Balanced Scorecard Implementation Towards New Product Development and Business Performance: A Review of Literature

Aminaimu Zhengxiaoming[1], Shrikant Panigrahi[2]
Faculty of Industrial management, University Malaysia Pahang
Corresponding author mail ID: 1271210987@qq.com

Abstract
Balances Scorecard (BSC) as a strategic performance tool has received closed attention by many organizations worldwide, however, the implementation has been limited. The globalization and economic turbulence have increased the challenges to the executives face and therefore need to find the right tools to overcome the challenges. The current paper focuses on a review of literature on the importance of BSC towards new product development and business performance. The 4th generation balanced scorecard leads the combination of management system and performance measurement that brings up one big strategy maps, and possibly will use widely to satisfy the customer demands. The industry 4.0 will help enlarge the big pictures of new product development based on customer needs. This paper discusses on the current issues and emerging importance of BSC literature and suggests fruitful areas for further research.
Keywords: balanced scorecard (BSC); new product development (NPD); industry 4.0; business performance

1. Introduction

Balanced scorecard as a strategic performance measurement tool have been regarded as a key success factor reflecting the essence of organization's value creation activities. When the organization struggle to survive they mostly focus on financial goals to improve their future planning (Hutchins, 2016). However, the enterprise rarely think of measurement as an essential part of their strategy (Elmes & Barry, 2017). For example, executives may introduce new strategies and innovative operating processes intended to achieve breakthrough performance, managers not only to introduce new measures to monitor new goals and processes but also to question whether or not their old measures are relevant to the new initiatives (Jeston, 2014).

Over the past decades, balanced scorecard consequences has become a hot research topic because it is positively related to finance and business management, extra-role the balanced scorecard is a management system that can motivate breakthrough improvements in such critical areas as product, process, customer, and market development (Subramanian & Gunasekaran, 2015). In the academic area, scholars have explored a diverse range of issues concerning balanced scorecard consequences and submitted their work to journals for publication. With the increasing number of publications in this area, reviewing the subjects that have been explored in the past to shed light for future research is necessary.

Therefore, this study aims to conduct research on balanced scorecard consequences. Research objectives include the following:

to conduct a comprehensive literature review of the balanced scorecard in the finance and business management;

- to provide systematic overview of its predictors and outcomes;
- to analyse the outcomes of balanced scorecard towards new product development; and
- to provide suggestions for the previous study.

2. Literature review

2.1 Definition of balanced scorecard

The BSC was originally initiated in 1990's by Dr. Robert Kaplan of Harvard University together with Dr. David Norton (Cooper et al., 2017). They develop the BSC as a structure for determining the organizational performance by using balanced set of performance evaluation (Teklehaimanot et al., 2016). The BSC approach gives a clear authorization as what the organizations should measure by identifying some of the flaws and the lack of certainty of past management resembles. Traditional companies or organizations used only short-term financial performance as a rate of success. But the BSC added the extra non-financial strategic quantifies to have better attention on long-term success. The approach has expanded over the years and has been examined as a completely united strategic management system (Murage, 2018).

Balanced scorecard system continues to enrich the development, from formulating strategy to the strategy into the implementation of the program (operational level), balanced scorecard through which the expression of the form is "strategic map." Therefore, BSC applications often incorporate a strategic map that presents the four dimensions in a single chart (Kang et al., 2015). The combination of a balanced scorecard and a strategic map is more than a performance appraisal tool, but a dashboard of strategy formulation and strategy execution (Bergeron, 2017). Therefore, the modern significance of the Balanced Scorecard is talk about how to determine the company strategy, how to break down the strategy, how to implement the strategy, which is a set of strategic management new product tools.

2.2 Measurement scales of balanced scorecard and its consequences

The measurement scales of balanced scorecard consequences have been discussed by several studies from different perspectives. The scorecard presents managers with four different perspectives from which to choose measures (Ogunsiji & Ladanu, 2017). It complements traditional financial indicators with measures of performance for customers, internal processes, and innovation and improvement activities. These measures differ from those traditionally used by companies in a few important ways (Keyes, 2016). Which are suitable for measuring all aspects of balanced scorecard and has been widely used in many studies, such as in the studies by:

2.2.1 Financial perspective and NPD

New product performance represents a strong link between CRM and the company's financial performance. Further, CRM can be a crucial way of improving financial performance. new product performance is an important mediator of CRM effects on company performance and may provide some explanation as to why previous studies (Reinartz et al., 2004) rather have evidenced these moderate effects. In other words, research that has left out new product development as an important mediator may have ignored a key mechanism for CRM's ability to improve financial performance (Ernst et al., 2011).

Traditional performance evaluation systems have the common weakness which overemphasizes the financial parameters and other perspectives were neglected. In the new market context where information highly influences companies' success, no single performance indicator could fully capture the complexity of an organization's performance. With multiple and often conflicting demands from various stakeholders, a company's performance objectives are multidimensional (Kalender & Vayvay, 2016). The financial perspective can measure the effectiveness of all the other perspectives. Johansson and Larson (Johansson et al., 2015) stated that this perspective indicates whether the previous strategies have been used to lead to economic success and seeks to define the financial performance of strategies meant to achieve revenue growth and cost reduction.

