

CHAPTER I

INTRODUCTION

1.1 Background of the Problem

Over the past two decades, intangible assets have come into the spotlight as the most influential assets that play an important role in the creation of corporate value in order to strengthen the company's competitive advantage. Intangible assets are considered critical in most organizations, they contribute significantly to a company's success and play a substantial role in the strategic management process (Steenkamp and Kashyap, 2010). The significant role of intangible assets of the firm have been supported by Vodak (2011) who stated that intangible assets represents up to 80 percent of the corporate value.

A significant shrinking of corporation's book value in relation to market value has been triggered the recognition of the value of corporation's intangible assets. Lev & Daum (2004) captured that the book value and value of intangibles of S&P 500 companies have been reversed during 1982 till 1992 with the value of intangibles increased from 38 to 62 percent and opposite direction for the book value. It signified that corporate market value has not been fully reflected in financial reporting. With the same context Cheng et al. (2012) argue that the limitation of financial reporting in defining firm value emphasize the fact that the source of economic value is no longer the production of material goods, but the creation of intellectual capital.

In today's business environment, in which economy is driven by information and knowledge, intellectual capital is assumed as one of the most critical factors that bring about development and competitiveness in organizations (Abdulaali, 2018). According to (Petty and Guthrie, 2000, p. 157) there are four reasons that could specifically explain the importance of intellectual capital, as follow:

- the revolution of information and technology
- the rising importance of knowledge and knowledge-based economy
- the changing patterns of interpersonal activities and network society
- the emergence of innovation as the principal determinant of competitiveness

The term of “Intellectual Capital” was firstly introduced by Stewart in 1991 which identifies IC as the “brainpower” of the firm (Dumay, Guthrie and Rooney, 2020). Intellectual Capital (IC) is defined as “the sum of all intangible and knowledge-related resources that an organization is able to use in its productive processes in the attempt to create value” Kianto et al. (2014, p. 364). The more complex definition is stipulated in (Dumay, 2016, p. 2) which define IC as “the collection of intangible resources, knowledge, experience, and intellectual property that an organization, community, country or society has and uses to create economic, utility, social and environmental value”. In different way, Pulic (2008) was emphasized the necessity to explain the distinction between knowledge and intellectual capital. He argues that not every knowledge that company possess could be identifies as intellectual capital, only such knowledge that can be transformed into value identifiable on the market, or in other words, into benefits the customer pays for are becomes intellectual capital. IC could be classified as human capital, structural capital and relational capital (Kannan and Aulbur, 2004; Kaya, Sahin and Gurson, 2010; Mahmood and Mubarik, 2020).

Human capital is the cumulative value of investments in employee training, competence, and potential opportunities (Kannan and Aulbur, 2004). Human capital combines employee competencies to address challenges for clients, vendors, and the company (Mahmood and Mubarik, 2020). This resource consists of all of the employees' individual talents, mutual knowledge, general know-how, and management expertise. Human capital is the source of intellectual capital's lifeblood (Kaya, Sahin and Gurson, 2010). It is the root of new ideas and improvements.

Moreover in today's knowledge economy, knowledge worker is treating as investment not cost anymore. Employees are the carriers of knowledge, which is the crucial substance of products and services (Pulic, 2008). They are main value creators of contemporary economy.

Structural capital refers to supportive infrastructure that allows the rest of an enterprise to operate in a repeatable and scalable manner (Kannan and Aulbur, 2004). It is owned by a company and stays with the company even though employees leave. Processes, records, structures, designs, and expertise are all examples of structural capital. It also comprises of intellectual property that qualify for special legal protection such as Patents, trademarks, copyrights, and trade secrets. Structural capital (SC) is the procedures and systems that an enterprise uses to carry out its business transactions. These mechanisms vary from tangible and intangible items provided by the company, such as copyrights, patents, software systems, databases, processes and trademarks, transparency, organizational culture, employee trust, and performance (Mahmood and Mubarik, 2020).

