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REVIEW OF PUBLIC HOSPITAL BALANCE SCORECARD AND ITS APPLICABILITY TO INDONESIAN PUBLIC HOSPITALS

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ABSTRACT

Indonesia is currently adopting the Balanced Scorecard (BSC) concept for its national health development plan. This indicates that Indonesian health institutions, including hospitals, were encouraged to apply BSC as their strategic management tool. This study is aimed to fill the literature gap by reviewing the existing international experiences regarding the Balanced Scorecard implementation in hospitals and assess its applicability in Indonesian public hospitals. By using a research method called "systematic review", we study in more detail the diversity of proposed BSC for healthcare organizations described from major online-based research databases, e.g. Pubmed, EBSCOhost, Scopus, Emerald, Wiley, ScienceDirect, JSTOR, SpringerLink, and Inderscience.Most of studies on BSC adoption and implementation highlight benefits such as managerial focus improvement, capturing a balanced view of financial and non-financial performance indicators, helpful in goals congruence, useful as cultural and motivational tool, and also for catalyzing changes needed by hospitals. However, time-consuming and a need for intensive exercises were reported as major challenges in its adoption and implementation process. A gradual approach would be an appropriate for Indonesian context, with an institutional assessment of cultural readiness as an additional approach, then followed by the designing, piloting, and gradual scaling-up.

Rencana pembangunan di bidang kesehatansaat ini di Indonesia mengadopsi konsep Balanced Scorecard (BSC). Hal ini mengindikasikan bahwasanya institusi-institusi kesehatan, termasuk rumah sakit, juga diharapkan untuk menerapkan konsep BSC tersebut. Studi ini bertujuan untuk mereviu penerapan BSC di rumah sakit di berbagai Negara dan menilai kelayakan penerapannya untuk rumah sakit–

rumah sakit di Indonesia. Studi ini menggunakan metode systematic review, yaitu dengan mempelajari artikel-artikel penelitian terkait BSC Rumah Sakit yang dipublikasikan secara online di Pubmed, EBSCO, Emerald, Wiley, Science Direct, JSTOR, Springer Link, dan Inderscience. Studi ini menemukan bahwa manfaat dari penerapan BSC di rumah sakit antara lain meningkatkan focus dalam proses pengelolan institusi, menyeimbangkan capaian kinerja keuangan dan non-keuangan, membantu menyelaraskan tujuan, mendorong budaya kerja yang positif dan meningkatkan motivasi kerja, serta mendorong perubahan lingkungan kerja seseuai kebutuhan rumah sakit. Studi ini juga menemukan bahwasanya tantangan utama dalam penerapan BSC di rumah sakit adalah lamanya waktu yang dibutuhkan untuk proses adopsi dan penerapannya, dan membutuhkan proses percobaan (piloting) yang intensif. Bagi rumah sakit di Indonesia, BSC sebaiknya diadopsi dan diterapkan secara bertahap. Rumah sakit juga perlu melakukan penilaian kesiapan secara kelembagaan (readiness assessment) sebelum dilakukan desain, piloting, dan penerapannya secara bertahap untuk skala yang lebih luas.

1. INTRODUCTION

The emergence of BSC as one of new modern Performance Measurement (PM) systems can be seen as an alternative solution to the use of traditional business PM systems which focus only on financial performance and give little attention to the non-financial measures, and putting management attention into short-term performance. This may mislead companies business continues improvement and innovation purposes which are two important aspects in today's constantly changing business environment (Magdy *et al.*, 2011). The powerful financial-based measures were incapable in gauging value in today's business environment where intangible assets and execution of strategy are everything (Niven, 2008, p. 14). BSC offers a complementary measures to financial measures, which are required by enterprises with the drivers of future financial success represented by such disparate but critical elements as innovation, customer satisfaction, and employee involvement.

As the most important management innovation of the 20th century, the Balance Scorecard (BSC) has been adopted in a broad range of industries from manufacturing to healthcare and has received considerable attention from both academic and industry press(Zelman *et al.*, 2003). BSC adoption in the healthcare industry is considered to have similar issues to the other kind of industries such as manufacturing industry. However, Zelman *et al.* (2003) reported that healthcare industries faced some unique challenges such as the complexity of measuring, interpreting and comparing the medical staff relations and quality of care.

Research focusing on performance management within the healthcare setting is still relevant for several reasons. Gurd and Gao (2007) argued that increase of demand from aging populations, better treatments wanted by many people, shortage of professional workers, and reducing governments financial subsidiaries were still relevant to the theme. Considerable strategic challenges and strong pressure to be more responsive to costumers' demands by improving quality and efficiency were also being reported(Chow *et al.*, 1998; Kocakulah & Austill, 2007; Lorden *et al.*, 2008). Healy *et al.* (2002, pp. 36 - 54) classified

hospitals' pressures into three groups; (1) demand-side changes (changes in demography, fertility, ageing, migration, changing patterns of disease, changing risk factors, and hospital-acquired infections), (2) supply-side changes (changes in technology, clinical knowledge, and workforce), and (3) political and societal changes (financial pressures, internationalization of health system, and global changes in the market for medical research and development). While traditional performance measurement and management control systems lack abilities to meet strategic objectives of healthcare organization (Gurd& Gao, 2007; Lorden *et al.*, 2008), BSC adoption was considered as a solution (Baker & Pink, 1995; Gumbus & Wilson, 2004; Naranjo-Gil *et al.*, 2016; Zelman *et al.*, 2003).