2.2.2 Internal process perspective and NPD

The internal business processes category focuses on core processes aimed at customer satisfaction and at financial objective achievement (Kaplan & Norton, 2001). Internal business processes perspective generally identifies more effective processes for the organization to achieve high efficiency in terms of its objectives. These can include both short-term and long-term objectives as well as incorporating innovative process development in order to stimulate improvement. Companies should identify and structure efficiently the internal value driving processes that are vital regarding the goals of customers and shareholders (Kalender & Vayvay, 2016).

How the effect of internal business processes on both customer and financial performance, as well as customer performance, affect financial performance can be investigated. The goals of internal business processes in the BSC model are to innovate and improve the process of identifying and satisfying customer demand, as well as to provide excellent customer management service afterward (Lee et al., 2013). Internal business processes indicate the extent to which value is brought to the customer via efficient use of business resources (Lee et al., 2013).

2.2.3 Customer's perspective and NPD

In recent years, firms have focused on how to enter markets and meet customer requirements by improving product attributes and processes to boost their market share and profits (Chan & Ip, 2011). Some disregard the influence of customer behaviour and satisfaction, and most fail to take the time value of money into consideration. A new, comprehensive decision support system that overcomes these shortcomings is needed to help firms make more sensible and reliable decisions on new product development.

From the modern management perspective, maximizing customer value is the key to surviving fierce competition in the business world. Hence, many firms actively engage in developing new products. By delivering value through new products, firms satisfy customers and generate profits. It has been empirically established that customer satisfaction leads to customer loyalty and, in the long term, to profitability (Heskett et al., 1994); (Ip et al., 2008). New products are a crucial driver of customer satisfaction, and that customer satisfaction plays a key role in business sustainability. This suggests that new product development and relationship marketing are associated, especially as customer relationship management is a core relationship marketing tool in the delivery of customer value through products (Christian, 2000). To survive and succeed in the current business environment, firms usually focus on several areas to improve their new product development, such as identifying customer needs for continuous new product development (Liu et al., 2008); (Schilling, 2010), improving product quality (Kwong* & Bai, 2005); (Staley & Warfield, 2007); (Swink et al., 2006), and accelerating the process of commercialization.

Most current decision support systems help managers select the best new product among alternatives in terms of market share, return maximization, or product development time minimization. However, the measurement of market share or return maximization excludes the time value of money, whereas that of product development time minimization disregards market demand and the effect on customer behaviour of relationship marketing. These shortcomings may affect the outcome of new product development (Chan & Ip, 2011). The customer category assesses the extent to which the target market was captured (Kaplan & Norton, 2001). Customer performance indicates the extent to which the customer market and service are improved (Lee et al., 2013).

A turbulent environment imposes organizations to be smart, agile, and responsive to fast changes of business needs. In order to survive and maintain development, organizations have to improve their new product development process and product quality, ad- just their products to customer's requirements, accelerate the process of commercialization, and be ahead of their competitors (Chan & Ip, 2011). The new product development process includes the stages of identifying customer needs, generating concepts, selecting a concept (or a set of concepts), designing a product, testing prototypes of a new product, and launching (Takai, 2009); (Wang & Gupta, 2011). As new product development helps firms to survive and succeed in dynamic markets, it is a crucial process in maintaining a company's competitive position (Chin et al., 2009). However, market competition and product technology advancement is often intense (McCarthy et al., 2006), what causes NPD to be a relatively risky activity (Kahraman et al., 2007). Consequently, companies try to meet customer requirements by improving product attributes and the NPD process.

The NPD process consists of the stages such as identifying customer needs, establishing target specification, generating product concepts, evaluating and selecting the most promising concepts, designing and testing prototypes of new products, and finally launching new products on the market (Annacchino, 2003). The case-based reasoning approach begins with collecting the data of a new product that can regard customer requirements for a new product and/or trends in the market. The sales and marketing department analyses the market and customer response about existing products, and specifies attributes that refer to a new product, e.g. its application, complexity, and shape. In the next step attributes are selected and weights are assigned to these attributes according to their impact on the cost of new product development (Relich & Pawlewski, 2018).

2.2.4 Learning and Growth perspective and NPD

The learning and growth category assesses the construction of necessary long- term growth and improvement infrastructure (Kaplan & Norton, 2001). Learning and growth perspective consists of employee skills, training and administration of routine processes. In other words this perspective focuses on internal skills and capabilities, in order to align them to the strategic goals of the organization (Kalender & Vayvay, 2016). The learning and growth aspect is an important intangible component of the BSC model. It is related to internal operations, stakeholders and sustainability. This aspect serves as a basis for management and important for new product development (Inayat et al., 2013); (Van Weenen, 2000).

