

PLANNING AND CONTROLLING OF INTELLECTUAL CAPITAL: THE ROLE OF BEYOND BUDGETING

Marcus Rodrigs *, Mushtaq Kamil **

* Corresponding author, Newcastle Business School, University of Newcastle, Australia

Contact details: Newcastle Business School, University of Newcastle, University Dr, Callaghan NSW 2308, Australia

** College of Administration and Economics, University of Baghdad, Iraq



Abstract

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The purpose of this study is to explore whether the adoption of Beyond Budgeting (BB) as a management accounting practice (MAP) contributes to developing intellectual capital (IC) and creating value in Iraqi companies. This requires an understanding of the views of the Iraqi managers about the nature of the information provided by this practice, which may be used to determine whether this information is relevant in the management of IC in the context of Iraq. This research aims also to explore the challenges of the adoption of the BB in planning and controlling IC in Iraq. The study adopts a qualitative approach and an interpretive paradigm. It also adopts a semi-structured interview method of collecting data from executive managers and management accountants of 20 companies in the four major economic sectors in Iraq. Of the sampled participants, 90% support the adoption of the philosophy of BB for planning and controlling of IC in their organisations. In addition, they confirm that the BB philosophy is based on new techniques that can eliminate the disadvantages of traditional budgeting. This study examines the contribution of the SM in supporting, establishing, and developing IC that is lacking in the literature. This study also examines the main problem that has not been studied in the Iraqi economy, which is whether the management and development IC will create new sources of value in Iraq instead of its dependence on oil as the main source of value for the country.

Keywords: Intellectual Capital, Beyond Budgeting, Human Capital, Information Capital, Organisational Capital

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1. INTRODUCTION

In the global economy, IC is an important source of value and wealth creation for companies and nations. The progress or failure of companies and nations have come to be measured based on their ownership of IC, rather than their ownership

of physical assets (Bontis, 2004). The majority of countries in the Arab region have huge reserves of oil, which they depend on as the main source for their wealth (Bontis, 2004). In the modern context, it is no longer sufficient or sustainable to rely only on natural resources or tangible assets that deplete with time. Nations and organizations need to find

ways to create and manage value. IC is a means of creating such value but requires the building, development, and effective management of it (Marr & Roos, 2005). Iraq is the fifth-largest oil-producing country in the world, with over 148.8 billion barrels of oil reserves (Stebbins, 2019). Oil is the main resource for Iraq and it contributes 90% to government revenues (World Bank Group, 2017). The lack of industry diversification in Iraq makes it dependent on natural commodities, which are high-risk resources and which, in turn, depend on market prices that fluctuate on the basis of economic and political factors (Hvidt, 2013). Iraq has benefited from its natural resources from 2005-2013 when oil prices were at record levels. In this period particularly, Iraq's revenue from the sale of oil was 900 billion dollars (www.mof.gov.iq). However, with a sharp drop in global oil prices since 2014, Iraq is now facing a financial crisis (Gunter, 2015). The dependence on natural resources appears to put Iraq at high risk, especially if the importance of intangible resources is not addressed.

The lack of IC in Iraq highlights the need for policies to develop it. The Iraqi government appears to have realized this. It has set aside funds in its annual budgets for training programs to develop both human resources and investment in information technology in all Iraqi economic sectors (www.mof.gov.iq). Despite the broad size of the training programs and its high costs, there is a lack of success in the development of IC through these programs. The most important reason is the lack of a strategic plan to develop IC as well as the lack of relevant required information (www.igiol.gov.iq). The reason for the lack of information relates to the current accounting practices in Iraq which had been designed in the 1980s, and had met the requirements of management at that point in time where the focus was on tangible assets (Ibrahim, 2014). These practices are no longer able to meet the requirements of contemporary management that requires information on the critical elements of success the most important being IC (Ibrahim, 2014).

The further literature review shows that Iraqi companies need information systems in their planning and controlling of IC in order to create value. There is some evidence that management accounting (MA) can also play a role in planning and controlling of IC (Novas, Sousa, & Alves, 2012). Some literature show that beyond budgeting as an advanced management accounting practice may be appropriate in the planning and controlling of IC (Wibowo, 2016). However, the lack of evidence on the application of MAPs in ICM is a challenge for adopting them (Tayles, Pike, & Sofian, 2007). Therefore, this research aims to explore whether the adoption of BB as a MAP contributes to planning and controlling of IC in order to create value in Iraqi companies.

The literature shows that Iraqi firms need to develop IC in order to create value, and they need to adopt an information management system in order to plan and control IC. The literature suggests that MA may play a vital role in planning and controlling IC (Novas et al., 2012). Some of the literature shows that BB may be suitable in planning and controlling of IC (Sofian, 2010; Tayles et al., 2007). However, Lonnqvist, Kujansivu, and Antola (2006) argue that using the tools in practice

investigates which tools work and do not and how they can be improved. Extant literature is still lacking in providing empirical evidence about utilising MAPs in the management of IC (Cleary, 2015). Although the firms in developed countries adopt advanced MAPs, the literature does not include evidence on whether companies adopt advanced MAPs in planning and controlling of IC (Tayles et al., 2007). Furthermore, Cleary (2015) argues that the contribution of MA in planning and controlling of IC has yet to be fully established. Despite the relevance of MAPs, research shows that the adoption rate is still low, for example, in emerging economies such as China, Singapore, India, Malaysia, Estonia, Poland, Saudi Arabia, Egypt, and Libya where it is between none and 15% (Leftesi, 2008). Further still, they do not use these practices in planning and controlling of IC. Most of the firms in these countries use traditional MAPs (Leftesi, 2008). In Iraq, there is no study on the use of advanced MAPs, and their adoption in the planning and controlling of IC. The lack of evidence about applying MAPs in the management of IC in other countries represents a challenge for adopting them in Iraq because there is a need to determine whether these practices are suitable in planning and controlling of IC and in Iraq. This leads to the research problem: *How relevant is BB as a management accounting practice in the planning and controlling of IC in Iraqi companies to create value for stakeholders?*

In light of the below discussion, this research aims to explore whether adoption BB contributes to planning and controlling IC to create value in Iraqi companies. This requires knowledge of the views of the managers about the nature of the information provided by BB and to determine whether this information is relevant in planning and controlling of IC in the context of Iraq. This research aims also to explore the challenges of the adoption of BB in the management of IC in Iraq, and will address the research problem and the research aims through the following questions:

RQ1: How relevant is BB as a MAP in the planning and controlling of IC in Iraq?

RQ2: What are the challenges facing managers in the adoption of BB in planning and controlling?

2. LITERATURE REVIEW

This study uses the method of reviewing the concepts, theories, and subjects related to the topics of the research with the aim of defining the research problem and then its questions (Bell, Bryman, & Harley, 2019).

The modern economy has become a knowledge economy. One of its most important features is its conversion from an industry-based economy, dependent on tangible assets, to a knowledge economy, dependent on intangible assets (Guthrie, 2001). This does not mean that tangible assets have disappeared, but they have become secondary in terms of importance (Kozak, 2011). In the new economy, intangible assets account, on average, for above 75 percent of a company's value (Kaplan & Norton, 2004b). A company's sustainability to compete in the modern knowledge economy is increasingly derived from the exploitation of these intangible resources. Companies today create

sustainable value from leveraging their intangible assets (Inkinen, 2015).

The literature review of the definition of IC is complex and is not clear. While there is a multitude of different definitions of IC, there is an absence of a standard definition of IC (Marr & Moustaghfir, 2005; Pedro, Leitão, & Alves, 2018; Petty & Guthrie, 2000; Tyskbo, 2019). Furthermore, there is a diverse group of interchangeable terms that are used to refer to IC, such as intangible assets, knowledge assets, and human assets (Joshi, Cahill, Sidhu, & Kansal, 2013; Marr, 2005b; Milost, 2013). The literature shows that IC was defined from three main perspectives, which are intangible assets, knowledge assets, and human assets (Andriessen, 2004). Each perspective represents an opinion of a specific discipline about the concept of IC, and every discipline has different assumptions in defining the concept of IC (Marr, 2005a).