Indonesia is currently promoting BSC concept for its national health development plan. This indicates that Indonesian health institutions, including hospitals, have been encouraged to apply BSC as their strategic management tool (Indonesian Ministry of Health, 2016). Unfortunately, reports regarding the progress of BSC implementation in Indonesia are not available. Some articles, indeed, used BSC framework to assess particular Indonesian hospital performance, however, none of those studies explained BSC as an official tool for hospital quality improvement.

This research is aimed to review the existing internationally experiences of BSC implementation and to assess the feasibility of its application in the Indonesian public hospitals. This paper will explore in more detail the diversity of proposed BSC for healthcare organizations described in recent publications.

The rest sections of this paper isstructured as follows: the next section provides brief literature on development of BSC followed by method used and results. The fifth section discusses presents a thorough discussion of the findings and then concludes the paper by presenting useful policy implications and directions for future research.

2. THE EVOLUTION OF BALANCED SCORECARD

Kaplan and Norton (1996, p. 25) defined BSC as a framework that helps organizations translates strategy into operational objectives that drive both behavior and performance. The measures and objectives are viewed across four dimensions of performance: financial, customer, internal business process, and learning and growth. The word balanced in the term 'Balanced Scorecard' is an indication of the balanced consideration given to long and short-term objectives, financial and non-financial measures, leading and lagging indicators, and external and internal performance perspectives (Hendricks *et al.*, 2004; Kaplan & Norton, 1996, p. 222).The 1st generation of BSC in the 1990s is well-known for the 4-box model and aimed to solve the measurement problem of balancing the accuracy and integrity of financial metrics with the drivers for future financial success (Figure 1) (Niven, 2005, p. 6). The 2nd generation shows the evolvement of BSC from measurement system to core management system by suggesting the creation of a "strategy map" to link the causality between measures perspective (Lawrie & Cobbold, 2004). The 3rd generation introduced a "cascading strategy" to reach all organization levels and suggested organization to incorporate destination statements by linking 'the activity perspective' derived from financial and customer perspectives to the 'outcome perspective' derived from the learning and growth and internal business process perspectives (Lawrie& Cobbold, 2004). The 3rd generation put greater focus on strategic linkage model (Perkins *et al.*, 2014).

Kaplan and Norton (2008) stated that companies mostly adopted BSC-based management system by implementing sequentially five principles. They began with mobilizing the executive team as the first principle, and then followed rapidly by translating the strategy

into operational terms as the second principle, and then doing alignment - how to use strategy maps and scorecards to align organizational units, both line business units and corporate staff ones, to a comprehensive corporate strategy - of the organization into the strategies as the third principle. The fourth principle is redesigning of some key human resource systems (goal-setting and incentives) and then followed by final principle by redesigning of various planning, budgeting, and control systems. Based on this five sequence principles, Kaplan and Norton (2008, pp. 8 - 17)introduced Closed-Loop Management System in six stages to help companies to (1) develop the strategy, (2) plan the strategy, (3) align organizational units and employees with the strategy, (4) plan operations by setting priorities for process management and allocating resources that will deliver the strategy, (5) monitor and learn from operations and strategy, and (6) test and adapt the strategy (Kaplan & Norton, 2008, pp. 8 - 17).

3. METHODS

Under systematic review methods (Fink, 2014; Tsafnat *et al.*, 2014), we identified any previous academic publications using keywords of "Balanced Scorecard," "hospital," "health care,""health care organization,""hospital performance management," and "hospital performance measurement" from major Internet-based research databases, e.g. Pubmed, EBSCO host, Scopus, Emerald, Wiley, Science Direct, JSTOR, Springer Link, and Inder science.

We applied the search string to titles, abstracts and keywords of academic publications within the databases. Emphasizing the use of BSC within healthcare organizations particularly in the hospital setting was our first criteria for inclusion and exclusion. Other criteria applied were (1) the articles included BSC, (2) accessibility of the full text of the publications, (3) the report was published in English, and (4) only articles from journals ranked Q1 to Q4 proposed by Scimago Journal & Country Rank (SJR) in year 2016 were selected. All the selected articles were reviewed for their aims, types, materials and methods, results and the outcomes, and also for the benefits and challenges.