Learning and growth facilitate the alignment of employees, information systems and organizations in SD (Haake & Seuring, 2009); (Nejati & Nejati, 2013). These three factors relate to what Kaplan and Norton claim is the infrastructure that is needed in order to enable ambitious objectives in the other three perspectives to be achieved. This of course will be in the long term, since an improvement in the learning and growth perspective will require certain expenditures that may decrease short-term financial results, whilst contributing to long-term success (Kaplan & Norton, 1995).

Improving the customer experience and realizing customer objectives must increasingly rely on input from the employees closest to both the customer and the organization's internal processes. Employees must be engaged so that their minds and creative capabilities can be applied to achieve customer and organizational objectives. Here, Kaplan and Norton acknowledge the importance of aligning people, processes and technology to support strategic objectives. To do so, organizations must consider investment in three categories that enable learning and growth (Kaplan & Norton, 1996).

Kaplan and Norton note that most organizations have devoted little effort to measuring the outcomes or drivers regarding employee skills, strategic information availability and organizational alignment. Efforts that advance, re-train or re-skill employees are often overlooked when developing strategic objectives. Exposing strategic information that can potentially impact employee job performance is inadequately planned. Aligning individuals, teams and departments or groups with the organization's strategy to drive long-term objectives is inconsistent and sporadic (Kaplan & Norton, 1996).

How will we sustain our ability to change and improve? Includes employee training and organizational attitudes related to both employee and organizational improvement. Examples of this perspective include the amount of revenue that comes from new ide- as and measures of the types and length of time spent training staff (Isoraite, 2008).

2.2.5 NPD and Business performance

new product development project management, investigating and excavating the existing problems in the new product development project management from various angles with the methods of interview investigation and data statistical analysis and with the knowledge of project management, analysing the problem causes from five aspects of project management system such as decision, organization, resource allocation, process control, evaluation and motivation according to the existing problems and putting forward the optimization idea and plan.

In the operation of the organization, the new product development is the activity with important strategic significance. The enterprise to find out the existing problems in the new product development management performance, to optimize the new product development strategy management system, and to increase the new product development efficiency and raise the market competitiveness.

2.3 Relevant studies in the field of finance and business management

Most studies on balanced scorecard explored its determinants and outcomes. In recent years, researchers tended to explore the effect of balanced scorecard towards new product development. Therefore, the balanced scorecard is found to be a significant factor. The balanced scorecard can serve as the focal point for the organization's efforts, defining and communicating priorities to managers, employees, investors, even customers (Quesado et al., 2018). The balanced scorecard is now used as the language, the benchmark against which all new projects and businesses are evaluated (Rabbani et al., 2014).

2.4 Content analysis of finance and business management journals

Content analysis is a popular method of analyzing finance and business management journals. In the finance and business management settings, researchers have conducted reviews of various topics, revealing online research methods in finance and business management journals (Saeidi et al., 2015), exploring the contributions of finance towards the new product development literature (Hoobler et al., 2018) analyzing studies related to the finance and business management industry in Malaysia (Hadi et al., 2016) and identifying the ranking of journals (Aziz & Samad, 2016); (Hoobler et al., 2018). Despite these efforts and the numerous related studies, the use of a systematic content analysis on balanced scorecard and its consequences has received insufficient attention.

This paper reports the results of an analysis of studies related to balanced scorecard in new product development and business performance setting. In particular, the study aims to **analyse** the determinants and outcomes from different perspectives to provide a comprehensive summary of Balanced Scorecard and its consequences research in the finance and business management area.

3 Research methodology

This study explored balanced scorecard to pics in strategic finance and business management studies. Top journals based on previous studies in strategic finance and business management ranking as discussed by ranked finance and management journals on the basis of their citation indices and impact factors. Thus, this study identifies

These strategic finance and management journals include International Journal of Productivity and Performance Management, Measuring Business Excellence, Journal of Intellectual Capital, Strategic Finance, Benchmarking, International Journal of Operation & Production Management, Management Decision, Controlling & Management Review, Accounting, Auditing & Accountability Journal and Quality Progress. The leading strategic finance journal such as Journal of Finance and Review of Financial Studies were also selected.

This study first searched refereed papers in the identified journals one by one by using the keyword “balanced scorecard.” The topics and abstracts of the papers were screened. Given the numerous studies on balanced scorecard, this study merely selected the papers with “balanced scorecard” in the topic, abstracts or keywords. The earliest relevant paper was published in 1981. A total of 1918 refereed papers up to December 18, 2018, were found and analyzed.

With reference to the research topics and objectives, most papers focused on the determinants and outcomes of balanced scorecard. Content analysis was performed to identify the major variables, influencing factors and outcomes. The coding and selection procedures were as follows:

- Each journal identified with the keyword “balanced scorecard” was searched.
- The influencing factors (or outcomes) and main variables of each paper were listed.
- The total number of papers published by all journals in the set was tabulated.
- The percentage of total papers published by each journal in the set was calculated.