IC is defined from an intangible asset perspective, and this perspective is attributed to the field of accounting. The accounting discipline classifies the assets based on their physical existence either tangible assets or intangible assets (Potter, Libby, Libby, & Short, 2009). In the knowledge economy, success and superior performance are no longer driven by tangible assets, but instead primarily by intangible assets (Marr, 2008). Furthermore, new intangibles have emerged such as staff competencies, customer relationships, models, and computer and administrative systems (Petty & Guthrie, 2000; Pew Tan, Plowman, & Hancock, 2007). IC is used to refer to these new intangibles (Altundag, Fidanbas, & İrdan, 2019). In the accounting field, the term intangible asset is more commonly used to refer to IC as well as IC is discussed from the intangible perspective (Lev, Cañibano, & Marr, 2005; Thiagarajan & Baul, 2014). The literature shows that there are two opinions to define IC from an intangible perspective. Firstly, that IC includes all of the organisation's intangible assets (Lev et al., 2005). Secondly, that IC is a subset of the firm's total intangible asset base, rather than being similar to it (Albertini, 2016).

IC is defined also from a knowledge perspective that is attributed to the economic literature, which states that knowledge is the primary factor of value creation in the new economy rather than the factors of production on which the traditional model is based (Augier & Teece, 2005). Therefore, economists have introduced a new model in which they have added knowledge as another superior factor that directs the use of capital, technological development, and quality of labour (Marr, 2005a). Besides the uses of knowledge, the economists opine that knowledge is brought from a variety of sources (Augier & Teece, 2005). The definitions explain IC from a knowledge perspective attempt to present one or more of three issues, which are the source of knowledge, with any resources the knowledge is used for, and the role of knowledge played alone or with other factors. For example, Roos, Roos, Dragonetti, and Edvinsson (1997) defined IC as the sum of the knowledge of its members and the practical translation of this knowledge into brands, trademarks, and processes.

Human resource management introduces a perspective on the concept of IC. The literature in this field regards human capital as a part of IC or intangible assets. However, they distinguish it from

other parts and consider it the most important part (Gates & Langevin, 2010). Human capital is the centre of organisational performance and the source of value creation in the new economy (Johanson, 2005). Human capital is the most important component of IC because people are the source, ideas, inspiration, innovation, competence, deliver customer relations, and intellectual property (Gates & Langevin, 2010; Johanson, 2005; Tyskbo, 2019). In other words, human capital is the main generator for other intangibles. In this context, Ahonen argues (as cited in Johanson, 2005) that "human capital is, in fact, the only generative intangible and, therefore, the central element of IC" (p. 96). Moreover, Kamath (2014) refers that IC is any creation which emerges from the human capital. Therefore, there are some definitions equating IC with human capital (Tayles et al., 2007).

IC construct is a hierarchy of nested concepts, with components that have items (Beattie & Thomson, 2007; Dumay & Cai, 2015). There is considerable debate over the identification and classification of IC components and items (Montemari & Nielsen, 2013). This discussion has sparked many debated classifications because of the different perceptions and purposes that each classification is based on (Thiagarajan & Baul, 2014). Roos et al. (1997) classify IC into two components, which are human capital and structural capital. Kaplan and Norton (2001) classify IC into human capital, organisational capital, and information capital. They perceive that these components are the intangible assets needed to enable organisational activities and customer relationships to be performed at ever-higher levels of performance. Sveiby (1997) proposed a classification for IC into three components are employee (individual) competence, internal structure, and external structure. Sveiby's classification has been adopted by (Bontis, 1989; Edvinsson & Malone, 1997; Sullivan, 1989) with modification of the terminology of the components into human capital, structural capital, and customer capital. Bontis, Meritum, and Pablos (as cited in Choong, 2008), modified and extended the last classification by replacing customer capital with relational capital.

IC literature has currently consensus on the classification that is formed from three components, which are human, structural, and relational capital (Abhayawansa, Guthrie, & Bernardi, 2019; Albertini, 2016; Dumay & Guthrie, 2019; Guthrie, Ricceri, & Dumay, 2012; Montemari & Nielsen, 2013; Tyskbo, 2019). The definitions of the three components are as follows.

1. *Human capital*: it refers to the competencies, skills, knowledge, experience, innovation and creativity, and other attributes that are had by employees of the organisation and used to generate earnings and growth and to improve efficiency and productivity (Wanga, Lu, Kweh, & Cheng, 2014).

2. *Structural capital*: it is the knowledge and information infrastructure of the organisation that is used by the employees in achieving the organisation's objectives (Kamath, 2014). Cleary (2009) argues that structural capital refers also to the systems, procedures, and routines that represent the core of the organisation. Structural capital is often seen as everything of value that is remaining an organization, when employees leave the workplace (Tyskbo, 2019).

3. *Relational capital*: it is all relationships that exist between an organization and any external party, be it a person or an organization. These relationships can be embodied with, for example, customers, suppliers, employees, pressure groups, shareholders, creditors, and investors (Marr, 2008; Tyskbo, 2019). Relationships tend to be in one of two categories – formal relationships that arise through contractual obligations with major clients, suppliers, partners, and informal relationships (Forte, Tucker, Matonti, & Nicolò, 2017) and in addition to relationships, Tyskbo (2019) argues that reputations, goodwill, and brands' names also belong to relational capital.

The definitions in each perspective refer to the different kinds of intangibles as IC according to its assumptions. Therefore, there are no right or wrong definitions of IC because each definition is built on discipline assumptions, and every discipline has different assumptions (Marr, 2005a, 2008). Moreover, multiple definitions and classifications provide a better understanding of the meaning of IC (Pedro et al., 2018).

There are three dominant theories of how companies can create a competitive advantage from intangible resources. These are the resource-based view (RBV), the knowledge-based view (KBV), and intellectual capital theory (ICT) (Khalique & Shaari, 2013). The RBV argues that an organisation obtains a competitive advantage when it exploits its internal resources as a bundle (Marr, Schiuma, & Neely, 2004). The main criticism of RBV is that it is static in nature because it depends only on the internal resources of an organisation (Curado & Bontis, 2006). KBV argues that knowledge is the primary source for creating value and competitive advantage through developing new knowledge-based assets (Carpenter, Sanders, & Gregersen, 2001). The main criticism of KBV is that it ignores other intangible sources which may create value (Pucar, 2012).

ICT states that an organisation's IC is not just the knowledge and skills that can be acquired by learning and training, but IC is a whole set of intangible assets used to create value (Pucar, 2012). IC includes human capital (such as knowledge, skills, competence attitude, and training), structural capital (such as patents, models, networks, systems, and organisational culture), and relational capital (such as relationships with customers and suppliers, trademarks and reputation or image of the organisation) (Pucar, 2012). According to ICT, these components constitute the main source of competitive advantage in a knowledge economy (Ling, 2012). ICT hypothesises that corporate value does not arise directly from any one of its IC components, but only from the interaction among all three (Haris, 2000).

Khalique and Shaari (2013) argue that ICT is the advanced form of RBV and KBV, and it attempts to extend and to overcome the shortcoming of RBV and KBV. ICT is the standard theory of the current literature and the prevailing paradigm (Martí, 2007). It has been posited that in the global economy, IC is the principal source of competitive advantage for companies (Lerro, Linzalone, & Schiuma, 2014). The applied logic of business in the knowledge economy is that the creation of long-term success is achieved by value creation. This occurs by converting IC into value for stakeholders (Khalique & Shaari, 2013).

Value creation has become a global issue as a result of a continuing stream of companies' failure, product discontinuations, stock market pressures, brand destruction, and the competitive market (Abdullah & Said, 2015). Stakeholder theory posits the main question, which is "*How do organisations create value?*" (Vidal, Berman, & Buren, 2015). According to Ernst and Young (EY, 2013) value is created through an organisation's business model. The business model refers to the logic of the firm, the way it operates, and how it creates value from its resources and capabilities for its stakeholders (Beattie & Smith, 2013). There are two main models to create value, the first one focuses on physical assets and the second one focuses on intangible assets (Kraaijenbrink & Spender, 2011). In the knowledge economy, the logic of value is shifting away from physical and monetary assets to intangible assets (Harris & Burgman, 2005). More recently the concept of IC has been identified as a key resource and driver of organizational performance and value creation (Teece, 2010).

Managers need to understand how these drivers create value in their organizations (Marr et al., 2004). Value creation through IC is achieved by implementing specific principles (Laverne & Earl, 2006). Firstly, it is never the IC itself that creates value, but rather it is the products and services that are created by the IC (Marr et al., 2004). Secondly, the alignment of IC with strategy is the primary principle in creating value from IC (Kaplan, 2009). Thirdly, IC components rarely create value by themselves individually. They arise when they are combined effectively with each other and with other tangible assets (Kaplan & Norton, 2004a). These characteristics provide an understanding of how IC adds value to an organization (Kaplan & Norton, 2004a). The process of exploitation of IC, and its conversion to a tangible outcome, must be undertaken in accordance with these principles, and effective management to fulfil the purpose (Marr & Roos, 2005).