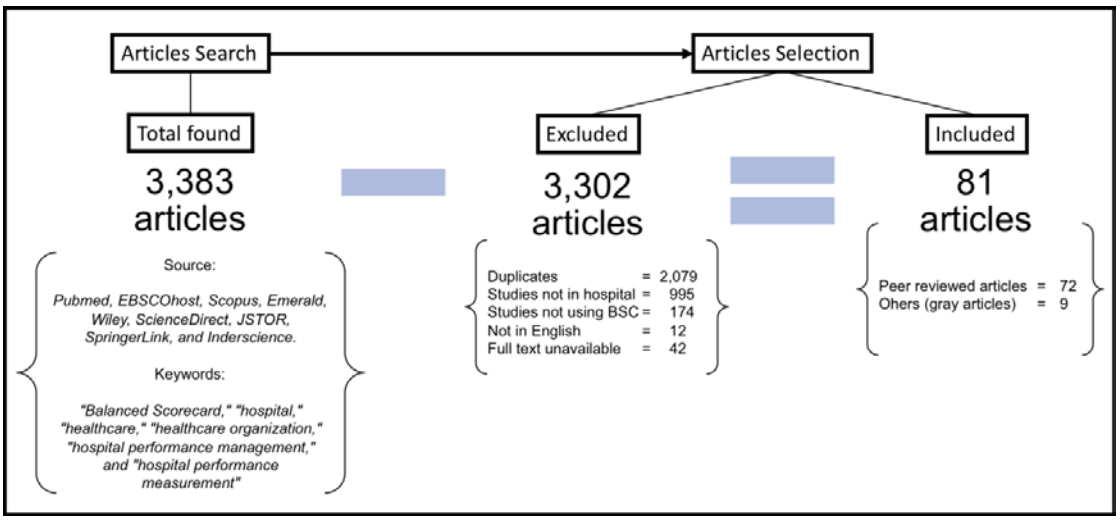

Figure 1. Steps of articles selection

Seventy-two of English articles were selected from 3.383 articles that available in major world databases (figure 1). We excluded 2,079duplicatearticles and also eliminated about

1,223 articles for some reasons, i.e. studies were not conducted in hospital's environment, studies were not using BSC in their analysis, articles were no published in English, and the full-text version were not available. We included 81 articles for further analysis consisting of 72 peer-reviewed articles and nine grey-articles.

Table 1. Summary of selected articles by research design

Research Design		Publishing year					Total	
		1995 - 2000	2001 - 2005	2006 - 2010	2011 - 2015	2016 - 2017	n	%
Archival/Illustrative case		3	2	4	1	-	10	13.89%
Case/Field Study		2	10	10	18	8	48	66.67%
Longitudinal study		-	-	1	1	-	2	2.78%
Mixed-quantitative/ qualitative		-	-	1	-	1	2	2.78%
Qualitative		-	1	-	-	-	1	1.39%
Quantitative		-	1	3	3	-	7	9.72%
Literature Review		-	-	-	1	1	2	2.78%
Total	(n)	5	14	19	24	10	72	100.00%
	(%)	6.94%	19.44%	26.39%	33.33%	13.89%		

Table 1.summarizes the ranges of publishing from 1995 to 2017 with case study as the most method applied by researchers. This is understandable since BSC is a management tool and mostly proposed as a strategic management tool. Case studies are generally used by researchers to interpret strategies, or to develop sets of "best practices"(Klonoski, 2013).
Looking at the economy country setting and geographical distribution of the authors' affiliation (Table 2.), it appeals that BSC is driven mostly by HICs' research institutions. This is not surprising since HICs, particularly in North America and Europe, faced the change in funding environment in 1990s stipulated by the federal and provincialgovernments, greater demand on accountability from the healthcareoperators, and the raise of healthcare costs (Chan & Ho, 1999). Most global health centers also were located in HICs, indicating that interest in global health stems from HICs' public health institutions which were not a feature of non-HICs (Beaglehole & Bonita, 2010).

Table 2. Summary of selected articles by countries economy setting and continents

Countries Income Setting	Continent				Total
	North America	Asia	Europe	Africa	
High income	30	12	19	0	61
Upper middle income	0	4	0	0	4
Lower middle income	0	4	0	0	4
Low income	0	2	0	1	3
Total	30	22	19	1	72

4. DISCUSSION

BSC Adoption by hospitals: Benefits, Functions, and Challenges

Baker and Pink (1995)were the first authors discussing the adoption of BSC concept by hospitals that began in the 1990s. Their article then followed by Chow *et al.* (1998),

Castaneda-Mendez *et al.* (1998), Gordon *et al.* (1998), Wachtel *et al.* (1999), and Curtright *et al.* (2000). While Baker and Pink (1995), Chow *et al.* (1998) and Curtright *et al.* (2000)used the same perspectives as original Balanced Scorecard perspectives, i.e. financial, customer, internal business (process), and innovation and learning perspectives, Castaneda-Mendez *et al.* (1998), Gordon *et al.* (1998)and Wachtel *et al.* (1999) modified the perspectives.