4 Findings

As shown in Table I, of the 1981 referred journal papers most of them were published in three key finance journals namely, *International Journal of Productivity and Performance Management, Measuring Business Excellence and Strategic Finance.* The leading finance journal such as *Journal of Finance* and *Journal of Financial Economics*.

Table I. Number of papers from each of the top journals

No.	Journals	No. of papers	(%)
1	*International Journal of Productivity and Performance Management*	234	12.2
2	*Measuring Business Excellence*	202	10.5
3	*Journal of Intellectual Capital*	201	10.5
4	*Strategic Finance*	168	8.8
5	*Benchmarking*	162	8.4
6	*International Journal of Operation & Production Management*	156	8.1
7	*Management Decision*	131	6.8
8	*Quality Progress*	123	6.4
9	*Controlling & Management Review*	91	4.7
10	*Accounting, Auditing & Accountability Journal*	82	4.3
	Total	1918	

4.1 Strategic planning for new product development (NPD)

New product development may be the result of a complex process and depend on a set of capabilities that, although often dispersed throughout the company's strategic structure, can still be aligned with its strategic requirements. This set of capabilities form a meta-capability known as innovation capability (Kerzner & Kerzner, 2017). In order to achieve a successful new product, and certainly the successful implementation of a new product into a company, it is necessary to have a structured and documented approach to New Product Development (NPD), therefore providing a strategic plan for the development of new products (Luzzini et al., 2015).

New product development strategy will help you organize your product planning and research, capture your customers' views and expectations, and accurately plan and resource your new product development project (Kerzner & Kerzner, 2017). It is the firm's ability to rapidly introduce new products and adopt new processes, which are critical for competing with other firms (Chen et al., 2015). New product development is used by scholars whenever they need specific information about firms' technological structure and strategic innovation behaviour, in different industrial sectors (Laudon & Laudon, 2016).

4.2 Strategic control for new product development (NPD)

New product development (NPD) has become an important source of competitive advantage for firms and understanding factors that contribute to new product success is a vital managerial concern. One factor that is crucial to understanding NPD and performance is a firm's strategic control (Barrales-Molina et al., 2018). A better understanding of the relationship between strategic control and NPD performance requires emphasizing the importance of contingencies among a firm's strategic posture and other constructs of interest (Prajogo, 2016). Identifying which particular factors enhance or constrain the impact of strategic control on performance is an important research agenda (Melnyk et al., 2014). In response to the research design, informants could have provided data consistent with their beliefs about the way in which is strategic control should link to the organizational new product and how the latter related to strategic planning performance (Elbanna, 2016). strategic control provides means for tighter top-manageme nt control over their action (Van der Kolk & Schokker, 2016).

4.3 Knowledge economy for new product development (NPD)

Over the past two decades, the economies of leading countries have increasingly evolved toward knowledge-based economies, especially in the research and development of new products (Tchamyou, 2017). knowledge economy has been built around how product newness a affects product performance in the context of established firms (Jin et al., 2018). New product development and environmental factors are important boundaries for depicting how product newness influences product performance, prior studies have overlooked the important role of new product knowledge economy. Knowledge economy reflects new product understandings of their competitors and customers (Jin et al., 2018). In the face of resource scarcity and environmental turbulence, new product need external sources to

broaden their knowledge base and support innovation development (Forés & Camisón, 2016); (Dooley et al., 2017); (Chuang et al., 2016) .
knowledge economy characteristics such as breadth and tacitness may have significant and differential impacts on the process of assimilating, integrating, and transforming firm knowledge into new products (Jin et al., 2018); (Chuang et al., 2016). New product development is a process that involves transforming firms' embedded knowledge economy into new products, services, or a combination of these (Porter & Heppelmann, 2015). As such, the characteristics of firm knowledge significantly affect the value of technological and market newness in new products (Dunning, 2015); (Reid et al., 2016).

4.4 Financial strategies for new product development (NPD)

Financial control involves the use of financial measures to assess organization and new product development management performance (Chenhall & Moers, 2015). The focus of attention could be a product, a product line, an organization department, a division, or the entire organization (Kerzner & Kerzner, 2017); (Chenhall & Moers, 2015). Financial strategies are an essential one for any economy, essentially because funds are channeled to those economic agents having new productive investment prospects (Batuo et al., 2018). Financial strategies one of factors which define the new product development process were the primary focus of study (Laudon & Laudon, 2016).

4.5 Strategic management design for new product development (NPD)

The competitiveness in global and local markets highlights the importance of design, quality, productivity, multi-company collaboration, optimal price levels and production process predictability (Felice & Petrillo, 2016). When an industrial company launches a new product on the market the goal is to obtain a viable business (Ottman, 2017). A successful organisation recognises that when an effective strategic management design is properly implemented, it will result in a sustainable competitive advantage (Dayan et al., 2017).

organizational process effects such as the reduction of data redundancy, higher design quality, and lower influence of product changes on the development process; and strategic effects such as higher levels of product innovation and product cost and process cost reductions (Navimipour & Soltani, 2016). Product development is viewed as problem solving that needs to understand user (market) needs and then match these needs with the capabilities of particular technologies, rather than letting technology overly influence the development process, that is Strategic management of the new product development (Barkham et al., 2018).