Most organisations have budgets as integral components of their management control systems, as a means of planning and control (Binti, 2005). However, many criticisms have been made of relying on such traditional budgets. Firstly, it encourages rigid planning and a lack of flexibility in the competitive environment because it is based on annual fixed performance estimates (Daum, 2002). Secondly, budgets were designed mainly for the purposes of financial forecasting, managing and controlling revenues, costs, and cash flows (CIMA, 2007). This design ignores planning and controlling the key drivers of value creation in a knowledge economy (Ito, 2007), and it ignores the link of non-financial indicators with the budgeting process (Horváth & Sauter, 2004). Thirdly, traditional budgets are less effective in the planning process because they overlook clear alignment between strategy and budgeting (Horváth & Sauter, 2004).

Because of these disadvantages, Horváth and Sauter (2004) argue that there is a trend in what is known as "*Beyond Budgeting*". BB replaces budgets with tools and techniques (such as BSC, activity-based budgeting, zero-based budgeting, and rolling forecasts) in order to overcome the disadvantages of traditional budgets (Neely, Bourne, & Adams, 2003). However, some of these tools and techniques are

designed for planning and controlling the operational activities (tangible assets) and not for IC (Tuanmat & Smith, 2011). Horváth and Sauter (2004) argue that BB, based on the combination of the BSC with rolling forecasts, is a suitable alternative for planning and controlling IC.

Iraqi IC suffers from erosion because of decades of prolonged United Nations economic sanctions, wars, and the massive brain drain of skilled Iraqis (Cheema, 2013; Ibrahim, 2014; World Bank Group, 2017). The lack of IC in Iraq highlights the need for policies to be developed in line with the World Bank's recommendations. The Iraqi government appears to have realised this. It has set aside funds in its annual budgets for training programs to develop both human resources and investment in infrastructure information technology in all Iraqi economic sectors (Iraq Ministry of Finance). Further, it is now a requirement for every foreign oil company in Iraq to spend US\$5 million annually on developing Iraqi human resources (www.oil.gov.iq).

A study, conducted by the department of the Inspector General at the Ministry of Oil, on the training programs for the period from 2010 to 2013, showed that 2577 courses were conducted and the numbers of participants were 28347 with a total cost of US\$428 million (Noor & Abduldayem, 2015). Despite the broad range of the training programs and their high costs, the Iraqi General Inspector determined several reasons for the lack of success in the development of HC through these programs. The most important of these reasons is the lack of a budgetary system in planning and controlling of IC (www.oil.gov.iq).

The Iraqi General Inspector's report revealed that the key challenge facing the development of IC in Iraq is the lack of relevant information (www.igiol.gov.iq). The reason for the lack of information relating to the current budget in Iraq is that the current budget in companies and organisations were designed in the 1980s, to meet the requirements of management at the time, where the focus was on tangible assets (Ibrahim, 2014). These budgets are no longer able to meet the requirements of contemporary management which requires information on the critical elements of success, the most important being IC (Alnajjar, 2004). Therefore, Iraqi companies need to adopt advanced MAPs in order to contribute to the development of IC.

3. RESEARCH METHODOLOGY

The research methodology includes the research strategy and design. This section discusses both of them and includes research paradigm and approach (Bell et al., 2019).

This study is based on the interpretivist paradigm. Two philosophical dimensions characterise this paradigm: ontology and epistemology. Ontology is concerned with the reality of social phenomena (Wahyuni, 2012). Ontologically, this paradigm believes that social phenomena are constructed from the perceptions and actions of those social actors concerned with their existence (Saunders, Lewis, & Thornhill, 2009). Epistemology is the belief on how to generate, understand, and use knowledge deemed to be acceptable in a field of study (Wahyuni, 2012).

Epistemologically, the interpretivism paradigm believes that knowledge is derived from the interpretations by social actors about meanings of social phenomena in order to understand them (Bryman & Bell, 2011). In MA research, interpretive studies are based on the belief that MAPs are socially constructed and can be changed by the social actors (Richardson, 2012). Interpretive studies in MA, aim to understand and critique the adoption MAPs as a social practice through the perceptions of social actors (decision-makers and accountants) (Parker, 2012).

This research adopts a qualitative approach emphasising words rather than quantification in the collection and analysis of data (Bryman & Bell, 2011). Two reasons for adopting a qualitative approach within interpretivist paradigm include: firstly, the social world of business and management is multidimensional and complex to lend itself to theorising by definite laws in the same way as a quantitative approach (Saunders et al., 2009). Secondly, the research needs the insights of this complex world that may be lost if it is reduced entirely to a series of law-like generalisations as in quantitative studies (Saunders et al., 2009). In the same context, the multifaceted and complex nature of the adoption of many MAPs can be analysed only by qualitative methods (Parker, 2012). In an assessment of the contribution of MA research in the last 20 years, Parker (2012) found that MA research is arguably a leader in applying qualitative research methodologies. In addition, qualitative methods can be used to explore the problems of IC and MAPs about which little is known in Iraq in order to gain a deeper understanding.

Research design is a plan of how the study will work for answering the research questions. This plan provides a framework for the instrument of data collection and the procedures of data analysis (Saunders et al., 2009).

This study focuses on four Iraqi sectors that are technology, finance (banks), services, and manufacturing, for two reasons. Firstly, the four sectors contribute 19.8% of the gross domestic product in Iraq. These four sectors come in second place after the oil sector which contributes 74% of gross domestic product (Khdair, Shamsudin, & Subramanim, 2011). Secondly, although all sectors in Iraq need to develop IC, these sectors have a strong emphasis on IC compared with other economic sectors (Sofian, 2005). The study also focuses on executive managers and management accountants in the four sectors, as the executive managers are responsible for developing IC, and management accountants are responsible to produce the relevant information about IC (Tayles et al., 2007).

This study targets the listed companies, which belong to the four sectors, on the Iraq Stock Exchange, which are 65 companies (Table A.1). This study uses the purposive method in selecting the samples. The purposive sampling method is often applied in qualitative research (Bryman & Bell, 2011). This study is based on specific criterion in selecting the sample. The criterion that is used to select the samples is that companies that can afford ICM are normally large in size, and adoption of MAPs is likely to occur in this type of companies (Tayles et al., 2007). The main factor to determine the size firm is annual sales turnover (Sofian, 2005).

Literature for qualitative interviews shows the minimum, maximum, and mean number of interviews to be conducted. In this context, Warren (2002) refers that the minimum number of interviews should be between 20 and 30. This research undertook 40 interviews with executive managers and management accountants in each company; 2 interviews in 20 companies, 5 companies from each sector. The size of the sample is selected according to the criterion suggested by the above literature. The companies in each sector with the highest annual sales turnover are included within the sample. In the case where a company refused participation in the study, the researchers targeted the next company in terms of the highest annual sales turnover. This research aimed at the top five largest companies in each of the four sectors (Table A.2).

A research instrument is a tool for collecting relevant data about a research project (Birmingham & Wilkinson, 2003). This research adopts semi-structured interview because it is an appropriate instrument to collect data when research adopts the interpretivist epistemology where the study concentrates to understand and critique the adoption of MAPs as a social practice through the perceptions that social actors ascribe (executive managers and management accountants) to this phenomenon (Parker, 2012; Saunders, Lewis, & Thornhill, 2015). This study uses interview questions that consist of a list of open-ended questions, broadly focused on the perceptions of managers about the role of BB in planning and controlling of IC in their organisations. The interview questions concentrate on three main aspects, which are 1) the importance and relevance of adopting BB in planning and controlling of IC, 2) the challenges facing Iraqi organisation in the adoption of BB. The interview questions are designed to contribute to answering the research questions (Bell et al., 2019; Saunders et al., 2009).

4. DATA COLLECTION

This study uses semi-structured interviews as the instrument to collect data. The interviews were conducted face to face with the executive managers and management accountants of 20 companies in the four economic sectors in Iraq. The interviews were conducted at the companies' headquarters in Iraq. Thirty-two interviews were conducted in Baghdad City; four interviews were conducted in Erbil Governorate; two interviews were conducted in Sulaymaniyah Governorate; two interviews were conducted in Al-Anbar Governorate. The duration of the interviews was between 30 minutes to 50 minutes, with a mean of approximately 36 minutes.

