



# **Dynamic performance measurement system for a self-financing tertiary institution: Integrating governance for quality and sustainability**

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# Abstract

- **Performance of self-financing tertiary education institutions are predominately measured by their overall quality as assessed by designated external agencies.** For management purpose, prior studies have pointed out adoption of a performance measurement system, such as balanced scorecard, to monitor and manage performance of tertiary education institutions under an increasingly competitive environment.
- In the case of Hong Kong, there have been a number of newly established degree offering, self-financing institutions that are monitored closely by various stakeholders mainly for quality assurance purpose. Building on a literature review of performance measurement for tertiary education institutions as part of the third sector, **a strategy-focused balanced performance measurement framework is explored and constructed.**
- We argue that this framework reconfigured from the conventional balanced scorecard for the self-financing tertiary institutions must be led by a **governance of complementary visions in seeking causal-effects for continuous improvement and sustainable performance.**

# Introduction

- While **balanced scorecard (BSC) as a tool for performance measurement system** has been adopted widely for profit-oriented organizations, its application is also extended to non-profit organizations in various countries.
- There have been applications in health care organizations as well as educational institutions, in the third sector, which have adapted the framework of BSC and customized for their variations in strategic focuses.
- Non-profit organizations are driven by the interests of their broad stakeholders in service-oriented operations. Design of such a performance measurement system however needs to address **intrinsic weakness of a standard BSC**
- Looking into the case of Hong Kong's self-financing education institutions, the authors intend to **explore an adapted BSC framework that is driven by the key stakeholders**
  - augmented by the governance and overall strategy of an institution seeking continuous improvement with dynamic capabilities for quality and sustainability.

# Critics of traditional BSC

- Despite popularity of utilizing a traditional BSC, there are critics that raise concerns about relevance of adopting BSC for various organizations. In particular, Norreklit et al. (2005) pointed out the **weakness in casualty** when attempting to link certain performance indicators with the end results.
- Need to develop a customized performance measurement system composed of performance indicators that are constructed based on a causal relationship (Norreklit et al., 2005).
- Further, Barmabe and Busco (2005) suggested the **casual relationships between performance drivers** and outcomes could be enhanced with a system dynamic model.
- **The time lag intrinsic with certain performance measures** should be considered as well in designing a performance measurement system for third-sector organizations (Moxham, 2013).

# Literature review:

## Performance measurement for non-profit and education sector

- Atkinson et al. (2011) reveals the **relevance of using BSC in non-profit organizations** that are driven by their unique stakeholders' interests and expectations. Specific non-financial performance measures are critical to drive delivery of quality services
- Moxham (2013) points out that should be **a rationale for determination of their performance measures which could hardly be standardized**. Such performance measures in third-sector organizations should address three main areas, namely accountability, legitimacy as well as improvement of efficiency and effectiveness (Moxham, 2013).
- Papenhausen and Einstein (2006) examined how BSC could be made suitable to a higher education setting with alignment of **a wide variety of measures with the strategy of a college**.
- Further explored by Zangoueinezhad and Moshabaki (2011) that universities could use a **knowledge-based approach in measuring performance based on a modified balanced scorecard framework**.

# Literature review:

## Design of a performance measurement system

- As stipulated in prior studies, BSC can be considered as an integrated performance management system that enables organizations to align their **strategy from the governance level** with actions (Kaplan and Norton 1996, 2001).
  - Overall strategy and mission of an education institution is so critical as it drives its development and day-to-day activities.
- With reference to the study by Papenhausen and Einstein (2006), a BSC strategy map would enable clarifications of its overarching and **complementary strategic themes as well as the goals to be achieved.**
- An adapted framework by Papenhausen and Einstein (2006) is provided as Fig. 1.