Castaneda-Mendez *et al.* (1998)modified the perspectives by using the term of "value added" to modify the original perspectives (patient-value added, employee-value added, business-value added (learning perspective, business-value added). Gordon *et al.* (1998)used five perspectives in his framework by using customer satisfaction, internal excellence, innovation and learning, financial viability, and population types. Curtright *et al.* (2000) developed seven perspectives for Mayo Clinic consisting of customer satisfaction, clinical productivity and efficiency, financial, internal operations, mutual respect and diversity social commitment, external environmental assessment and patient characteristics.

Other examples of BSC modification according to its original perspectives presented in Table 3, showing that dissimilarity characteristics between private and public sector entities should be considered when adopting BSC concept. However, an example of Duke Hospital's BSC framework from Kaplan and Norton's (2001) can be the first guidance, namely after the mission and vision, both financial and customer perspectives in the same level and then followed by the internal process perspective, and the learning and growth perspective (Kaplan & Norton, 2001, p. 155).

Table 3. Variations of BSC perspectives used (corporate level)

Research site(s)	Country	BSC Level	Perspectives	Authors
Lawrence Hospital	USA	Corporate	Patient-value added; Business-value added; Employee-value added; Business-value.	Castaneda-Mendez et al. (1998)
Ontario Acute Care Hospitals	Canada	Corporate	Patient Satisfaction; Financial Performance and Condition; Clinical Utilization and Outcomes; System Integration and Management Innovation.	Pink et al. (2001)
Duke University Hospital	USA	Corporate	Service improvements; Finance; Clinical quality and internal business; work culture	Thalman and Malinowski (2004)
Ontario Acute Care Hospitals	Canada	Corporate	Patient Satisfaction; Financial Performance and Condition; Clinical Utilization and Outcomes; System Integration and Management Innovation.	Yap et al. (2005)
Toronto East General Hospital	Canada	Corporate	Patient Focus; Ensure Value; Encourage People; Collaborative Spirit and Inspire Innovation	Devitt et al. (2005)
Theagenion Hospital of Thessaloniki	Greece	Corporate	Stakeholder; Financial Management; Internal Process; Learning and Growth.	Karra and Papadopoulos (2005)
Singapore Hospital	Singapore	Corporate	Customer; Process; Learning &Growth; Supplier; IT	Kumar et al. (2005)
The Capital Care Group	Canada	Corporate	Clients; Internal processes; learning and research; People; Community partnerships	Schalm (2008)
Lombardy region hospitals	Italy	Corporate	Patient satisfaction; Economy; Clinical process; Human capital	Lovaglio (2010)
Private university hospital	Pakistan	Corporate	Patient satisfaction; Financial; Internal business; Human resource	Rabbani et al. (2010)
St. Anna University Hospital of Ferrara	Italy	Unit/Department	Community; Financial Resources; Internal Processes; Growth and Learning.	Lupi et al. (2011)
Lebanon hospitals	Lebanon	Corporate	Clinical utilization and outcomes; financial performance and condition; system integration and human resources; patient satisfaction	El-Jardali et al. (2011)
Italian Teaching Hospitals	Italy	Corporate	Stakeholder; Financial and economic; Care; Innovation and growth; Teaching; Research	Trotta et al. (2013)
Urban non-teaching hospital	Australia	Corporate	Patient satisfaction; Effective resource use; Staff wellbeing and productivity; Process improvement and management	Samaranayake et al. (2016)

Kaplan and Norton (1996, p. 2) initially developed BSC for for-profit (private) sector and as an instrument for managers to navigate their company's competitiveness by emphasizing not only on achieving financial objectives, but also on the performance drivers of these financial objectives. For the nonprofit organizations, Kaplan (2001) found that BSC, when adopted by the nonprofit sector, enabled all organizational resources—the senior leadership team, technology resources, initiatives, change programs, financial resources, and human resources—become aligned to accomplishing organizational objectives. BSC has been increasingly applied in hospitals and healthcare in high-income countries, and recently extended to low- and middle-income countries (McPake, 2016).

Following perceived benefits theme proposed by Madsen and Stenheim (2014) (Table 4), the implementation of BSC within hospitals helps managers focus on what is important in the long run, prioritize and making decisions. Karra and Papadopoulos (2005)reported that BSC framework provides a roadmap of actions, policies, priorities and resources to achieve mission and strategic goals. BSC also being reported for its usefulness in decision making in highly complex and uncertain environment, and effectively underlying existing problems and identifying opportunities for improvements on time (Inamdar *et al.*, 2002; Koumpouros, 2013; Pink *et al.*, 2001).

