakken, 2008), based on their mental models.

In order to improve the intuitive manager resource investment decision-making process, this paper proposes an Interactive Learning Environment (ILE) based on a System Dynamics model. The ILE allows executive sensitivity improvement in the effects or implications of several resource investment policies, considering capacity growth and productivity development in a firm.

The model

Model Structure

Model structure was inspired on Barney & Pedercini (2003), Pedercini, et al. (2007) and Kopainsky, et al. (2009) system dynamics based simulation models. The goal of the model is to be a practical executive learning tool that incorporates organization growth strategic decisions on capacity and productivity investment. The model generates scenarios showing the effects of several proposed strategies, in order to achieve net earnings growth and strategic resource development.

Model learning objectives:

- Perform a productivity versus capacity tradeoff resources growth strategy analysis
- Develop a feedback loops and decision-performance or response delays “participant sense”
- Assess the relative resource equilibrium development principle
- Improve the participants’ learning and decision making in dynamic systems

The model has three subsystems: strategic resources, finance performance and strategy decisions, as illustrated in Figure 1. The goal is the determination of a resource development investment strategy that maximize the cash flow net present value (NPV) in certain time period.

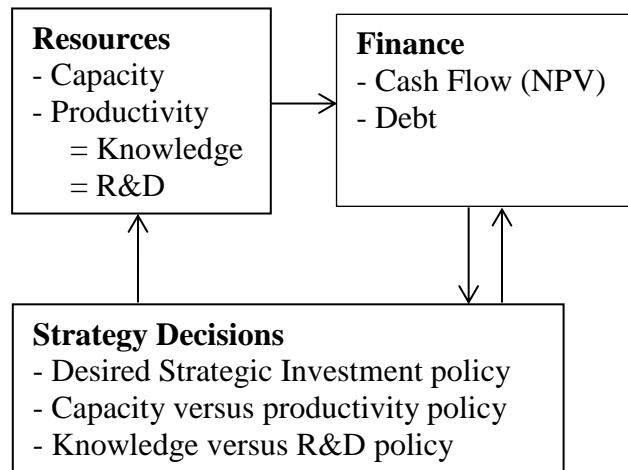


Fig. 1. Block Diagram of the Strategic Resources Investment Planning Model

The dynamic hypothesis is illustrated in Figure 2. The causal loop diagram (CLD) has three feedback loops: one reinforcing loop for the firm growth, that considers the investment in the capacity resource; one reinforcing loop for the firm development, that invest in (two) productivity resources and one balancing loop for financing the budget. There are three policy variables: the desired strategic investment (amount), the strategic growth policy (investment proportion in capacity versus productivity) and the strategic development or productivity resources allocation (R&D versus knowledge) policy.

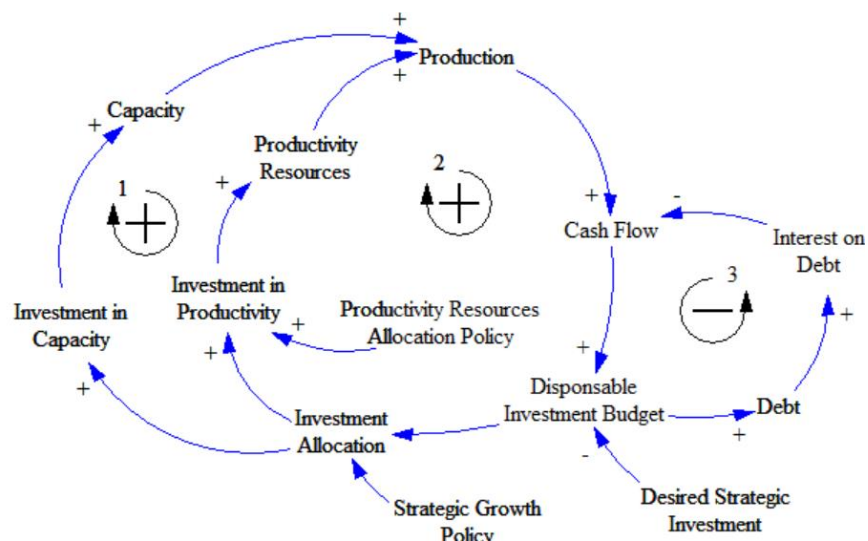


Fig. 2. Strategic Resources Investment Planning Model high level CLD

Conclusions

A management simulation model is proposed in this paper. The model simulation can be seen as a mean to develop executive skills in strategic resource investment allocation decision making, by proposing and tasting several growth and development firm strategies. The model is based on the System Dynamics methodology.

Based on an experiment, results suggest that participants achieve the following learning points:

- The resource investment allocation and the build-up of capacity and productivity resources are crucial decisions for the dynamic growth process of a firm that should be seen and understand as a cause-effect relationship
- The resources must develop in an equilibrate perspective, considering their relative levels at each period of time
- The extreme values not always are the best ones I strategic decision making
- It should be taking in account the strategic resources' building time in the investment allocation decision making processes and their delayed impacts.

The proposed model could be used to “experiment” stock-flow relationship under the Resource-Based View of the firm in Strategy courses. The proposed ILE could be an effective mean to improve management ability to understand non-linear cause effects relationships, resource building timing, lagged responses and results sensitivity as a function of policy variables in business systems.

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