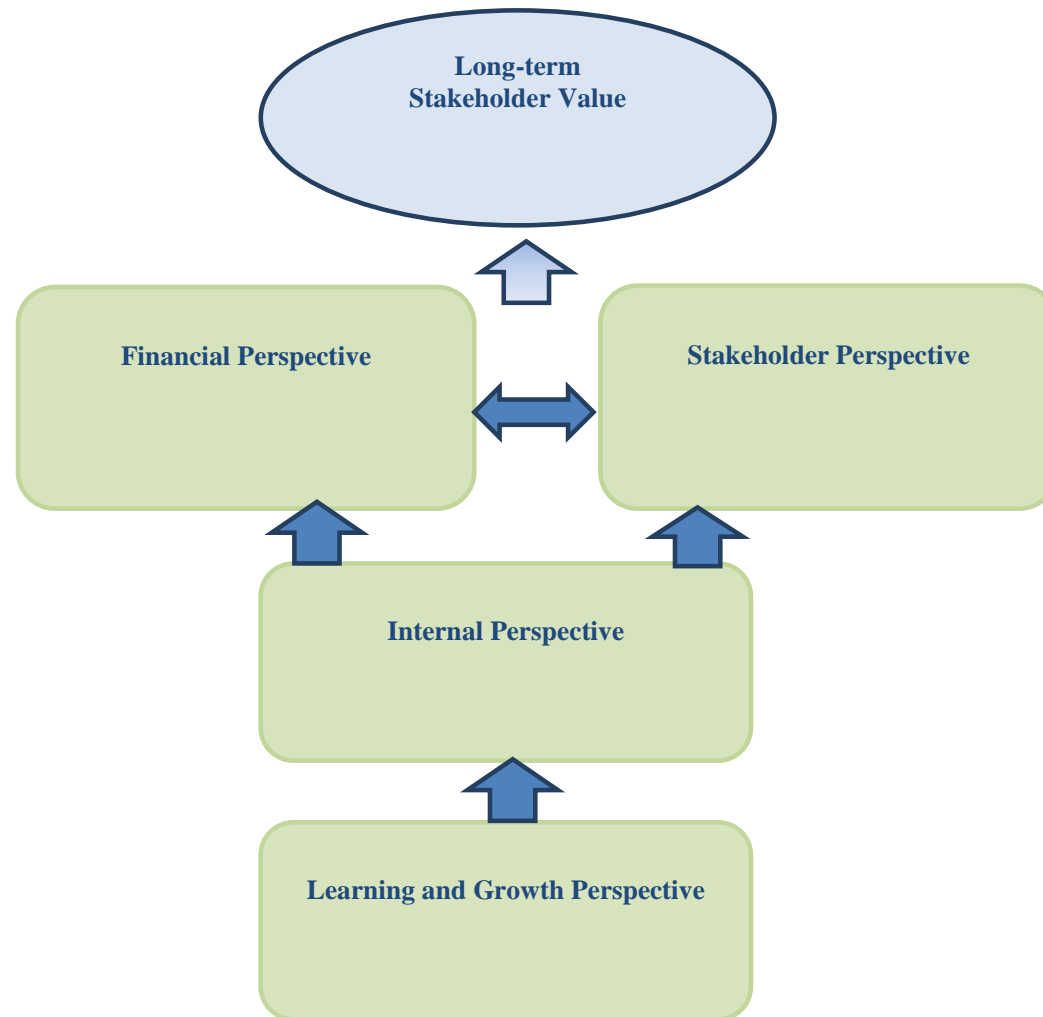


Figure 1 Adapted BSC Framework (Papenhausen and Einstein, 2006)

# Literature review:

## Stakeholder perspective

- Need to embrace **a broader base of stakeholders**
- In a prior study focusing on **students as a group of key stakeholders**, Adidam et al. (2004) suggested that business students continue their relationship with their school with a sense of commitment and loyalty if the school offers superior benefit in terms of education quality, location, costs of tuition, internship opportunities, better placements and networking opportunities.
- Students consider teaching quality, student services, articulation and internship opportunities, relationship between school and industry, are important for them staying in the school (Holdford and White, 1997).
- A range of pertinent quality dimensions covering most aspects of student life have been explored in past literatures (e.g. Harvey, 1995; Hill, 1995; Elliott and Healy, 2001; Wiers-Jenssen et al., 2002).



# Literature review:

## Internal process perspective

- Education providers are expected to develop internal **processes to enhance teaching excellence, curriculum excellence, quality of faculty, and efficiency and effectiveness of service.**
- In the study by Voss and Gruber (2006), the desired **teaching attributes** in tertiary education are expertise, approachability, communication skills, teaching skills, friendliness, enthusiasm, humour, and teaching methods. Lecturers should have sufficient knowledge of the subject and the ability to transmit excitement and interest for their subject.
  - Education provider should develop **internal mechanisms and policies to enhance these teaching attributes.**
  - Learning and growth activities would support the faculty development that enhances these internal processes.