BSC can be used to balance the demands of internal and external stakeholders. Radnor and Lovell (2003) pointed out that BSC is not necessarily used only to focus on external stakeholders. It also targeted for enhanced transparency, clarity, and accountability for public/patients, and involvement/support for staff. BSC provides a balanced view of the organization's performance, and broadens a manager's focus to take into account other issues than just financial aspects. Several authors pointed that the more balanced view has helped in reducing the over-emphasis on financial measures and assisted in shifting the focus towards a more 'holistic' and balanced view of the organization's performance (Gao & Gurd, 2015; Jones *et al.*, 2002; Rabbani *et al.*, 2010).

The concept of BSC can be useful in communicating and visualizing the strategy in the organization. Grigoroudis *et al.* (2012), as well as Thalman and Malinowski (2004), argued that the concept of BSC often makes it easier to communicate the strategy to the organization. Other authors also argued that BSC provides a 'common language' and frame of reference, and can be a facilitator of useful discussions in the organization (Nippak *et al.*, 2016; Rabbani *et al.*, 2010; Samaranayake *et al.*, 2016; Smith *et al.*, 2011). In addition, Thalman and Malinowski (2004) also highlighted that the concept can facilitate useful discussions about strategies.

For the goal alignment, BSC framework ensured everyone in the organization works toward the same goals, i.e. what is referred to as goal congruence (Embree *et al.*, 2015; Gordon *et al.*, 1998). This is similar to the findings of Groene *et al.* (2009) and Jones *et al.* (2002) who pointed out that BSC gives organizational members greater awareness of long-term goals, for example, balances economic considerations and social responsibility, and ecological concerns, and improves understanding of how their activities affect the organization's long-term goals.

BSC can be a 'cultural tools' that changes how the organization operates and focus on the things that lead to better performance in the long run (Wachtel *et al.*, 1999) and also as a 'motivational tool' that captures the attention of organizational members, which can be useful in goal-setting and for motivating employees (Gao& Gurd, 2015; Thalman & Malinowski, 2004). For example, the BSC can be used to set more explicit targets than before, and various types of incentives to encourage the right kind of behavior. Finally, for organizational change catalyst issues, BSC was highlighted that it can be used as a catalyst in organizational change processes by increasing the organizational strength (Embree *et al.*,

2015) and useful in mobilizing staff for organizational transformation(Aidemark, 2010; Tsasis & Harber, 2008).The popularity of BSC framework as one of 'scientific' and sophisticated business strategic management, also helps in anticipating resistance from organization members, make it easier when monitoring the hospitals' operations to achieve certain changes needed by hospital (Gao & Gurd, 2015).

Table 4. Perceived benefits

Theme/ Issues	Perceived Benefits	Authors' Findings
Managerial focus	• Helps managers focus on what is important in the long run • Helps managers focus on prioritizing decisions	➢ provides a roadmap of actions, policies, priorities and resources (Karra & Papadopoulos, 2005). ➢ helps in managing organization in a highly complex and uncertain environment (Inamdar et al., 2002).
Balancing view stakeholder demands	• Balanced and holistic view of the organization's performance • Broadens organization's focus to take into account stakeholders • Makes the organization more forward-looking	➢ helps in fulfilling government expectations, and targets for enhanced transparency, clarity, and accountability for public, and staff involvement (Radnor & Lovell, 2003) ➢ helps in a better balance between economic and public benefits (Gao & Gurd, 2015).
Communication and visualization	• Common language • Common frame of reference • Facilitates discussions	➢ assists management in strategy clarifying and gaining consensus, and providing feedback to evaluate and improve strategy (Grigoroudis et al., 2012). ➢ Improves staff understanding (Smith *et al.*, 2011)
Alignment of goals	• Helps improve goal congruence • Increased awareness of how the organization's long-term goals	➢ connects the mission and the outcomes of organizations program(Embree et al., 2015). ➢ balances economic and social responsibility, and ecological concerns(Groene et al., 2009)
Cultural and motivational tool	• Better leadership • Captures the attentions of organizational members • Motivational effects as a result of more explicit targets and incentives	➢ provides a different mindset for key leadership to globally look at the organization (Wachtel et al., 1999). ➢ affects the behavior of the employees(Thalman& Malinowski, 2004).
Organizational change catalyst	• Can be used to justify organizational changes • Well-known concept	➢ mobilizes staff for organizational transformation (Tsasis& Harber, 2008). ➢ a more 'scientific' and sophisticated system for monitoring the hospitals (Gao & Gurd, 2015).

