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INTELLECTUAL CAPITAL PERFORMANCE OF REGIONAL DEVELOPMENT BANKS IN INDONESIA

Abstract

Studies related to intellectual capital, particularly in banking sector, are basically focused on the relationship between intellectual capital performance and bank performance. In contrast to previous studies, this study analyzes the intellectual capital performance of regional development banks throughout Indonesia to develop performance through management of efficiency and productivity. The population and sample in this study consist of 26 regional development banks in Indonesia for the period 2007–2013. The management of efficiency is measured using the ratio of operating expense to operating income (BOPO), while the management of labor productivity is measured using the ratio of labor expenses to total operating expense and income level. At the theoretical level, this study is expected to fill the gap for the assessment of intellectual capital performance of banking institutions with unique characteristics such as regional development banks. To analyze intellectual capital performance, VAIC™ method developed by Pulic (1998, 2000, 2004, 2008) is applied. The findings show that the intellectual capital performance of regional development banks is in the category of common performers. Finally, regional development banks need to focus on the importance of strengthening intangible resources directly affecting banking management in terms of strengthening information technology, positioning, and management competence, as well as organizational culture and working climate.

Keywords	intellectual capital, bank efficiency, bank productivity, Value Added Intellectual Capital Coefficient (VAIC™) model
JEL Classification	G21, O34

INTRODUCTION

The Law on the Banking of the Republic of Indonesia No. 10 of 1998 positions regional development banks as commercial (private) banks carrying out business activities conventionally and/or based on sharia principles in order to provide services in the traffic of payment. In principle, regional development banks have scope of business similar to other commercial banks, both state-owned and private commercial banks. However, compared to other commercial banks, regional development banks have their main duties and functions specifically regulated in the Regulation of the Minister of Home Affairs of the Republic of Indonesia No. 62 of 1999 (Umanto, Wijaya, & Atmoko, 2015b). The main duties of regional development banks are to develop the economy and to drive regional development, while their main functions are (1) to encourage regional economic growth and development in order to improve the living standards of the community, (2) to act as regional cash holders or to save regional funds, and (3) to act as a source of locally generated revenue. In this case, regional development banks are positioned as a regional-owned enterprise with dual role. This dual role generates problems which are then identified as conflicting objective in the management of state owned (Wong, 2004; Wicaksono, 2009; Umanto, Wijaya, & Atmoko, 2015a).

The first role serves as the regional cash holder or the source of regional revenue, while the second role serves as a regional-owned enterprise playing a strategic role in providing financial products and services needed by the community. On the one hand, the dual role provides a significant role for regional development banks in driving the potential for regional or local economic growth and investment. This opinion is also based on the findings of the previous studies about the importance of the development of local financial institutions (particularly regional banking) to regional economic growth (Jayaratne & Strahan, 1995; Guiso, Sapienza, & Zingales, 2002; Burges & Pande, 2005; Hasan, Wachtel, & Zhou, 2006; Kendall, 2012). Meanwhile, in a more micro context, Ali (2017) places the importance of community banking as a microfinance institution that can accelerate the process of social networking within the framework of community empowerment.

However, on the other hand, the dual role of regional development banks causes limited capacity in resource management. This condition eventually leads to low capacity to innovate in terms of products, services, and networks; low productivity of human resources; and low utilization of information technology in supporting services.

It is an interesting condition to study, considering that regional development banks in Indonesia are encouraged to become regional champion banks. In this context, regional development banks are positioned as an institution encouraged to carry out the process of value creation as the basis for developing a competitive advantage (Andrews, 1987; Marr & Ross, 2005). The objective is to respond to changes in the external environment (both from competitors and customers) by relying on strengthening internal resources and organizational capabilities (Marr & Roos, 2005, p. 28).

The process of value creation is affected by the capability of an organization to manage not only tangible resources, but also intangible resources. Tangible resources and intangible resources are complementary because they are indispensable in an organization, although in its development, intangible resources have a strategic role for the organization. Roos and Roos (1997), Sveiby (1997), Marr, Schiuma, and Neely (2004), and Marr and Roos (2005) identify intangible resources in the form of intellectual capital. Intellectual capital consists of human capital, structural capital, and relational capital (Pulic, 1998, 2000, 2004, 2008; Bontis, 1996, 1998, 1999; Roos, Roos, Dragonetti, & Edvinsson, 1997; Edvinsson & Malone; 1997; Saint-Onge, 1996; Ungerer & Uys, 2005a, 2005b).

Intellectual capital is later positioned as leverage in increasing organizational capability toward competitive advantage (Saint-onge, 1996; Sveiby, 1997; Keenan & Aggestam, 2001). In its development, performance measurement of intellectual capital becomes one of the important measurements to assess the performance of an organization. This measurement is generally carried out by comparing the value of output (out) with input (in).