This study adopts a thematic analysis approach. Thematic analysis is widely used in analysing semi-structured interviews (Clarke, Knights, & Jarvis, 2012; Evans, 2018). In addition, it is the most common approach to qualitative data analysis because qualitative research seeks to find out themes (Bell et al., 2019). This study followed a four-step thematic analysis in order to find out the themes from data (Creswell, 2014; Marshall & Rossman, 2011). The first step is the transcription of all digitally recorded audio interviews into written

documents (Marshall & Rossman, 2006). The second step was coding which is considered the core of the qualitative data analysis process (Bell et al., 2019). Coding is the process of organising the text into chunks before bringing meaning to those chunks (Creswell, 2003). The study used the combination of two approaches of codes in analysing the text transcript. The first approach is to use predetermined codes that are based on past literature as well as the titles and goals of the list of interview questions. The second approach was to develop codes on the information that emerged from the participants (Creswell, 2003). The third step in data analysis was to categorise codes into and name those categories with a term by using one of two approaches above. Finally, all the transcripts were coded and categorized into the main themes and sub-themes relating to the role of BB in planning and controlling of IC in Iraq and included data analysis and interpretation of the findings.

5. RESEARCH RESULTS

This section presents the main themes, which appear from data analysis. These themes are the relevance of BB in planning and controlling IC, techniques of BB, the relevance of BSC and rolling budget, reservations of applying BB techniques in Iraq, and the importance of adoption of BB in Iraq.

5.1. Relevance of BB in planning and controlling IC

Some participants think that the current budget mechanism could be enhanced with the tools that are based on the BB philosophy. However, some participants are of a different view and think that the organisation cannot use two styles of budgeting at the same time for the purpose of planning and controlling because each one of them has a different principle and philosophy. Therefore, the organisation needs to adopt one of them for its planning and controlling.

Most participants supported the adoption of BB alone in their organisations. They stated that Iraq organisations now have to work in a business environment that is different from the previous environment that was in existence prior to the political change in 2003. They support the need to adopt modern management models in planning and controlling in line with the new business environment. They think that the principles and philosophy of BB make it a relevant model for planning and controlling in the current era in Iraq.

5.2. Techniques of BB

BB philosophy is based on new techniques in order to eliminate the disadvantages of traditional budgeting. There are many techniques introduced by BB, such as zero-based budgeting, activity-based budgeting, activity-based management, balanced scorecard, and rolling forecasts. The participants offered their perceptions about the techniques and their relevance to the planning and controlling in their organisations generally, and IC especially. Some participants stated that zero-based budgeting is not relevant for planning and controlling of IC, for two reasons. Firstly, it is a technique used primarily

to assess government expenditures and hence is not relevant for profit-seeking organisations. Secondly, it lacks non-financial indicators, which are necessary for modern planning for organisations and IC. Some participants stated that activity-based budgeting and activity-based management are not relevant for planning and controlling of IC, for two reasons. Firstly, they are designed for planning and controlling the operational activities (tangible assets) and not for IC. Secondly, they aim at a reduction of costs and the elimination of non-value-adding activities. While they share the same aim of traditional budgets in financial control, they are different as they aim for continuous improvement.

5.3. Relevance of BSC and rolling budget

Most participants think that the technique of BB, which is based on a combination of the BSC with rolling forecasts, is a suitable alternative for planning and controlling IC. They introduced several arguments about the relevance of these techniques as narrated.

5.3.1. Flexibility of budgets

Participants stated that the Iraqi environment faces economic changes, an unstable economic situation, as well as a complex business environment coupled with rapid changes, especially in the telecommunication sector. Organisations have to work with annual budgets that are no longer flexible enough to be able to respond to an environment that requires follow-up plans and feedback to be able to modify plans in a short time. This supports the need for Iraqi organisations to look for better techniques such as BB to facilitate flexibility. Some Participants think that rolling budgets could be suitable for achieving this purpose. However, other participants think that the adoption of a rolling budget alone is not enough but rather should be applied with another technique because it only addresses the problems of flexibility and ignores the other problems of traditional budgets. Therefore, the participants suggest the pairing between rolling budgeting and BSC to achieve the required integration. In addition, preparing the plans according to a rolling short-term budget will be very costly because preparing a budget consumes resources of the organisation including time and costs, so it is necessary to take the budget period into account for considerations related to costs of preparing the budget.

5.3.2. Alignment of the budget with strategy goals

Participants question the importance of planning if it does not transfer into the vision, strategy, and objectives of the organization and link to indicators in the budget. The current system results in a budget that represents a misleading road map that does not lead the organisation to achieve its real objectives. Therefore, organizations need to shift their strategic goals into items and indicators so that these goals are achieved. However, the Iraqi organisations have many problems that prevent alignment between the strategy and budgets:

1) there are Iraqi organisations that do not have a vision, mission, and a strategy 2) Iraqi organisations set general and unclear objectives, and the objectives of each department do not fit with other departments, so each department works independently of the other 3) some Iraqi organisations use traditional budgets that lack a link between the budgeting process and strategic objectives.

The participants think there are many reasons that make the BSC the most suitable technique for the process of planning and control among the techniques of BB philosophy, which, when adopted, could lead to overcoming the problems of traditional budgeting and achieve harmonisation between the budget and the strategy of an organisation. Participants point out that one of the important principles for applying BSC is to translate an organisation's vision and strategy into performance objectives for each of its four dimensions. These performance objectives are to be communicated to employees throughout the organisation, so that they know what needs to be done. Therefore, adopting a BSC will lead to 1) forcing Iraqi organisations to have vision, mission, and strategy 2) clear, specific, and harmonised objectives among all departments in the organisation, which will eliminate the lack of clarity and conflict in setting goals that cause a misalignment of the goals with the organisation's strategy 3) BSC plans for IC components (human capital, information capital, and organisational capital) through the learning and growth perspective and then connect this to the organisation and departmental plans. Therefore, it needs to prepare an integrated plan in which the objectives of the learning and growth of IC will be in line with the objectives of all departments in the organisation.

5.3.3. Using financial and non-financial indicators

Most of the participants think that using non-financial indicators is important in preparing budgeting in the current era. In this context, the participants introduced two arguments. Firstly, the survival of the organisation requires comprehensive and detailed planning with drivers that serve as the foundation of success in the current business environment (critical success factors). In this aspect, the organisation needs to plan and address the real causes and their impact instead of planning the results only as in the traditional budgets. The nature of planning for these drivers, especially IC, requires non-financial items and indicators. For example, the planning for HC requires an estimation of the number of training courses, quality of training, and preparation of trainees, and all these items are non-financial items.

Secondly, planning for the key drivers (including intellectual capital) can lead to success in the organisation, but it requires non-financial detail to form a roadmap for managers and employees in order to achieve the goals of the organisation. This is contrary to traditional budgets that provide a general or total overall perception without clarifying the details or how to reach the goals through detailed quantitative indicators. The participants think that BSC (within BB techniques) is the most suitable technique for the process of planning and

control, for two reasons. Firstly, it has a set of non-financial indicators that provide an opportunity for managers to plan the work based on the drivers that lead to the success of the organisation. Secondly, the presence of non-financial indicators in the four perspectives in the BSC, as well as using a cause-effect relationship between the four perspectives, gives evidence that the planning will have both causes and results.

5.3.4. Linking of the budget with performance assessment

The participants point out that the current budgets in Iraq are separated from real performance evaluation because they contribute only to controlling the costs and ignore the other key performance indicators that focus on achieving the goals and strategies of the organisation. Participants think that BSC is the better technique to link budget with performance assessment because it determines performance measures for each goal of an organisation's plan.

5.4. Reservations of applying BB techniques in Iraq

Despite the consensus the participants have about its relevance in planning and controlling of IC, some participants point out some reservations about applying BB techniques in Iraq. These reservations are as follows:

1. *Previous experience*: some participants stated Iraq had previous experience in applying new kinds of budgets such as program budgets and performance budgets as alternatives to the traditional budget and performance and programs budget but did not succeed even though they were good in theory.

2. *Legislation*: some participants point out the current Iraqi legislation obliges organisations in the mixed sector to prepare budgets according to the Unified Accounting System. Therefore, it is difficult to change from the traditional budgets and adopt a modern budget system in the mixed sector because of this legal requirement.

3. *Cost of applying BB*: some participant points out that preparing a rolling budget every month or three months requires many resources such as time, increasing accounting staff, and funds to prepare data for budgets. Therefore, it is difficult to implement rolling budgets for short-term use in the industry.

5.5. Importance of adoption of BB in Iraq

With a view to understanding the importance and relevance of BB, questions were asked in the interview, and the following are the summarised responses:

1. Most of the participants state that budget problems have not been resolved in Iraq. They think that the adoption of BB will help Iraqi organisations to go beyond the shortcomings and negative aspects of the traditional budget system.