Time-consuming was the biggest issue found by authors in adopting and implementation of BSC within hospitals as shown in Table 5 (Aidemark & Funck, 2009; Chow *et al.*, 1998; Groene *et al.*, 2009; Nippak *et al.*, 2016; Verzola *et al.*, 2009). In addition, Baker and Pink (1995) stated that implementation of BSC needs a major investment of resources and continues investment in human resources. Availability of data for developing baseline data performance indicators and for benchmarking purposes were the next challenges (Devitt *et al.*, 2005; Hall *et al.*, 2003; Lupi *et al.*, 2011; Thalman & Malinowski, 2004; Trotta *et al.*, 2013).
Several authors such as Chen *et al.* (2006), Hall *et al.* (2003), Lorden *et al.* (2008), Lupi *et al.* (2011) emphasized that difficulties and complexities in designing BSC were also challenges in adopting BSC. Facts founded by authors such as failure in choosing effective key performance indicators, questions regarding the reliability of measures and indicators, measures of satisfaction for both employees and customers, and choosing appropriate indicators and indicators/measures' weights.
Adoption of BSC within hospitals also needs concerns in role involvement of stakeholders, executives, and professional workers. Aidemark and Funck (2009), for example, reported

challenge on the lack of involvement from medical professionals in development and implementation in Sweden, a high-income country in Europe, similar to the findings within lower-middle income setting as reported by Rabbani *et al.* (2010). Lack of understanding of actors involved (Biro *et al.*, 2003) and lack of access to information (Rabbani *et al.*, 2010) were also challenges. Therefore, a standardized guideline to support the design and the adoption of BSC is needed (Catuogno *et al.*, 2017). Rabbani *et al.* (2010) and El-Jardali *et al.* (2011) ended their report with the same conclusion regarding cultures, such as hierarchical culture and physician resistance, as one of the constraints in adoption BSC in Pakistan and Lebanon. Rabbani *et al.* (2010) also added committed leadership as one of the pre-requisites in adopting BSC in Pakistan.

Table 5. Challenges in BSC adoption

Issues	Key findings and authors
Cost-benefit factor	• Time consuming (Aidemark & Funck, 2009; Chow et al., 1998; El-Jardali et al., 2011; Groene et al., 2009; Nippak et al., 2016; Verzola et al., 2009) • Major investment of resources including HR (Baker & Pink, 1995)
Resources (data, IT/IS, HR)	• Data availability (Devitt et al., 2005; El-Jardali et al., 2011; Hall et al., 2003; Lupi et al., 2011; Rabbani et al., 2010; Trotta et al., 2013) • Information technology systems (El-Jardali et al., 2011; Trotta et al., 2013) • Lack of designated HR (Rabbani et al., 2010)
Design Complexity	• Questionable feasibility of measures and indicators, e.g. key performance indicators, measures' weights(Chen et al., 2006; Hall et al., 2003; Lupi et al., 2011)
Role involvement	• Lack of role awareness and involvement (Aidemark & Funck, 2009; Rabbani et al., 2010) • Lack of understanding (Biro et al., 2003)
Culture and Individual	• physician resistance (El-Jardali et al., 2011) • Lack of Interest and Hierarchical culture (Rabbani et al., 2010) • Difference individual backgrounds of managers (Naranjo-Gil, 2009)
Communication	Lack of access to information (Rabbani et al., 2010)
Knowledge transfer	Need for guidelines to support the design and the adoption (Catuogno et al., 2017)
Leadership	Derogatory leadership (Rabbani et al., 2010)
Organizational structure	Non-uniformity of the organization (Verzola et al., 2009)
Benefit Utilization	Linking information generated from BSC into action, e.g. linking of budget and planning process (Baker & Pink, 1995; Thalman & Malinowski, 2004)

Making BSC applicable for Indonesian Local Public Hospitals

The reform of public hospitals in Indonesia began in 1991 under decentralization policies in the health sector (Lieberman & Alkatiri, 2003) and were driven mainly by the fiscal crises of the late 1980s and early 1990s (Preker& Harding, 2003, p. 16). The policy, however, were also inspired by the successful of the same policy run by developed countries around the world. For example, Government of Finland launched the health care decentralization since the late 1980sto simplify the planning processes of health care systems, to give more decision making power to local authorities, and to provide more effective health care production through better coordination of the functions between primary and secondary care (Vartiainen, 2010).

Indonesian public hospital reforms were started with the promotion of autonomization policy, then followed by devolution to the district governments in 2001(Heywood & Harahap, 2009; Lieberman & Alkatiri, 2003; Maharani & Tampubolon, 2014). While the autonomization was intended to improve the capacity of Indonesian public hospitals to recover their costs by allowing them to retain and utilize the revenue obtained from patient fees, devolution was aimed to reduce financial dependency (subsidy) from the central

government, i.e. by giving public hospitals at provincial and district levels more authority to manage personnel, finance and procurement (Heywood & Harahap, 2009; Lieberman & Alkatiri, 2003; Maharani & Tampubolon, 2014). However, Maharani and Tampubolon (2017), by extending research conducted by Suwandono *et al.* (2001), reported that autonomization and devolution efforts on public hospitals do not necessarily improve either their financial performance or their utilization as measured by bed occupancy rates and number of procedures.