4.6 Performance measurement tool for new product development (NPD)

New product development performance measurement is a surprisingly expansive and elusive subject (Camuffo & Gerli, 2018). This is due to the multiplicity of meanings associated with performance measurement; the varied, but simultaneous, roles that performance measurement plays; and the numerous, distinct customers of performance measurement (Carlsson-Wall et al., 2016). Performance measure is characterized by the combination of four aspects: its managerial purpose, object of interest, measurement forms and linkages with other metrics (Glas et al., 2018). The dimensions and elements of these four characteristics make up a formative framework defining the space of conceivable new product development metrics. This framework helps identify the current new product development performance measurement state of knowledge (Asadzadeh & de Souza Filho, 2016). The framework also exposes the gaps, helping identify the performance measurement questions and issues that remain unanswered and merit both practical and scholarly inquiry.

5 Discussion and Conclusions

5.1 Conclusion

The study review of balanced scorecard and its outcomes, research objectives, key themes and journals. In a nutshell the Balanced scorecard perspectives bring positive impact on New Product Development and at the same times to improving business performance. The perspectives can lead towards the new innovation of product based on trends. Nowadays the people specification on their demands open more constructive idea to company in order to meet what people want. The factors that influence balanced scorecard consequences are analysed from four perspectives, finance, internal business, customer, learning and growth. All the findings may provide useful guidance for business management.

5.2 Theoretical Implications

The findings may provide academic implications from three perspectives. From the research objectives, this work summarized previous studies that may shed light for future studies. Future research may search for new research areas and research perspectives, such as the moderating effect of balanced scorecard consequences, to further explore balanced scorecard consequences.

The outcome perspective may encourage researchers to focus on balanced scorecard consequences. This study summarized the outcomes of balanced scorecard consequences and found that organizational commitment, intention to stay and intention to leave are the three main outcomes of balanced scorecard consequences. Researchers should explore the outcomes of balanced scorecard consequences from various aspects, such as balanced scorecard consequences, balanced scorecard performance, career success and other outcomes, apart from the factors relating to balanced scorecard attitudes.

From the research methodology perspective, this study may provide researchers with trends in research methods for future study. Quantitative methods, such as structural equation modeling, path analysis and factor analysis, were commonly used in the previous studies. In recent years, some studies tended to examine the mediating effect of balanced scorecard consequences (Hoque, 2014). Testing the moderator effect of balanced scorecard consequences and exploring it using different methods is also necessary.

5.3 Practical Implications

The findings revealed that the organization plays an important role in determining balanced scorecard consequences. Many organizational management activities were proven contributors to balanced scorecard consequences, such as some firms use a BSC to emphasize the leading non-financial indicators of firm value. Subtle changes in the presentation of information in a BSC (such as adding performance markers) can offer a solution to firms who want to use a BSC to increase the weight evaluators assign to such indicators of firm value. Without performance markers, business-unit managers may react negatively to the use of a BSC for fear that evaluators will not fully incorporate these non-financials into their evaluations (Epstein, 2018).These findings have important practical implications for the many firms that use the BSC as a tool to evaluate and reward managers (Bento et al., 2017). All these findings are comprehensive, and they are combined to provide useful guidance for practical finance and business management.

This study found that balanced scorecard and its consequences is a core strategic management and execution tool. It is based on the consensus on the overall development strategy of the enterprise. Through the design and implementation, the objectives, targets and initial action plans of the four angles are effectively combined. Strategic management and implementation system together. Its main purpose is to transform the company's strategy into concrete actions to create a competitive advantage.

From an advanced measure of performance factors balanced scorecard and its consequences divides the strategy into four different operational goals and designs appropriate performance measures based on these four perspectives (Valmohammadi & Ahmadi, 2015). Therefore, it not only provides enterprises with all kinds of information necessary for effective operation but also overcomes the interference of information and asymmetry (Parida et al., 2015). More importantly, it provides quantifiable, measurable and measurable indicators for enterprises. Evaluative, which is more conducive to the company's comprehensive system monitoring, and promote the achievement of corporate strategy and vision (Star et al., 2016).

5.4 Limitation and future research

This study conducted a literature review on balanced scorecard consequences by using content analysis. Despite its relatively comprehensive review of balanced scorecard consequences, considerable room for improvement still exists given the extensive studies on this topic. Future studies may identify the authorship and institutional contribution and rank the published numbers in balanced scorecard consequences research. Analyzing the research methods used in balanced scorecard consequences-related studies is also necessary. Furthermore, future research may perform meta-analysis and attempt to find new values of balanced scorecard consequences. Apart from balanced scorecard consequences, new and relevant balanced scorecard attitudes exist, such as balanced scorecard involvement, balanced scorecard engagement and balanced scorecard performance. Future studies may consider analyzing these items.