2. Participants believe that the adoption of BB will be the basis of success in Iraqi organisations at this stage for two reasons. Firstly, it will help

organisations to achieve real goals and organisation strategies as it links planning in implementing strategy. In addition, it will provide clear plans for the IC work because it has indicators, to draw up a working map and a working guide for the management and staff of the organisation. Secondly, the adoption of BB will lead to Iraqi organisations and their performance in a better position because BB will contribute to determining not only budgetary needs but will also focus on identifying deviations, strengths, and weaknesses in IC performance. This would ensure better performance better of IC in the current business environment of Iraq.

6. DISCUSSION

This section discusses the findings of the data analysis which includes two aspects: relevance of BB in planning and controlling IC and another benefit of adopting BB.

Of the sampled participants, 90% support the adoption of the philosophy of BB for planning and controlling of IC in their organisations. In addition, they confirm that the BB philosophy is based on new techniques that can eliminate the disadvantages of traditional budgeting. BB philosophy is based on new techniques such as zero-based budgeting, activity-based budgeting, activity-based management, BSC, and rolling forecasts. There are four reasons why zero-based budgeting, activity-based budgeting, and activity-based management are not feasible in Iraqi organizations (see the list below). Supporters of the adoption of BB, which is based on a combination of the BSC with rolling forecasts, think that it is a suitable alternative for planning and controlling IC. In addition, this combination will contribute solutions to addressing many problems in the current budgetary system in Iraq. This support for BB, along with BSC and rolling budget is based on four reasons.

1. Considering the current instabilities facing the Iraqi business environment - economic and political instability - annual budgets are no longer sufficiently flexible to enable managers to follow up plans and to be able to modify plans swiftly to counter these variables. These variables, as well as the rapid changes in IC (especially InC), make the planning and controlling of IC almost impossible. Therefore, adopting rolling budgeting can contribute to limiting the influence of the above variables on the process of planning and controlling IC. A rolling budget involves preparing periodic short-term budgets.

2. In Iraq, classifications of budgets are rigid. These classifications focus merely on revenues, costs and cash flows, and the details of their components only. Therefore, these budgets do not contain any items related to IC components. The adoption of the BSC within the BB philosophy addresses the problems of classifications of budgets. The BSC plans for IC components (human capital, information capital, and organisational capital) through the learning and growth perspective. In addition, these items are flexible (not rigid) because they depend on an organisation's strategy and strategy for the development of IC.

3. Budgets focus only on the overall financial estimate. The total estimated figures are to evaluate the result of certain causes, not the causes

themselves, which are components of IC. The components of the IC are the drivers of success, including good financial results. Therefore, planning IC is done through the causes and not the results. The BSC plays the role of planning through a set of items from the perspective of learning and growth that aim to develop the components of IC. These items are the reason for the organization's success in operations and customer satisfaction, and in reaching its financial goals.

4. Aggregate financial indicators are not suitable as specific targets for the IC and for the organisation to achieve them, because most of IC performance is non-financial and requires detailed non-financial indicators, not mere aggregate financial estimates. Traditional budgets provide a general or total overall perception without clarifying the details and how to reach the goals through quantitative indicators. The presence of non-financial indicators in the four perspectives of the BSC, as well as using the cause-effect relationship between the four perspectives, shows that the planning will give management a clear perception about achieving the organisation's goals.

The findings also show that the adoption of BB achieves a benefit other than the mere benefit of planning for IC in Iraq. This benefit is to get rid of duplicate goals in the budget, which is one of the common problems in preparing budgets in Iraq, where the management uses the same goals and figures of the previous year's budget, with only some adjustments, to prepare current budgets. This means there are no new goals. In contrast, the adoption of BB solves this problem, as it links the process of preparing of budgets with an organisation's strategy because the overall achieving of an organisation's strategy can be done through BSC.

7. CONCLUSION

The philosophy of BB is based on using new MAPs as tools to eliminate the disadvantages of traditional budgeting. In this context, BB introduces many techniques such as zero-based budgeting, activity-based budgeting, activity-based management, balanced scorecard, and rolling forecasts.

All these techniques except balanced scorecard and rolling forecasts are not relevant for planning and controlling IC in Iraq for one or more of the following reasons:

1. Planning and controlling of IC requires non-financial indicators while most of these techniques do not include these types of indicators.

2. These techniques are designed for planning and controlling tangible assets, not intangible assets, and they seek to achieve two goals which are cost control and continuous improvement of tangible assets.

BB is based on a combination of the BSC with rolling forecasts, which is the relevant alternative for planning and controlling IC in Iraq for two reasons.

1. The combination of BSC and rolling budget will eliminate the prevailing problems in the traditional budgets, which are budget inflexibility, rigid classification, focus merely on the overall financial estimate, and planning only for aggregate financial indicators.

2. Planning and controlling of IC requires detailed non-financial items because most of the IC performance is non-financial in nature. In addition, IC is the engine of all the organization's activities. Therefore, planning and controlling of IC requires a set of items that contribute to the learning and growth of IC as well as it requires to show the impact of this learning and growth on organisation's activities through other sets of items. In other words, planning and controlling of IC needs to show a cause-effect relationship between the learning and growth of IC and other items in an organisation's activities. BSC achieves this because it has a set of financial and non-financial items in its four perspectives, which show exactly that cause-effect relationship between the learning and growth of IC and the development of organisation's activities. These features make BSC a suitable technique for planning and controlling of IC in organisations.

In addition to the benefits above, adoption of BB assists to get rid of duplicate goals in budgets, which is one of the common problems in preparing budgets in Iraq, where the management uses the same goals and figures of the previous year's budget to prepare the current budget, with only some adjustments. This means there are no new goals. In contrast, the adoption of BB solves this problem, as it links the process of preparing budgets with an organisation's strategy because the overall achievement of an organisation's strategy can be done through a BSC.

This research uses a qualitative approach and semi-structured interviews. The findings of qualitative research are often restricted (Bryman, 2016), and cannot be generalised to other situations outside of those under study (Gibbs, 2007). The aim of most qualitative research is not to generalise findings to individuals, sites, or places outside of those under the study but rather to provide themes developed in the context of a specific population (Polit & Beck, 2010). This research focuses on studying the role of BB in planning and controlling of IC in four Iraqi sectors, which are technology, finance (banks), trading and services, and manufacturing, for two reasons. Firstly, the four sectors contribute 19.8 % of the gross domestic product in Iraq. These sectors rank second after the oil sector, which contributes 74% of gross domestic product. Secondly, these sectors have a strong emphasis on IC compared with other economic sectors. Based on the above argument, the findings of the research from the four sectors cannot be generalised to other sectors in Iraq. Although the four sectors are important, the need to develop IC in all other sectors in Iraq is important to the country. In addition, there is a need to know how BB assists in planning and controlling of IC in organisations. Further research is needed in sectors not covered here, to investigate the possibility of generalisation of this study's findings to other Iraqi sectors. In this context, Bryman (2016) argues that qualitative researchers can generalize when they generate findings related to a particular topic and make comparisons with results by other researchers related to the same topic.