Following trends in many countries that have improved their public hospitals' performance through corporatization type of decentralization (Preker& Harding, 2003, p. 10), Government of Indonesia launched the Government Law No. 23 Year 2005 concerning Financial Management of Public Service Agencies that increased the autonomy of public hospitals in managing their resources were also expected to improve the quality services and, in the other hand, to reduce dependencies on government subsidies. Corporatized hospitals, by transforming local public hospitals as local public service agencies, or 'Badan Layanan Umum Daerah (BLUD)', have broader decision space on finance and other resources than autonomized hospitals have and also from ordinary subordinates of local government entities, or 'Satuan Kerja Perangkat Daerah (SKPD)', which are run under Government Law No. 58 Year 2005 concerning Management of Local Government Finance Governance. They have greater control on budget, revenue utilization, investment, partnership with private sector services and investors, procuring debt and accounts receivable, and personnel management. Corporatized hospitals were expected to lower the dependency on central government subsidies, to increase the competitiveness of public hospitals within other public and private hospitals, and to better serve the community (Maharani & Tampubolon, 2017).

Maharani and Tampubolon (2017) reported that corporatization, indeed, has improved revenue and expenditure of the Indonesian public hospitals but not efficiency and equity. They highlight that corporatization hospitals were poor in design since Indonesia began the policy without a pilot model - a strategy that worked in Malaysia (Hussein *et al.*, 2003), Vietnam (London, 2013), Pakistan (Bossert & Mitchell, 2011), and Singapore (Phua, 2003) - that led to a lack of preliminary data needed to re-fine the reform design. They also suggested to improve the capacity and the capability of hospital managers, and maintain regular monitoring (Maharani & Tampubolon, 2017). In a case study of five district public hospitals in Java island of Indonesia, Andayani *et al.* (2015) found that a new business standards of financial reporting has led hospitals to wider flexibility in the use of public resources and also to the expansion of hospitals' responsibilities. However, successful implementation depends on the operational management system of the hospital to support the accountability. They recommended that the hospital managers were encouraged to improve their political communication skills for the effectiveness of hospital advocacy process to the politicians, and should monitor performance from various perspectives, including clinical, managerial and financial. All of these findings, i.e. lack in preliminary data for good design reforms, lack of capacity and capability of hospital managers, and the need for regular monitoring system from various perspectives, would be considerable reasons behind the adoption of BSC by Indonesian public hospitals.

As discussed earlier, the outcomes that have been promoted by BSC within high-income countries, such as integration and facilitation of clinical, operational, and financial indicators with greater employee motivation and patient satisfaction, would be the first impression for its adoption. In addition, Rohsiswatmo *et al.* (2014) revealed BSC approach as a mechanism for driving quality improvement of patient perspective, i.e. improving prevention and control of bloodstream infection. However, Rabbani *et al.* (2010) and El-Jardali *et al.*(2011)

suggested that in addition to assessing its feasibility, objectivity, cost-effectiveness, and sustainability, the adoption must track political and leadership priorities, resource constraints, local culture, levels of education, and quality of information systems. El-Jardali *et al.* (2011) explained that willingness to accept and participate in adopting BSC by hospitals depends on constant efforts in clarifying the non-punitive nature of the initiatives.

As a quality improvement that required for continuous rather than a discrete process and for its objective to integrate performance measurement and strategic analysis, El-Jardali *et al.* (2011) and Rabbani *et al.* (2010), recommended that, depending on the fulfillment of necessary pre-requisites, BSC adoption should be in gradual approach. We would recommend the two studies as the most relevant to Indonesia setting for at least three reasons, *first,* country setting, *second*, similar findings to Andayani *et al.* (2015) and Maharani and Tampubolon (2016, 2017) regarding problems and challenges faced by the public hospitals - e.g. lack of preliminary data and inadequate capacity of human resources, and *finally*, critical need for pilot model reference in the adoption process of BSC. Furthermore, El-Jardali *et al.* (2011) and Rabbani *et al.* (2010) proposed four perspectives adopted from the Ontario Acute Care BSC framework to be applied by hospitals in their countries, namely: clinical utilization and outcomes, financial performance and condition, system integration and human resources, and patient satisfaction, proved that the hospitals from non-HICs could adopt the BSC framework implemented by those hospitals from HICs.