Acknowledgement

Universiti Malaysia Pahang fully supports the facilities and resources for this research. The authors would like to acknowledgement the support of the internal grands of Dr. Shrikant Panigrahi. Thank you very much for publisher to let me challenge myself to bring up my first constructive paper.

References

Annacchino, M. 2003. *New product development: from initial idea to product management*. Elsevier.

Asadzadeh, S., de Souza Filho, C.R. 2016. A review on spectral processing methods for geological remote sensing. *International journal of applied earth observation and geoinformation*, **47**, 69-90.

Aziz, N.N.A., Samad, S. 2016. Innovation and competitive advantage: Moderating effects of firm age in foods manufacturing SMEs in Malaysia. *Procedia Economics and Finance*, **35**, 256-266.

Barkham, R., Bokhari, S., Saiz, A. 2018. Urban Big Data: City Management and Real Estate Markets. *GovLab Digest: New York, NY, USA*.

Barrales-Molina, V., Kaynak, H., Gutiérrez-Gutiérrez, L. 2018. The Role of Human Resource-Related Quality Management Practices in New Product Development: A Dynamic Capability Perspective.

Batuo, M., Mlambo, K., Asongu, S. 2018. Linkages between financial development, financial instability, financial liberalisation and economic growth in Africa. *Research in International Business and Finance*, **45**, 168-179.

Bento, R.F., Mertins, L., White, L.F. 2017. Ideology and the balanced scorecard: An empirical exploration of the tension between shareholder value maximization and corporate social responsibility. *Journal of Business Ethics*, **142**(4), 769-789.

Bergeron, B.P. 2017. *Performance management in healthcare: from key performance indicators to balanced scorecard*. Productivity Press.

Camuffo, A., Gerli, F. 2018. Modeling management behaviors in lean production environments. *International Journal of Operations & Production Management*, **38**(2), 403-423.

Carlsson-Wall, M., Kraus, K., Messner, M. 2016. Performance measurement systems and the enactment of different institutional logics: insights from a football organization. *Management Accounting Research*, **32**, 45-61.

Chan, S., Ip, W. 2011. A dynamic decision support system to predict the value of customer for new product development. *Decision Support Systems*, **52**(1), 178-188.

Chen, Y., Wang, Y., Nevo, S., Benitez-Amado, J., Kou, G. 2015. IT capabilities and product innovation performance: The roles of corporate entrepreneurship and competitive intensity. *Information & Management*, **52**(6), 643-657.

Chenhall, R.H., Moers, F. 2015. The role of innovation in the evolution of management accounting and its integration into management control. *Accounting, Organizations and Society*, **47**, 1-13.

Chin, K.-S., Tang, D.-W., Yang, J.-B., Wong, S.Y., Wang, H. 2009. Assessing new product development project risk by Bayesian network with a systematic probability generation methodology. *Expert Systems with Applications*, **36**(6), 9879-9890.

Christian, G. 2000. Service Management and Marketing: a customer relationship management approach. *Chichester, England: John Wiley&Sons LTD.*

Chuang, C.-H., Jackson, S.E., Jiang, Y. 2016. Can knowledge-intensive teamwork be managed? Examining the roles of HRM systems, leadership, and tacit knowledge. *Journal of management*, **42**(2), 524-554.

Cooper, D.J., Ezzamel, M., Qu, S.Q. 2017. Popularizing a management accounting idea: The case of the balanced scorecard. *Contemporary Accounting Research*.