REFERENCES

1. Abdullah, N. H. N., & Said, J. (2015). Enhancing the governance of government linked companies via strategic management accounting practices and value creation. *Procedia Economics and Finance*, 28, 222-229. [https://doi.org/10.1016/S2212-5671\(15\)01103-X](https://doi.org/10.1016/S2212-5671(15)01103-X)
2. Abhayawansa, S., Guthrie, J., & Bernardi, C. (2019). Intellectual capital accounting in the age of integrated reporting: A commentary. *Journal of Intellectual Capital*, 20(1), 2-10. <https://doi.org/10.1108/JIC-01-2019-223>
3. Albertini, E. (2016). An inductive typology of the interrelations between different components of intellectual capital. *Management Decision*, 54(4), 887-901. <https://doi.org/10.1108/MD-09-2015-0425>
4. Alnajjar, F. (2004). *New Iraq free market economy and accounting*. <https://doi.org/10.2139/ssrn.487642>
5. Altındag, Ö., Fidanbas, Ö., & İrdan, G. (2019). The impact of intellectual capital on innovation: A literature study. *Business Management Dynamics*, 8(12), 1-12. Retrieved from http://bmdynamics.com/issue_pdf/bmd110706-01-12.pdf
6. Andriessen, D. (2004). *Making sense of intellectual capital: Designing a method for the valuation of intangibles*. <https://doi.org/10.4324/9780080510712>
7. Augier, M., & Teece, D. J. (2005). An economics perspective on intellectual capital. In B. Marr (Ed.), *Perspectives on intellectual capital: Multidisciplinary insights into management, measurement, and reporting* (Chapter 1, pp. 3-27). <https://doi.org/10.1016/B978-0-7506-7799-8.50006-1>
8. Beattie, V., & Smith, S. J. (2013). Value creation and business models: Refocusing the intellectual capital debate. *The British Accounting Review*, 45(4), 243-254. <https://doi.org/10.1016/j.bar.2013.06.001>
9. Beattie, V., & Thomson, S. J. (2007). Lifting the lid on the use of content analysis to investigate intellectual capital disclosures. *Accounting Forum*, 31(2), 129-163. <https://doi.org/10.1016/j.acfor.2007.02.001>
10. Bell, E., Bryman, A., & Harley, B. (2019). *Business research methods* (5th ed.). United Kingdom: Oxford University Press.
11. Binti, M. (2005). *Application of intellectual capital accounting practices* (PhD Thesis, Faculty of Management and Human Resource Development, University Technology Malaysia).
12. Birmingham, P., & Wilkinson, D. (2003). *Using research instruments a guide for researchers* (1st ed.). <https://doi.org/10.4324/9780203422991>
13. Bontis, N. (1989). Intellectual capital: An exploratory study that develops measures and models. *Management Decision*, 36(2), 63-76. <https://doi.org/10.1108/00251749810204142>
14. Bontis, N. (2004). National intellectual capital index: A United Nations initiative for the Arab region. *Journal of Intellectual Capital*, 5(1), 13-39. <https://doi.org/10.1108/14691930410512905>
15. Bryman, A. (2016). *Social research methods* (5th ed.). United Kingdom: Oxford University Press.
16. Bryman, A., & Bell, E. (2011). *Business research methods*. United Kingdom: Oxford University Press.
17. Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling human capital with organizational context: The impact of international assignment experience on multinational firm performance and CEO pay. *Academy of Management Journal*, 44(3), 493-511. <https://doi.org/10.5465/3069366>
18. Cheema, S. A. (2013). Investing in Iraq: Prospects and challenges. *Middle East Institute*. Retrieved from <https://www.mei.edu/publications/investing-iraq-prospects-and-challenges>
19. Choong, K. K. (2008). Intellectual capital: Definitions, categorization and reporting models. *Journal of Intellectual Capital*, 9(4), 609-638. <https://doi.org/10.1108/14691930810913186>
20. CIMA. (2007). *Beyond budgeting* (Topic Gateway Series No. 35). Retrieved from https://www.cimaglobal.com/Documents/ImportedDocuments/cid_tg_beyond_budgeting_oct07.pdf
21. Clarke, C., Knights, D., & Jarvis, C. (2012). A labour of love? Academics in business schools. *Scandinavian Journal of Management*, 28(1), 5-15. <https://doi.org/10.1016/j.scaman.2011.12.003>
22. Cleary, P. (2009). Exploring the relationship between management accounting and structural capital in a knowledge-intensive sector. *Journal of Intellectual Capital*, 10(1), 37-52. <https://doi.org/10.1108/14691930910922888>
23. Cleary, P. (2015). An empirical investigation of the impact of management accounting on structural capital and business performance. *Journal of Intellectual Capital*, 16(3), 566-586. <https://doi.org/10.1108/JIC-10-2014-0114>
24. Creswell, J. W. (2003). *Research design qualitative, quantitative, and mixed methods approaches*. London, England: SAGE Publications.
25. Creswell, J. W. (2014). *Research design qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: SAGE Publications.
26. Curado, C., & Bontis, N. (2006). The knowledge-based view of the firm and its theoretical precursor. *International Journal of Learning and Intellectual Capital* 3(4), 367-381. <https://doi.org/10.1504/IJLIC.2006.011747>
27. Daum, J. H. (2002, September 8). *Performance management beyond budgeting: Why you should consider it, how it works, and who should contribute to make it happen* (The New Economy Analyst Report).
28. Dumay, J., & Cai, L. (2015). Using content analysis as a research methodology for investigating intellectual capital disclosure: A critique. *Journal of Intellectual Capital*, 16(1), 121-155. <https://doi.org/10.1108/JIC-04-2014-0043>
29. Dumay, J., & Guthrie, J. (2019). Reflections on interdisciplinary critical intellectual capital accounting research: Multidisciplinary propositions for a new future. *Accounting, Auditing & Accountability Journal*, 32(8), 2282-2306. <https://doi.org/10.1108/AAAJ-08-2018-3636>
30. Edvinsson, L., & Malone, M. (1997). *Intellectual capital: Realizing your company's true value by finding its hidden brainpower* (1st ed.). New York, NY: Harper Business.
31. Ernst & Young (EY). (2013). *The concept of "value creation" in Integrated Reporting*. Retrieved from <https://ru.scribd.com/document/371646639/EY-the-Concept-of-Value-Creation-in-Integrated-Reporting>
32. Evans, C. (2018). Analysing semi-structured interviews using thematic analysis: Exploring voluntary civic participation among adults. <https://doi.org/10.4135/9781526439284>
33. Forte, W., Tucker, J., Matonti, G., & Nicolò, G. (2017). Measuring the intellectual capital of Italian listed companies. *Journal of Intellectual Capital*, 18(4), 710-732. <https://doi.org/10.1108/JIC-08-2016-0083>