Relational capital is defined as the combined value of relation with customers, suppliers, industry associations and markets. It also refers to issues like trust and understanding and the strength and loyalty of customer relations, which encompasses customer satisfaction, repeat business, financial well-being, and price sensitivity (Kannan and Aulbur, 2004). Relational capital is defined by the organization's credibility and consumer loyalty (Mahmood and Mubarik, 2020). It is linked to the organization's external relationships with its vendors, partners, and clients. In this context, relational or social capital is described as the bond created by organizational relationships with stakeholders, which has an effect on the organization's lives.

One of methodologies that widely used by IC literature in evaluating the efficiency of firm's intellectual capital is Value Added intellectual Capital (VAIC) model proposed by Pulic (2000). The VAIC model deviates from an investment-

based approach that uses financial statement information with the understanding that all expenses related to intellectual capital are define as an investment, not a burden. This model is useful for assessing IC and distinguishing organizational features. The model combines capital employed efficiency, human capital efficiency, and structural capital efficiency, allowing for comparative analysis across firms, sectors, industries, and countries (Oppong and Pattanayak, 2019). VAIC provides quantifiable, objective, and quantitative measurements that can be applied without the use of subjective grading or scores or the use of judgment scales (Phusavat *et al.*, 2011).

Productivity is an important yardstick of economic performance. Productivity is a key indicator of a company's efficiency in utilizing production factors. Productivity defined as an economic unit's ability and willingness to produce the maximum possible output with given inputs and technology (RBI, 2008). High productivity leads to greater profits for business and greater income for individuals. Productivity is always being the primary concern of business management; they are constantly looking for ways to improve firm productivity, whether through formal programs, changing operating methods, or adopting new technologies and knowledge in order to maintain its competitiveness.

According to Yallwe and Buscemi (2014) Intellectual capital have a significant contribution to productivity that supports the future competitiveness of the firm. It also be a conceptual model for restoring sustainable growth in elevated economies seriously affected by the global crisis, as well as IC essential role in enhancing organizational performance and value creation dynamics (Lerro, Linzalone and Schiuma, 2014). It is widely acknowledged that the dynamics of value creation are the result of continuous improvement in organizational performance. To improve performance, an organization must optimize its effectiveness and efficiency that involves the ability to design, implement, manage, and develop organizational processes. This is only feasible through continuous improvement of organizational

competencies which are rooted in the organizational knowledge assets that comprise the organizations' IC.

Recent studies have established the importance of intellectual capital and its relevance on performance and value creation of organization (Mrázková, Peržel'ová and Glova, 2016; Xu and Liu, 2020; Weqar *et al.*, 2021), especially for those that are define as knowledge intensive industries (Oppong and Pattanayak, 2019; Nazir, Tan and Nazir, 2020). Banks as service firms have been classified as knowledge intensive sectors (OECD, 2001). It is due to banking operation that involve close interaction between employees and customers, and heavily rely on the integration of information and communication technologies in developing and delivering their products and services. Cabrita *et al.* (2017) suggest that IC has important role in banking operations that determines the quality of services provided to its customers, and the importance of IC also leveraged by increasing complexity and more liberal environment where the banks are currently operating in, that makes the competitiveness depends critically on the quality of firm's IC and its ability to maximize those resources. Therefore, the recognition and development of IC is become the fundamental aspects of bank management.

Empirical studies have found evidence to support the role of intellectual capital in define performance and create competitive advantage in the banking industry. Using a large sample of 5,749 US commercial banks, Meles *et al.* (2016) found that efficiency in the use of Intellectual Capital (IC) positively affects the financial performance of the firms with human capital efficiency is found to have a larger impact on financial performance than other IC sub-components. Mondal and Ghosh (2012) investigate empirically the relationship between intellectual capital and profitability and productivity of 65 Indian banks for a period of ten years from 1999 to 2008. Using VAIC model in measuring IC efficiency, this study found that IC positive and significantly affects banks profitability (measured by return on asset and

return on equity) and bank productivity (measured by asset turnover). This study suggests that intellectual capital is vital for bank's competitive advantage.