Dayan, R., Heisig, P., Matos, F. 2017. Knowledge management as a factor for the formulation and implementation of organization strategy. *Journal of Knowledge Management*, **21**(2), 308-329.
Dooley, L., Kenny, B., O'Sullivan, D. 2017. Innovation capability development: case studies of small enterprises in the LMT manufacturing sector. *Small Enterprise Research*, **24**(3), 233-256.
Dunning, J.H. 2015. Reappraising the eclectic paradigm in an age of alliance capitalism. in: *The Eclectic Paradigm*, Springer, pp. 111-142.
Elbanna, S. 2016. Managers' autonomy, strategic control, organizational politics and strategic planning effectiveness: An empirical investigation into missing links in the hotel sector. *Tourism Management*, **52**, 210-220.
Elmes, M., Barry, D. 2017. Strategy retold: Toward a narrative view of strategic discourse. in: *The Aesthetic Turn in Management*, Routledge, pp. 39-62.
Epstein, M.J. 2018. *Making sustainability work: Best practices in managing and measuring corporate social, environmental and economic impacts*. Routledge.
Ernst, H., Hoyer, W.D., Krafft, M., Krieger, K. 2011. Customer relationship management and company performance—the mediating role of new product performance. *Journal of the academy of marketing science*, **39**(2), 290-306.
Felice, F.D., Petrillo, A. 2016. Strategic management of the new product development process. *International Journal of Service and Computing Oriented Manufacturing*, **2**(2), 124-137.
Forés, B., Camisón, C. 2016. Does incremental and radical innovation performance depend on different types of knowledge accumulation capabilities and organizational size? *Journal of Business Research*, **69**(2), 831-848.
Glas, A.H., Henne, F.U., Essig, M. 2018. Missing performance management and measurement aspects in performance-based contracting: A systematic process-based literature analysis of an astonishing research gap. *International Journal of Operations & Production Management*.
Haake, H., Seuring, S. 2009. Sustainable procurement of minor items–exploring limits to sustainability. *Sustainable Development*, **17**(5), 284-294.
Hadi, A.R.A., Suryanto, T., Hussain, M.A. 2016. Corporate Governance Mechanism on the Practice of International Financial Reporting Standards (IFRS) among Muslim Entrepreneurs in Textile Industry-The Case of Malaysia. *International Journal of Economic Perspectives*, **10**(2).
Heskett, J.L., Jones, T.O., Loveman, G.W., Sasser, W.E., Schlesinger, L.A. 1994. Putting the service-profit chain to work. *Harvard business review*, **72**(2), 164-174.
Hoobler, J.M., Masterson, C.R., Nkomo, S.M., Michel, E.J. 2018. The business case for women leaders: Meta-analysis, research critique, and path forward. *Journal of Management*, **44**(6), 2473-2499.
Hoque, Z. 2014. 20 years of studies on the balanced scorecard: trends, accomplishments, gaps and opportunities for future research. *The British accounting review*, **46**(1), 33-59.
Hutchins, D. 2016. *Hoshin Kanri: the strategic approach to continuous improvement*. Routledge.
Inayat, I., ul Amin, R., Inayat, Z., Salim, S.S. 2013. Effects of collaborative web based vocational education and training (VET) on learning outcomes. *Computers & education*, **68**, 153-166.
Ip, W.H., Chen, B., Lau, H.C., Choy, K., Chan, S. 2008. Modelling a CRM Markov chain process using system dynamics. *International Journal of Value Chain Management*, **2**(4), 420-435.

Isoraite, M. 2008. The balanced scorecard method: From theory to practice. *Intelektine Ekonomika*(1).
Jeston, J. 2014. *Business process management*. Routledge.
Jin, J.L., Shu, C., Zhou, K.Z. 2018. Product newness and product performance in new ventures: contingent roles of market knowledge breadth and tacitness. *Industrial Marketing Management*.
Johansson, A., Larson, M.G., Logg, A. 2015. High order cut finite element methods for the Stokes problem. *Advanced Modeling and Simulation in Engineering Sciences*, **2**(1), 24.
Kahraman, C., Büyüközkan, G., Ateş, N.Y. 2007. A two phase multi-attribute decision-making approach for new product introduction. *Information Sciences*, **177**(7), 1567-1582.
Kalender, Z.T., Vayvay, Ö. 2016. The Fifth Pillar of the Balanced Scorecard: Sustainability. *Procedia-Social and Behavioral Sciences*, **235**, 76-83.
Kang, J.-S., Chiang, C.-F., Huangthanapan, K., Downing, S. 2015. Corporate social responsibility and sustainability balanced scorecard: The case study of family-owned hotels. *International Journal of Hospitality Management*, **48**, 124-134.
Kaplan, R.S., Norton, D.P. 1996. *The balanced scorecard: translating strategy into action*. Harvard Business Press.
Kaplan, R.S., Norton, D.P. 1995. Putting the balanced scorecard to work. *Performance measurement, management, and appraisal sourcebook*, **66**(17511), 68.
Kaplan, R.S., Norton, D.P. 2001. *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*. Harvard Business Press.
Kerzner, H., Kerzner, H.R. 2017. *Project management: a systems approach to planning, scheduling, and controlling*. John Wiley & Sons.
Keyes, J. 2016. *Implementing the IT balanced scorecard: Aligning IT with corporate strategy*. Auerbach Publications.
Kwong*, C., Bai, H. 2005. Fuzzy regression approach to process modelling and optimization of epoxy dispensing. *International journal of production research*, **43**(12), 2359-2375.
Laudon, K.C., Laudon, J.P. 2016. *Management information system*. Pearson Education India.
Lee, S., Park, S.B., Lim, G.G. 2013. Using balanced scorecards for the evaluation of “Software-as-a-service”. *Information & Management*, **50**(7), 553-561.
Liu, X., Zhang, W., Tu, Y., Jiang, R. 2008. An analytical approach to customer requirement satisfaction in design specification development. *IEEE Transactions on Engineering Management*, **55**(1), 94-102.
Luzzini, D., Amann, M., Caniato, F., Essig, M., Ronchi, S. 2015. The path of innovation: purchasing and supplier involvement into new product development. *Industrial Marketing Management*, **47**, 109-120.
McCarthy, I.P., Tsinopoulos, C., Allen, P., Rose-Anderssen, C. 2006. New product development as a complex adaptive system of decisions. *Journal of product innovation management*, **23**(5), 437-456.
Melnyk, S.A., Bititci, U., Platts, K., Tobias, J., Andersen, B. 2014. Is performance measurement and management fit for the future? *Management Accounting Research*, **25**(2), 173-186.
Murage, A.A. 2018. Management Practices and Implementation of Strategic Plan in Anglican Church of Kenya Head Office in Nairobi City County, Kenya.
Navimipour, N.J., Soltani, Z. 2016. The impact of cost, technology acceptance and employees' satisfaction on the effectiveness of the electronic customer relationship management systems. *Computers in Human Behavior*, **55**, 1052-1066.