Studies related to intellectual capital, particularly in banking sector, are basically focused on the relationship between intellectual capital performance and bank performance or bank profitability, such as studies carried out by Mavridis (2004), Mavridis and Kyrmizoglou (2005), Yalama and Coskun (2007), Mondal and Ghosh (2012), Mention and Bontis (2013). In contrast to these studies, the current article focuses on analyzing intellectual capital performance of regional development banks in Indonesia, such as studies carried out by Goh (2005), Kamath (2007), Ulum (2008), Joshi, Cahill, and Sidhu (2010), and Karol (2013). At the theoretical level, this study is expected to fill the gap for the assessment of intellectual capital performance of banking institutions with unique characteristics such as regional development banks. It is interesting considering that the analysis is focused on the management of efficiency and labor productivity as an indicator to assess the performance of banks. The management of efficiency is measured using a ratio of operating expense to operating income (BOPO), while the management of labor productivity is measured using a ratio of labor expenses to total operating expense and income level. In addition, to deepen the analysis, this study also investigates the relationship between intellectual capital performance and efficiency as well as core capital of bank. It is expected to provide a deep analytical space concerning the sustainability of banking in the future.

1. THEORETICAL FRAMEWORK

1.1. The concept of intellectual capital

Intellectual capital is positioned to have an important role for an organization when Thomas Stewart (1991) wrote an article in Fortune Magazine entitled "Brain Power – How Intellectual Capital Is Becoming America's Most Valuable Asset". Stewart (1991) positions intellectual capital as a form of accumulated knowledge of individuals in an organization in the form of patent, management process, management capability, technology, information about consumers and suppliers, and past experiences. Such accumulation of knowledge may serve as a source for achieving competitive advantage.

Edvinsson and Sullivan (1996, p. 358) define intellectual capital as a collection of organized knowledge that can provide value for a company. Intellectual capital is also positioned as an intangible asset with an important role to create value of a company. In line with that opinion, Brooking (1996, p. 25) positions intellectual capital as an accumulation of intangible assets (consisting of market asset, human-centered asset, intellectual property asset, and infrastructure asset) playing an important role in the operation of a company. Meanwhile, Roos, Pike, and Fernstroom (2005, p. 19) define intellectual capital as a collection of non-monetary and non-physical resources that is wholly or largely under the control of a company and contributes to the process of value creation. In the end, Martinez-Torres (2006) positions intellectual capital as an unrecorded intangible asset in the financial statements even though its value reaches almost 80% of the market value of a company.

In its subsequent development, intellectual capital is positioned as a gap between firm market value and book value of a firm equity (Bontis, 1996; Sveiby, 1997; Edvinsson & Malone, 1997). It emphasizes that book value is different from market value. This distinction is based on the assumption that market value considers a company's growth in the future. Investors consider the fundamental aspect of a company to determine whether market

value is lower or higher than the current book value. In this case, book value is positioned as the net asset value of a company, representing the difference between total assets minus total intangible assets (patent, goodwill, etc.) and total liabilities of the company.

These definitions eventually posit the important role of intellectual capital for a company or an organization. This study identifies several important roles of intellectual capital, namely a driver for performance improvement and value creation of an organization (Itami & Roehl, 1987; Teece, 2000; Marr, Schiuma, & Neely, 2004; Roos, Pike, & Fernstron, 2005), as leverage for the success of an organization in the future (Edvinsson & Sullivan, 1996, pp. 358-360), as an instrument for value creation of a company and creation of national economic performance (Petty & Guthrie, 2000), as a key resource and driver for improving performance and value of a company (Marr & Roos, 2005, p. 28), and as a driver for value creation of a company and how it can be maintained (Roos, Pike, & Fernstroom, 2005, p. 19).

1.2. Performance measurement model of Intellectual Capital (Value Added Intellectual Capital Coefficient – VAIC™

Value Added Intellectual Capital Coefficient (VAIC™) model is developed by Pulic (1998, 2000, 2004, 2008). VAIC™ describes total value added by comparing the output (out) with the input (in) managed by a company. This study applies VAIC™ because this method is considered more objective and verifiable since it uses audited and published financial data of a company (Pulic, 1998, 2000, 2004, 2008; Firer & Williams, 2003). It is in line with the opinion of Pike, Rylander, and Roos (2002, p. 660) that the measurement method of intellectual capital must meet four criteria: (1) it is auditable and reliable, (2) it does not impose a large measurement overhead, (3) it facilitates strategic and tactical management, and (4) it generates the information needed by shareholders and investors. Firer and Williams (2003) add that VAIC™ provides a standardized and consistent measurement basis allowing comparison between countries or companies.

In addition, Pulic prioritizes the use of VAIC™ because: (1) it is an indicator that can show the ability of a company to achieve its business objectives, particularly related to the improvement of welfare for stakeholders (Pulic, 2004), (2) this method can show the ability of the company to create value including investments in new resources, payroll, and interest on financial assets, dividend payments, tax payments and investments in the development of the company; and (3) it shows the new value of monetary unit investment in the resources of the company (Pulic, 2008). In this case, the higher the coefficient of VAIC™, the better the intellectual capital of a company in creating value for its stakeholders. VAIC™ can be utilized by stakeholders (management, shareholders, or other related parties) to actively monitor the value added of the company in utilizing resources particularly related to the elements of intellectual capital in the form of human capital and structural capital.