Acting as financial intermediaries, banks have a crucial role in stimulation and promoting the economic growth. Banks play an important role in the re-allocation of funds from surplus spending-units to deficit- spending units. In Indonesia, according to Ministry of Cooperatives and SMEs more than 50% of GDP of the country is contribute by small and medium business sector, in which in its establishment and development cannot be separated from support of banking services, since they have limited and un-sufficient capital to start their business. This means that bank productivity is an important element in the development of Indonesia economy. Aside from this, the raising of SMEs in Indonesia also increases the need of advanced financial services, so it can accommodate complex and dynamic transaction.

Because of these drawbacks, Indonesia's banks need to be technologically sound and be more innovative which enable them in providing the best services in the way to maintain its competitive advantage in today constantly changing environment. To do so, banks have to maximizing the utilization if its intellectual capital, so it can enhances productivity and create the greatest value of the firm. According to Oppong and Pattanayak (2019) banks' potential in sustaining its competitive advantage is relies on the investment and efficient utilization of intellectual capital. That's why it is so important to examine how investment on IC influenced productivity of commercial banks in Indonesia.

Previous studies have demonstrate the relevance of IC in enhancing firm productivity (Ahangar, 2011; Komnencic, Tomic and Pokrajcic, 2011; Phusavat *et al.*, 2011; Mondal and Ghosh, 2012; Smriti and Das, 2018; Nazir, Tan and Nazir, 2020; Xu and Liu, 2020; Buallay, Abuhommous and Kukreja, 2021; Weqar *et al.*, 2021) which empirically tested for different firms, industries, sectors, and countries. However, only few studies (Khairiyansyah and Vehtasvili, 2018; Soewarno and

Tjahjadi, 2020) have been undertaken to examine the influence of IC on banking productivity in Indonesia. Also the existing studies did not employ both of the main productivity measures, employee productivity and assets turnover, to assess the effects of IC on commercial bank productivity in Indonesia. Hence, this study attempts to fill this existing gap in the literature by assessing the influence of IC on bank productivity using panel of Indonesia listed commercial bank with the application of VAIC model.

1.2 Problem Formulation

Based on the background of the problems described above, the problem formulations to be examined is, does investing in intellectual capital influence productivity of commercial banks listed on Indonesia Stock Exchange?

1.3 Research Objective

The objective of this study is to determine the effects of intellectual capital and its elements on firm productivity.

1.4 Research Benefits

The result of this study are expected to provide benefits to the authors himself and various parties, also contributes to the existing published literature and knowledge defined previously in the field. Firstly, because only few study that observe the effects of IC on banks productivity in Indonesia, this study is expected to broaden the understanding of intellectual capital vital role in enhancing firm performance especially on banking fields in Indonesia. Secondly, the result of this study are expected to be an input and consideration for banking companies in Indonesia to pay attention on effective and efficient utilization of intellectual capital to improve its productivity as well as to strengthening its competitiveness.

1.5 Writing Systematics

This research is divided into the following chapter:

Chapter 1 – Introduction

This part will describes background of the study, problem formulation, research objectives, research utility and writing systematics.

Chapter 2 - Literature Reviews

This chapter contains the theories, previous studies, theoretical frameworks and hypotheses. The theories and the relevant literatures will be used as the basis to construct and formulated the hypotheses, as well as materials for the argument in the discussion of the problem.

Chapter 3 – Research Methodology

This section describes the methods used in research by providing an explanation of the variables in the study, population and sample, data collection sources and methods, and data analysis techniques.

Chapter 4 - Research Results and Discussion

This chapter will discuss the description of the research object, data analysis, interpretation of the results and arguments for the results obtained in accordance with the techniques used.

Chapter 5 – Closing

It contains an explanation of the conclusions, limitations of the study, and suggestions from this study for interested parties.