Nejati, M., Nejati, M. 2013. Assessment of sustainable university factors from the perspective of university students. *Journal of Cleaner Production*, **48**, 101-107.
Ogunsiji, A.S., Ladanu, W.K. 2017. A Theoretical Study of Performance Measures in the Strategic and Corporate Entrepreneurships of Firms. *International Journal of Physical Sciences and Engineering (IJPSE)*, **1**(1), 72-80.
Ottman, J. 2017. *The new rules of green marketing: Strategies, tools, and inspiration for sustainable branding*. Routledge.
Parida, A., Kumar, U., Galar, D., Stenström, C. 2015. Performance measurement and management for maintenance: a literature review. *Journal of Quality in Maintenance Engineering*, **21**(1), 2-33.
Porter, M.E., Heppelmann, J.E. 2015. How smart, connected products are transforming companies. *Harvard Business Review*, **93**(10), 96-114.
Prajogo, D.I. 2016. The strategic fit between innovation strategies and business environment in delivering business performance. *International Journal of Production Economics*, **171**, 241-249.
Quesado, P.R., Aibar Guzmán, B., Lima Rodrigues, L. 2018. Advantages and contributions in the balanced scorecard implementation. *Intangible Capital*, **14**(1), 186-201.
Rabbani, A., Zamani, M., Yazdani-Chamzini, A., Zavadskas, E.K. 2014. Proposing a new integrated model based on sustainability balanced scorecard (SBSC) and MCDM approaches by using linguistic variables for the performance evaluation of oil producing companies. *Expert Systems with Applications*, **41**(16), 7316-7327.
Reid, M., Hultink, E.J., Marion, T., Barczak, G. 2016. The impact of the frequency of usage of IT artifacts on predevelopment performance in the NPD process. *Information & Management*, **53**(4), 422-434.
Reinartz, W., Krafft, M., Hoyer, W.D. 2004. The customer relationship management process: Its measurement and impact on performance. *Journal of marketing research*, **41**(3), 293-305.
Relich, M., Pawlewski, P. 2018. A case-based reasoning approach to cost estimation of new product development. *Neurocomputing*, **272**, 40-45.
Saeidi, S.P., Sofian, S., Saeidi, P., Saeidi, S.P., Saaeidi, S.A. 2015. How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of business research*, **68**(2), 341-350.
Schilling, M.A. 2010. *Strategic management of technological innovation*. Tata McGraw-Hill Education.
Staley, S.M., Warfield, J.N. 2007. Enterprise integration of product development data: systems science in action. *Enterprise Information Systems*, **1**(3), 269-285.
Star, S., Russ-Eft, D., Braverman, M.T., Levine, R. 2016. Performance Measurement and Performance Indicators: A literature review and a proposed model for practical adoption. *Human Resource Development Review*, **15**(2), 151-181.
Subramanian, N., Gunasekaran, A. 2015. Cleaner supply-chain management practices for twenty-first-century organizational competitiveness: Practice-performance framework and research propositions. *International Journal of Production Economics*, **164**, 216-233.
Swink, M., Talluri, S., Pandejpong, T. 2006. Faster, better, cheaper: A study of NPD project efficiency and performance tradeoffs. *Journal of Operations Management*, **24**(5), 542-562.
Takai, S. 2009. A case-based reasoning approach toward developing a belief about the cost of concept. *Research in Engineering Design*, **20**(4), 255.

Tchamyou, V.S. 2017. The role of knowledge economy in African business. *Journal of the Knowledge Economy*, **8**(4), 1189-1228.

Teklehaimanot, H.D., Teklehaimanot, A., Tedella, A.A., Abdella, M. 2016. Use of balanced scorecard methodology for performance measurement of the Health Extension Program in Ethiopia. *The American journal of tropical medicine and hygiene*, **94**(5), 1157-1169.

Valmohammadi, C., Ahmadi, M. 2015. The impact of knowledge management practices on organizational performance: A balanced scorecard approach. *Journal of Enterprise Information Management*, **28**(1), 131-159.

Van der Kolk, B., Schokker, T. 2016. Strategy implementation through hierarchical couplings in a management control package: an explorative case study. *Journal of Management Control*, **27**(2-3), 129-154.

Van Weenen, H. 2000. Towards a vision of a sustainable university. *International Journal of Sustainability in Higher Education*, **1**(1), 20-34.

Wang, H.-F., Gupta, S.M. 2011. *Green supply chain management: Product life cycle approach*. McGraw Hill Professional.