# Literature review:

## Learning and growth perspective

- The learning and growth perspective **identifies the skills and intangible assets within an organization that drive the school to improve its internal process.** The learning and growth areas include **human capital, information capital, and organizational capital** (Kaplan and Norton, 2001).
- **Human capital** consists of skills, training and knowledge. / **Information capital** is related to systems, databases, and networks / **Organizational capital** is about culture, leadership, alignment, and teamwork of the school.
- Education providers should put efforts in develop scholarly activities that integrate with their strengths in teaching and learning activities (Boyer, 1990). Further, perceived service quality is considered important in building students' satisfaction (Rojas-Mendez et al. (2009). Service quality provided by instructors, programme director and secretaries, service attitude and competences development are key components affecting students' satisfaction.
- **Education providers should allocate resources in enhancing these qualities.**

# Literature review:

## Financial perspective

- The financial perspective contains **largely performance outcomes in financial terms**, such as fund raising, revenues from operations, cash flow and overall financial management.
- Kaplan and Norton (2001) considered profitable programme mix, **increasing grants, increasing teaching productivity, and financially sound as goals of financial perspective**. The measurement includes donor support, grant and endowment received, contribution analysis, student/faculty ratio, balanced budget and market growth etc.
- Papenhausen and Einstein (2006) furthered that there should be consideration over **the variable sources of revenues** in maintaining a balanced budget.

# Embedding sustainability in tertiary institutions

- The concept of sustainability has gained significant attention in the society today. Hopwood et. al. (2010) points out the need to **consider economic, social and environmental sustainability of an organization for its long-term viability.**
- As the society as whole has become concerned about sustainability, it is argued that universities should also consider develop a vision of sustainability for its role as a tertiary education institution (Van Weean, 2000; Comm and Mathaisel, 2003).
- To pursue sustainable development and performance, it is critical to have an **adequate mode of governance or leadership that continues to encourage and support such agendas** (Van Zeijl-Rozema et al., 2008).

# The case of self-financing tertiary institutions in Hong Kong

- Case study as the research approach. Yin (1994) points out that the case study was adopted in a number of situations to explore new knowledge of individual, group, organizational, social, political and related phenomena.
- Case study method enables the investigators to embrace the “holistic and meaningful characteristics of real-life events”.

# Self-financing tertiary institutions in Hong Kong

- With the rapid growth of self-financing tertiary education, there have been emerging tertiary education institutions in Hong Kong leading to more competitions within the sector.
- Self-financing tertiary education institutions are actively working to pursue student enrolment on an annual basis (Lee, 2003).
- Self-financing educational institutions need to earn enough income to cover staffing expenses among other operational costs and infrastructural expenditures, etc.

# Self-financing tertiary institutions in Hong Kong – quality assurance

- Having recognized that quality education holds the key to the future, various countries set up their own quality assurance agencies in the 1990's.
- Among those is the Hong Kong Council for Academic Accreditation, the predecessor of the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ).
- The scope of the Council's academic accreditation services was broadened to include the sub-degree sector, including both publicly-funded institutions to self-financing programme providers.
- Following the reconstitution under the HKCAAVQ Ordinance (Cap 1150) in 2007, and the launch of the Hong Kong Qualifications Framework (QF) and Qualifications Register (QR) in 2008, the statutory powers and responsibilities of the Council focus on the quality assurance of the vocational sector.

# Self-financing tertiary institutions in Hong Kong – two levels of assessment

- HKCAAVQ as the external quality and performance assessor that focuses on:
  - Assessment of institutional performance
  - Assessment of programme performance
- The set of criteria adopted not designed as a structured system for performance measurement and management purpose
- The quest to enhance continuous improvement by management



# Discussion

- Current quality assurance mechanism adopted by the agency is inequivalent to a structured system for performance measurement and management purpose as illustrated in Fig. 2.
- Being driven by a strong governance-adopted strategy, a framework composed of the four main perspectives is proposed to enable an overview of the integrated components to enhance continuous improvement by management
- An institution needs to consider developing its own range of performance drivers from the internal as well as learning and growth perspectives that would result in innovative developments.