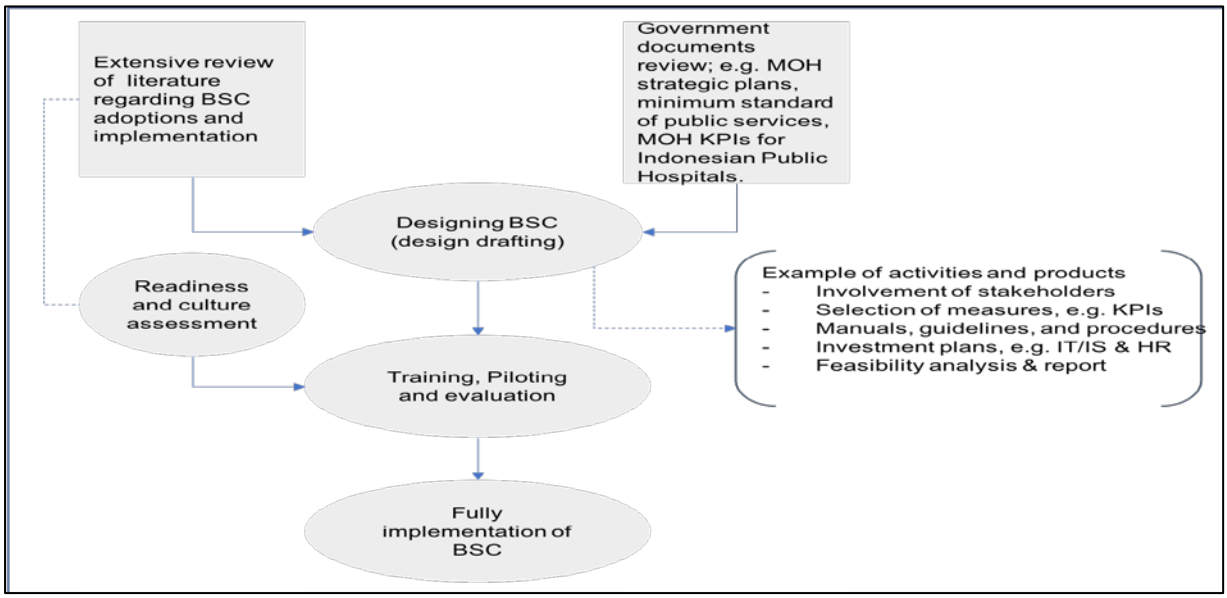

Figure 2. An example framework of BSC adoption phases for Indonesian local public hospitals

Figure 2. highlights that Indonesian Local Public hospitals could start with the extensive review of international best practiceson BSC adoption and simultaneously reviewing the central and local government document plans such as national strategic plan, minimum standard of public services on health, and also the key performance indicators. Based on the review results, hospitals then draft for a BSC framework through some activities such as disseminating the preliminary study results in a meeting with internal and external stakeholders, selection of measures and indicators, and preparing for a feasibility analysis and report. A readiness and organizational culture assessment then would be an advantage for the success of the next phase, i.e. piloting and training.

5. CONCLUSION

Successful in initial adoption of BSC within public hospital depends on how serious that the hospitals' management put their attention in investments of technologies, human capital, and time. Thus, ensuring the availability of resources those having skills in formulating strategic hypotheses, data analysis, and data management would be necessary. Next is building active involvement of the executives and stakeholders. Involvement of government and external parties such as consultants or/and university experts would be valuable in the development phase. For non-high-income countries, Rabbani *et al.* (2010) suggested that committed leadership, cultural readiness, quality information systems, viable strategic plans, and optimum resources, would be pre-requisites in adopting and implementing BSC within hospitals.

Caution should also be addressed regarding BSC as a strategic management rather than measurement system. Thus continues review and revision of the scorecards are encouraged to ensure BSC is valuable for decision-making process. The adoption of BSC is aimed to help hospitals in seeking for balance and harmony between long-term and short-term, financial and non-financial, individual and organizational, internal and external factors, cause-and-effects, and efficiency and fairness. However, since lives are difficult to balance and most countries are struggling to contain health costs (Gurd & Gao, 2007), it would be necessary to consider for putting patient needs at the top among the perspectives (Catuogno *et al.*, 2017; Devitt *et al.*, 2005; Gao & Gurd, 2015).

A major limitation of this study is the scarcity of BSC studies from Indonesia site (only one study found in Indonesian setting). Other limitations were the exclusion of non-English articles and ignoring studies that conducted in the other types of not-for-profit entities such as from government organization or non-government organizations (NGOs). However, important study findings from similar theme, i.e. performance of public hospitals, highlighted that Indonesian public hospitals were in the need for; *first*, high communication skill managers for advocacy process to the politicians; *second*, tool for monitoring performance from various perspectives, including clinical, managerial and financial; *third*, adequate and reliable data for good design reforms; and (4) managers with high managerial skill to capture hospitals' goals (Andayani *et al.*, 2015; Maharani & Tampubolon, 2016, 2017).

Despite the facts that BSC is time-consuming and also required for intensive exercises (Hoque, 2012), adoption of BSC could be an alternative solution since most studies on its adoption and implementation reveal with benefits such as managerial focus improvement, capturing a balanced view of financial and non-financial performance indicators, helpful in goals congruence, useful as cultural and motivational tool, and catalyzing changes needed by hospitals, considerable reasons behind the adoption of BSC by Indonesian public hospitals. A gradual approach suggested by El-Jardali *et al.* (2011) and Rabbani *et al.* (2010) would be an appropriate reference for Indonesian context, with an institutional assessment of cultural readiness as an additional approach, then followed by the designing, training and piloting, and finally, scaling-up in gradual.

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