

The important role of system dynamics investigation on business model, industry and performance management

System
dynamics
investigation

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Received 25 February 2022
Revised 28 July 2022
17 August 2022
26 November 2022
Accepted 5 December 2022

Abstract

Purpose – This research studies the development of the evolving dynamic system model and explores the important elements or factors and what detailed attributes are the main influences model in achieving the success of a business, industry and management. It also identifies the real and major differences between static and dynamic business management models and the detailed factors that influence them. Later, this research investigates the benefits/advantages and limitations/disadvantages of some research studies. The studies conducted in this research put more emphasis on the capabilities of system dynamics (SD) in modeling and the ability to measure, analyse and capture problems in business, industry, manufacturing etc.

Design/methodology/approach – The research presented in this work is a qualitative research based on a literature review. Publicly available research publications and reports have been used to create a research foundation, identify the research gaps and develop new analyses from the comparative studies. As the



International Journal of
Productivity and Performance
Management
© Emerald Publishing Limited
1741-0401
DOI 10.1108/IJPPM-07-2021-0399

literature review progressed, the scope of the literature search was further narrowed down to the development of SD models. Often, references to certain selected literature have been examined to find other relevant literature. To do so, a supporting tool (that connects related articles) provided by Google Scholar, Scopus, and particular journals has been used.

Findings – The dynamic business and management model is very different from the static business model in complexity, formality, flexibility, capturing, relationships, advantages, innovation model, new goals, updated information, perspective and problem-solving abilities. The initial approach of a static system was applied in the canvas business model, but further developments can be continued with a dynamic system approach.

Research limitations/implications – Based on this study, which shows that businesses are developing more towards digitalisation, wanting the ability to keep up with the era that is moving so fast and the desire to increase profits, an instrument is needed that can help describe the difficulties of the needs and developments of the future world. This instrument, or tool of SD, is also expected to assist in drawing future models and in building a business with complex variables that can be predicted from the beginning.

Practical implications – This study will contribute to the SD study for many business incubator research studies. Many practical in business incubator management to have a benefit how to achieve the business performance management (BPM) in SD review.

Originality/value – The significant differences between static and dynamics to be used for business research and strategic performance management. This comparative study analyses some SD models from many authors worldwide. Their goals behind their strategic business models and encounter for their respective progress.

Keywords Dynamic business model, Dynamic performance management, Enterprise architecture framework, Sustainability dynamics approach, Dynamic start-up business, Business management model for sustainability

Paper type Literature review

1. Introduction

Recently, the enterprise framework study has gained traction, forming a widely debated topic to investigate the boundary between regulation policy, governance, industry and business. Many investigations approach to progress and multiply (business model knowledge, business model plan, business model project, business model invention, circular business model and so on). The existing records identified that an increasing number of scientific researchers appeared in special editions of scientific publications, scientific seminars, training and scientific networks for academics (Foss and Saebi, 2017; Massa *et al.*, 2017) (see Figure 1).

Business process management has initiated the impact of optimisation and work efficiency for companies, businesses and industries until now. Still, the digitalisation transformation has required businesses to be flexible and affordable as well. In order to be a part of this digital era, submitting new levels of automation flexibility through the digitalisation of business process management itself is required.

Business performance management (BPM) is a part of the transformation in social management. So, BPM cannot be separated from the consumer and social world. It is necessary to assess whether the service capability provided is in accordance with the target in terms of the correct number, best expense and perfect moment. Measurement of results needs management to determine the targets and direct performance variables used to assess the results (the number, quality, productivity and result of services covered). Then these variables, the aims of performance, are determined to obtain the target. In the final stage, the business performance approach needs evaluation. All goals have been reached, and the next activities are needed to fulfil the predetermined review variables/criteria (Bouckaert and Halligan, 2008).

The system dynamics (SD) approach has a specific character compared to others. The SD methodology may establish a substantial perspective of how accurate situations might influence the firmness of a system in business performance and strategies (Sasthy, 1997).

In the future, SD application could explore some case studies, such as qualitative and quantitative studies on some types of business. Startups, family businesses, government, social services, sustainability and environmental businesses, and trading companies can all benefit from SD applications. The stakeholder can apply SD application in BPM and can get a better understanding of the direct and indirect impact on the enterprise. This information is critical for decision-makers, financial services, financial institutions, government agencies, consumers, investors, shareholders, suppliers, etc.

Based on this study, which shows that businesses are developing more towards digitalisation, wanting the ability to keep up with the era that is moving so fast and the desire to increase profits, an instrument is needed that can help describe the difficulties of the needs and developments of the future world. This instrument, or tool of SD, is also expected to assist in drawing future models and in building a business with complex variables that can be predicted from the beginning.

The start-up company's SD performance business models and management can be used as a case study, while government, business players or decision-makers can be used for further study. Further studies and any of these statements should focus on providing many benefits and contributions to enrich business research. The outstanding contribution could be applied to the local government of the country. Any further study could be continued depending on the world situation, business situation and business trends.

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