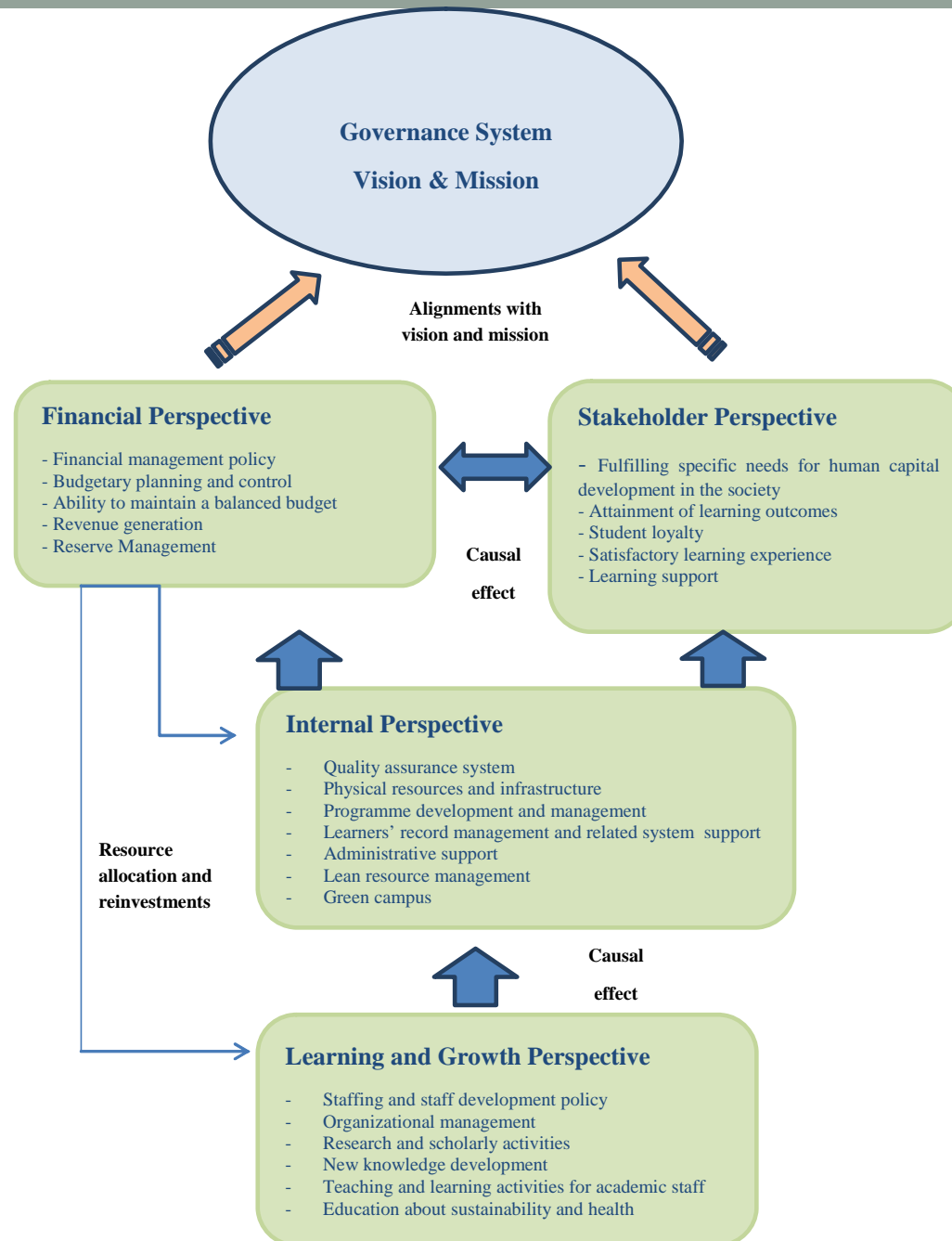


Figure 2

# Discussion

- **Second**, the existing quality assurance mechanism has not yet emphasized the significance of strategy clarity for an education institution that is constantly supported by a mode of governance.
- A clear strategy adopted by a **visionary board of governance** would not only help define the vision and mission but also drive continuous improvement in quality as evaluated by the assessors, which processes are however unlikely to be uniform to institutions of varying emphases.

# Discussion

- **At last**, this paper points out the need to evaluate the **dynamics, time lag and the casual relationship among the four perspectives** in order to optimize the use of financial resources for sustainability of a tertiary institution.
- Within the financial perspective, an institution needs **to review allocation of resources as well as the overall effectiveness of reinvestments into measures for sustainable performance** in the three domain areas, namely economic, environmental and social sustainability, with a long-term perspective for lean and green developments.
- A board of governance can make use of such **a performance measurement system to monitor an institution's on-going sustainability and other innovation beyond quality assurance.**



Thank you