34. Gates, S., & Langevin, P. (2010). Human capital measures, strategy, and performance: HR managers' perceptions. *Accounting, Auditing & Accountability Journal*, 23(1), 111-132. <https://doi.org/10.1108/09513571011010628>
35. Gibbs, G. (2007). *Analyzing qualitative data*. London, England: SAGE Publications. <https://doi.org/10.4135/9781849208574>
36. Gunter, F. R. (2015, January 9). ISIS and oil: Iraq's perfect storm. *Foreign Policy Research Institute (FPRI)*. Retrieved from <https://www.fpri.org/article/2015/01/isis-and-oil-iraqs-perfect-storm/>
37. Guthrie, J. (2001). The management, measurement and the reporting of intellectual capital. *Journal of Intellectual Capital*, 2(1), 27-41. <https://doi.org/10.1108/14691930110380473>
38. Guthrie, J., Ricceri, F., & Dumay, J. (2012). Reflections and projections: A decade of intellectual capital accounting research. *The British Accounting Review*, 44(2), 68-82. <https://doi.org/10.1016/j.bar.2012.03.004>
39. Haris, L. (2000). A theory of intellectual capital. *Advances in Developing Human Resources*, 2(1), 22-37. <https://doi.org/10.1177/152342230000200104>
40. Harris, J., & Burgman, R. (2005). *Chains, shops and networks: The logic of organizational value* (Accenture Institute for High Performance Business Research Report). Retrieved from https://www.researchgate.net/publication/239579622_Chains_Shops_and_Networks_The_Logic_of_Organizational_Value
41. Horváth, P., & Sauter, R. (2004). *Why budgeting fails: One management system is not enough* (Article Reprint No. B0409C). Retrieved from <https://martinandassoc.com/wp-content/uploads/2014/01/Why-Budgeting-Fails.pdf>
42. Hvidt, M. (2013). *Economic diversification in GCC countries: Past record and future trends* (Research Paper No. 27, Kuwait Programme on Development, Governance and Globalisation in the Gulf States, Vol. 27). Retrieved from <http://eprints.lse.ac.uk/55252/>
43. Ibrahim, M. A.-A. (2014). *The challenges and opportunities of Iraq transitioning to international accounting standards with particular emphasis on accounting for oil* (PhD Thesis, The University of Newcastle Australia). Retrieved from <https://nova.newcastle.edu.au/vital/access/manager/Repository/uon:15951>
44. Inkinen, H. (2015). Review of empirical research on intellectual capital and firm performance. *Journal of Intellectual Capital*, 16(3), 518-565. <https://doi.org/10.1108/JIC-01-2015-0002>
45. Ito, K. (2007). An example of Japanese beyond budgeting philosophy. *Japanese Management Accounting Today*, 2, 75-88. https://doi.org/10.1142/9789812779731_0006
46. Johanson, U. (2005). A human resource perspective on intellectual capital In B. Marr (Ed.), *Perspectives on intellectual capital: Multidisciplinary insights into management, measurement, and reporting* (Chapter 7). <https://doi.org/10.1016/B978-0-7506-7799-8.50012-7>
47. Joshi, M., Cahill, D., Sidhu, J., & Kansal, M. (2013). Intellectual capital and financial performance: An evaluation of the Australian financial sector. *Journal of Intellectual Capital*, 14(2), 264-285. <https://doi.org/10.1108/14691931311323887>
48. Kamath, G. B. (2014). A theoretical framework for intellectual capital disclosure. *Pacific Business Review International*, 6(8). Retrieved from http://poster.pacific-university.ac.in/2014/2014_month/march/9.pdf
49. Kaplan, R. (2009). Conceptual foundations of the balanced scorecard. *Handbook of Management Accounting Research*, 3, 1253-1269. [https://doi.org/10.1016/S1751-3243\(07\)03003-9](https://doi.org/10.1016/S1751-3243(07)03003-9)
50. Kaplan, R., & Norton, D. (2001). *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*. Retrieved from <http://124.158.108.137/ebooks/HBS%20Press,,Strategy-Focused%20Organization%20-%20How%20Balanced%20Scorecard%20Companies%20Thrive%20in%20the%20New%20Business%20Environment.%5B2000.ISBN1578512506%5D.pdf>
51. Kaplan, R., & Norton, D. (2004a). Measuring the strategic readiness of intangible assets. *Harvard Business Review*, 82(2), 52-63. Retrieved from <https://hbr.org/2004/02/measuring-the-strategic-readiness-of-intangible-assets>
52. Kaplan, R., & Norton, D. (2004b). The strategy map: Guide to aligning intangible assets. *Strategy & Leadership*, 32(5), 10-17. <https://doi.org/10.1108/10878570410699825>
53. Khalique, M., & Shaari, J. A. N. (2013). The road to the development of intellectual capital theory. *International Journal of Learning and Intellectual Capital*, 10(2), 122-136. <https://doi.org/10.1504/IJLIC.2013.052953>
54. Khdaif, W., Shamsudin, F., & Subramaniam, C. (2011). A proposed relationship between management practices and safety performance in the oil and gas industry in Iraq. Paper presented at the *World Business and Social Science Research Conference*. Retrieved from https://www.academia.edu/12409811/A_Proposed_Relationship_Between_Management_Practices_And_Safety_Performance_In_The_Oil_And_Gas_Industry_In_Iraq
55. Kozak, M. (2011). Strategic approach to intellectual capital development. *International Journal Learning and Intellectual Capital*, 8(1), 76-93. <https://doi.org/10.1504/IJLIC.2011.037360>
56. Kraaijenbrink, J., & Spender, J. C. (2011). Theories of the firm and their value creation assumptions. Paper presented at the *Annual International Conference of the Strategic Management Society, 6-9 November, Miami, US*. Retrieved from https://www.academia.edu/21425928/Theories_of_the_Firm_and_Their_Value_Creation_Assumptions
57. Lavergne, R., & Earl, R. L. (2006). Knowledge management: A value creation perspective. *Journal of Organizational Culture, Communications and Conflict*, 10(2), 43-60.
58. Leftesi, A. (2008). *The diffusion of management accounting practices in developing countries: Evidence from Libya* (Doctoral dissertation, University Huddersfield, United Kingdom). Retrieved from <http://eprints.hud.ac.uk/id/eprint/6220/1/aleftesifinalthesis.pdf>
59. Lerro, A., Linzalone, R., & Schiuma, G. (2014). Managing intellectual capital dimensions for organizational value creation. *Journal of Intellectual Capital*, 15(3), 350-361. <https://doi.org/10.1108/JIC-05-2014-0063>
60. Lev, B., Cañibano, L., & Marr, B. (2005). An accounting perspective on intellectual capital. In B. Marr (Ed.), *Perspectives on intellectual capital: Multidisciplinary insights into management, measurement, and reporting* (Chapter 3, pp. 42-55). <https://doi.org/10.1016/B978-0-7506-7799-8.50008-5>
61. Ling, Y.-H. (2012). A study on the influence of intellectual capital and intellectual capital complementarity on global initiatives. *Electronic Journal of Knowledge Management*, 10(2), 154-162. Retrieved from <http://www.ejkm.com/issue/download.html?idArticle=327>

62. Lonnqvist, A., Kujansivu, P., & Antola, J. (2006). Are management accounting equipped to deal with intellectual capital. *The Finnish Journal of Business Economics*, 55(3), 355-368.
63. Marr, B. (2005a). The evolution and convergence of intellectual capital as a theme. In B. Marr (Ed.), *Perspectives on intellectual capital: Multidisciplinary insights into management, measurement, and reporting* (Chapter 15, pp. 213-226). <https://doi.org/10.1016/B978-0-7506-7799-8.50020-6>
64. Marr, B. (2005b). *Perspectives on intellectual capital: Multidisciplinary insights into management, measurement, and reporting* (1st ed.). Oxford, England: Elsevier.
65. Marr, B. (2008). *Impacting future value: How to manage your intellectual capital* (Management Accounting Guideline, MAG). Retrieved from <https://www.journalofaccountancy.com/content/dam/jofa/archive/issues/2008/09/mag-intcapital-eng.pdf>
66. Marr, B., & Moustaghfir, K. (2005). Defining intellectual capital: A three-dimensional approach. *Management Decision*, 43(9), 1114-1128. <https://doi.org/10.1108/00251740510626227>
67. Marr, B., & Roos, G. (2005). A strategy perspective on intellectual capital. In B. Marr (Ed.), *Perspectives on intellectual capital: Multidisciplinary insights into management, measurement, and reporting* (Chapter 2, pp. 28-41). <https://doi.org/10.1016/B978-0-7506-7799-8.50007-3>
68. Marr, B., Schiuma, G., & Neely, A. (2004). The dynamics of value creation: Mapping your intellectual performance drivers. *Journal of Intellectual Capital*, 5(2), 312-325. <https://doi.org/10.1108/14691930410533722>
69. Marshall, C., & Rossman, G. B. (2006). *Designing qualitative research* (4th ed.). Thousand Oaks, CA: SAGE Publications.
70. Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed.). Thousand Oaks, CA: SAGE Publications.
71. Marti, J. M. V. (2007). In search of an intellectual capital comprehensive theory. *The Electronic Journal of Knowledge Management*, 5(2), 245-256. Retrieved from <http://www.ejkm.com/issue/download.html?idArticle=108>
72. Milost, F. (2013). Is the intellectual capital accounting just a management fashion? *International Journal of Business Management & Economic Research*, 4(4), 759-765. Retrieved from <http://www.ijbmer.com/docs/volumes/vol4issue4/ijbmer2013040402.pdf>
73. Montemari, M., & Nielsen, C. (2013). The role of causal maps in intellectual capital measurement and management. *Journal of Intellectual Capital*, 14(4), 522-546. <https://doi.org/10.1108/JIC-01-2013-0008>
74. Neely, A., Bourne, M., & Adams, C. (2003). Better budgeting or beyond budgeting? *Measuring Business Excellence*, 7(3), 22-28. <https://doi.org/10.1108/13683040310496471>
75. Noor, S., & Abduldayem, A. (2015). Statistics of training programs in the oil and gas sector. *Journal of the Oil Institute*, 2(1), 23-48.
76. Novas, J. C., Sousa, A., & Alves, M. C. (2012). *On the relations between management accounting systems and intellectual capital: Evidence for Portuguese companies* (CEFAGE-UE Working Paper Series 2012/13). Retrieved from http://www.cefage.uevora.pt/en/producao_cientifica/working_papers_serie_cefage/on_the_relations_between_management_accounting_systems_and_intellectual_capital_evidence_for_portuguese_companies
77. Parker, L. D. (2012). Qualitative management accounting research: Assessing deliverables and relevance. *Critical Perspectives on Accounting*, 23(1), 54-70. <https://doi.org/10.1016/j.cpa.2011.06.002>
78. Pedro, E., Leitão, J., & Alves, H. (2018). Back to the future of intellectual capital research: A systematic literature review. *Management Decision*, 56(11), 2502-2583. <https://doi.org/10.1108/MD-08-2017-0807>
79. Petty, R., & Guthrie, J. (2000). Intellectual capital literature review: Measurement, reporting and management. *Journal of Intellectual Capital*, 1(2), 155-176. <https://doi.org/10.1108/14691930010348731>
80. Pew Tan, H., Plowman, D., & Hancock, P. (2007). Intellectual capital and financial returns of companies. *Journal of Intellectual Capital*, 8(1), 76-95. <https://doi.org/10.1108/14691930710715079>
81. Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies*, 47(11), 1451-1458. <https://doi.org/10.1016/j.ijnurstu.2010.06.004>
82. Potter, B. N., Libby, R., Libby, P. A., & Short, D. G. (2009). *Accounting in context* (1st ed.). Sydney, Australia: McGraw-Hill.
83. Pucar, S. (2012). The influence of intellectual capital on export performance. *Journal of Intellectual Capital*, 13(2), 248-261. <https://doi.org/10.1108/14691931211225715>
84. Richardson, A. J. (2012). Paradigms, theory and management accounting practice: A comment on Parker (forthcoming) "Qualitative management accounting research: Assessing deliverables and relevance". *Critical Perspectives on Accounting*, 23(1), 83-88. <https://doi.org/10.1016/j.cpa.2011.05.003>
85. Roos, J., Roos, G., Dragonetti, N., & Edvinsson, L. (1997). *Intellectual capital: Navigating in the new business landscape*. London, England: Palgrave Macmillan. <https://doi.org/10.1007/978-1-349-14494-5>
86. Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.475.7307&rep=rep1&type=pdf>
87. Saunders, M., Lewis, P., & Thornhill, A. (2015). *Research methods for business students* (7th ed.). Harlow, United Kingdom: Pearson Education Limited.
88. Sofian, S. (2005). *Intellectual capital and management accounting an investigation of management accounting practices within Malaysian companies with high intellectual capital investments* (Doctoral dissertation, University of Bradford, United Kingdom).
89. Sofian, S. (2010). Intellectual capital and management accounting practices. In R. Maelah (Ed.), *Research in management accounting: Malaysian environment* (Chapter 5, pp. 131-204). Newcastle upon Tyne, England: Cambridge Scholars Publishing.
90. Stebbins, S. (2019). These 15 countries, as home to largest reserves, control the world's oil. *USA Today*. Retrieved from <https://www.usatoday.com/story/money/2019/05/22/largest-oil-reserves-in-world-15-countries-that-control-the-worlds-oil/39497945/>
91. Sullivan, P. H. (1989). *Profiting from intellectual capital: Extracting value from innovation*. New York, NY: John Wiley.
92. Sveiby, K. E. (1997). *The new organizational wealth: Managing and measuring knowledge-based assets*. San Francisco, CA: Berrett-Koehler Publishers, Inc.

93. Tayles, M., Pike, R. H., & Sofian, S. (2007). Intellectual capital, management accounting practices and corporate performance. *Accounting, Auditing & Accountability Journal*, 20(4), 522-548. <https://doi.org/10.1108/09513570710762575>
94. Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2-3), 172-194. <https://doi.org/10.1016/j.lrp.2009.07.003>
95. Thiagarajan, A., & Baul, U. (2014). Holistic intellectual capital conceptual offering for empirical research and business application. *The International Journal of Management*, 3(1), 31-50.
96. Tuanmat, T. Z., & Smith, M. (2011). Changes in management accounting practices in Malaysia. *Asian Review of Accounting*, 19(3), 221-242. <https://doi.org/10.1108/13217341111185146>
97. Tyskbo, D. (2019). Managers' views on how intellectual capital is recognized and managed in practice: A multiple case study of four Swedish firms. *Journal of Intellectual Capital*, 20(2), 282-304. <https://doi.org/10.1108/JIC-01-2018-0017>
98. Vidal, N. G., Berman, S., & Van Buren, H. (2015). Stakeholder theory and value creation models in Brazilian firms. *Review of Business Management Accounting Research*, 17(55), 911-931. <https://doi.org/10.7819/rbgn.v17i55.2070>
99. Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. *Institute of Certified Management Accountants*, 10(1), 69-80. Retrieved from <http://hdl.handle.net/10536/DRO/DU:30057483>
100. Wanga, W.-K., Lu, W.-M., Kweh, Q. L., & Cheng, I.-T. (2014). Does intellectual capital matter? Assessing the performance of CPA firms based on additive efficiency decomposition DEA. *Knowledge-Based Systems*, 65, 38-49. <https://doi.org/10.1016/j.knosys.2014.04.004>
101. Wibowo, D. (2016). Intellectual capital based management accounting system for creative city. *International Journal of Scientific & Technology Research*, 5(4), 207-211. Retrieved from <http://paper.researchbib.com/view/paper/117831>
102. World Bank Group. (2017). *Iraq systematic country diagnostic*. Retrieved from <https://openknowledge.worldbank.org/handle/10986/26237>

APPENDIX

Table A.1. The four sectors

Name of the company		Annual sales turnover (Billion IQD)
<i>Bank sector</i>		
1	Kurdistan International for Investment & Development	79.636
2	Union Bank of Iraq	75.861
3	Bank of Baghdad	73.620
4	National Bank of Iraq	54.786
5	Iraqi Middle East Investment Bank	53.353
6	Ashur International Bank	49.236
7	North Bank for Finance & Investment	47.827
8	Dijla & Furat Development & Investment Bank	45.068
9	Cihan Bank Islamic Investment and Finance	43.690
10	National Islamic Bank	41.308
11	Economy Bank for Investment	30.218
12	Investment Bank of Iraq	28.662
13	Summer Commercial Bank	26.083
14	Al-Mansour Bank for Investment	24.831
15	Al-Bilad Islamic Bank for Investment & Finance	23.502
16	Dar El-salam Investment	22.581
17	Babylon Bank	19.693
18	Iraqi Islamic Bank for Investment	18.898
19	Elaf Islamic Bank	11.957
20	Summer Commercial Bank	11.479
21	Mosul Bank for Finance & Investment	7.197
22	Unites Bank for Investment	4.071
23	Commercial Bank of Iraq	1.798
24	Credit Bank of Iraq	1.074
<i>Service sector</i>		
25	Mustafa Abbas for Auditing	8.605
26	Baghdad Hotel	6.884
27	Mamoura Real Estate	6.224
28	Mansour Hotel	4.959
29	Ahmed Al-Juboori for Auditing Services	3.353
30	Iraqi Land Transport	2.795
31	Ishtar Hotels	2.775
32	Palestine Hotel	2.530
33	Iraq Baghdad for General Transportation	2.322
34	Babylon Hotel	1.243
35	National for Tourist Investment	1.163
36	Tourist Village of Mosul Dam	0.944
37	Karkh Tour Amusement City	0.689
38	Al-Badia for General Trans	0.360
39	Iraqi for General Transportation	0.151
40	Al-Nukhba General Construction	0.045
<i>Telecommunication sector</i>		
41	Asia cell for Telecommunication	1,418.272
42	Zain Iraq for Telecommunication	1,214.125
43	Korek Telecom	938.896
44	EarthLink for Internet serves	683.552
45	Scope of sky Communication	523.748
46	Horizon Company	230.643
47	Alkafeel Omnea company	115.585
<i>Manufacturing sector</i>		
48	Baghdad Soft Drinks	264.993
49	Iraqi Date Processing and Marketing	5.356
50	National Chemical & Plastic Industries	2.382
51	Al-Mansour Pharmaceuticals Industries	2.282
52	Modern Paint industries	1.966
53	Electronic Industries	1.850
54	Ready-Made Clothes & General Trading	1.140
55	Iraqi for Tufted Carpets	0.894
56	The Light Industries	0.862
57	Al-Kindi of Veterinary Vaccines	0.847
58	Modern Sewing	0.788
59	Al-Hilal Industries	0.758
60	Modern Construction Materials Industry	0.625
61	Metallic Industries and Bicycles	0.275
62	Iraqi Engineering Works	0.137
63	Iraqi Company for Carton Manufactories	0.131
64	Baghdad for Packing Materials	0.116
65	Modern Chemical Industries	0.024

Source: Iraq Stock Exchange (ISX), 2017.

Table A.2. The sample from the four sectors

	<i>Sector</i>	<i>Name of the company</i>
1	Bank	Kurdistan International for Investment & Development
2	Bank	Bank of Baghdad
3	Bank	National Bank of Iraq
4	Bank	Iraqi Middle East Investment Bank
5	Bank	Ashur International Bank
6	Service	Mustafa Abbas for Auditing
7	Service	Baghdad Hotel
8	Service	Mamoura Real-estate
9	Service	Mansour Hotel
10	Service	Ahmed Al-Juboori for Auditing Services
11	Telecommunication	Asiacell for Telecommunication
12	Telecommunication	Zain Iraq for Telecommunication
13	Telecommunication	Korek Telecom
14	Telecommunication	EarthLink for Internet serves
15	Telecommunication	Horizon Company
16	Manufacturing	Baghdad Soft Drinks
17	Manufacturing	Iraqi Date Processing and Marketing
18	Manufacturing	National Chemical & Plastic Industries
19	Manufacturing	Al-Mansour Pharmaceuticals Industries
20	Manufacturing	Electronic Industries