In the calculation of VAIC™, there are two related components, namely (Pulic, 2000, 2008):

1) Intellectual Capital Efficiency (ICE). ICE shows the efficiency of intellectual capital consisting of two components, namely Human Capital Efficiency (HCE) and Structural Capital Efficiency (SCE). HCE is an indicator used to measure the efficiency of human capital. In this case, HCE is a ratio showing the value added produced by human capital. Pulic (1998, p. 10) states that HCE represents the value added generated from every $1 of labor expense incurred by a company. It means that human capital is total labor expenses incurred by a company. Meanwhile, SCE is an indicator used to measure structural capital. Structural capital is the difference between value added and human capital. It means that the greater the human capital (labor expenses) is, the smaller the proportion of structural capital in a company will be (Pulic, 2000, p. 4). Therefore, Structural Capital Efficiency (SCE) is a ratio showing the total structural capital generated from each unit of value added (VA).

2) Capital Employed Efficiency (CEE). CEE shows the efficient use of corporate capital in the form of financial capital and physical capital. In this case, CEE is a ratio showing value added that can be generated by every one unit of physical capital and financial capital incurred by a company (Pulic, 1998, p. 9). The use of physical capital and financial capital is still felt important for a company because intellectual capital cannot work alone in creating the efficiency of added value of a company.

2. METHODS

This study applies VAIC™ model to measure intellectual capital performance of regional development banks in Indonesia. In this study, total value added is posited as an indicator to provide an assessment of the ability of regional development banks to create value (value creation) by comparing total output (out) and total input (in). The output presents gross income of the banks including interest income, insurance income, and other income generated by them. Meanwhile, the input presents the total expenses incurred to generate income. Input (in) in this study is represented as interest expense, insurance costs, and other expenses incurred (not including employee cost). Employee costs or labor expenses are not included as input because they are not categorized as corporate expenses but rather as a form of investment for the development of a company (Pulic 1998, p. 9; Pulic, 2008, p. 7).

The equations used to measure VAIC™ are (Pulic, 2008):

- VAIC™ = ICE + CEE $\qquad$ (1)

- ICE = HCE + SCE $\qquad$ (1a)

- VA = Output (Out) – Input (In) $\qquad$ (2)

- CEE = VA/CE $\qquad$ (3)

- HCE = VA/HC $\qquad$ (4)

- SCE = SC/VA $\qquad$ (5)

where HCE – an indicator used to measure the efficiency of human capital, CEE – an indicator used to measure the efficiency of capital employed or physical and financial capital, SCE – an indicator used to measure structural capital, ICE – an in-

dicator used to measure the efficiency of intellectual capital. ICE consists of two indicators, namely human capital efficiency and structural capital efficiency, VAIC™ – value added intellectual coefficient, Output – total gross income of banks including interest income, insurance income, and other income generated by the banks, Input – interest expense + insurance cost + other expenses (not including employee cost), HC – human capital of the business = total employee cost = total salary and wages incurred by the company, CE – available funds (equity and net profit) or book value of the net assets for firm, SC – VA – HC, VA – value added (Pulic, 2008).

After assessing the performance measurement of intellectual capital using VAIC™ method, this study categorizes regional development banks based on the categorization developed by Kamath (2007) (see Table 1).

Table 1. VAIC™ scoring categorization

Category	VAICTM Score
Top performers	Above 5
Good performers	Between 4 and 5
Common performers	Between 2.5 and 4
Bad performers	Below 2.5

This study applies total sampling. The population and sample in this study consist of 26 regional development banks in Indonesia. This study uses quantitative data consisting of financial statements and annual reports of regional development banks over the period 2007–2013.

Quantitative data analysis is carried out using univariate analysis and crosstab tabulation. Univariate analysis is carried out using central tendency and dispersion in terms of mean, median, mode, standard deviation, and variance. Meanwhile, crosstab tabulation is carried out to explain the relationship between intellectual capital performance and efficiency as measured by the ratio of operating expenses to operating income (BOPO) as well as the relationship between intellectual capital performance and the bank's core capital.

3. RESULTS AND DISCUSSION

3.1. Results

Table 2 shows the descriptive statistics of intellectual capital performance (VAIC™) and its three constituent components, namely: (1) Human Capital Efficiency (HCE), (2) Structural Capital Efficiency (SCE), and (3) Capital Employed Efficiency (CEE).

Table 2. Descriptive statistics of intellectual capital performance

Descriptive statistics	HCE	SCE	CEE	VAIC
Mean	2.5591	.5850	.4917	3.6359
Median	2.4007	.5834	.4730	3.4964
Mode	1.5040a	.5328a	.4235a	2.4042a
Std. deviation	.7060	.0950	.1218	.7680
Variance	.499	.009	.015	.590
Minimum	1.5040	.3351	.2442	2.4042
Maximum	6.1387	.8371	.9130	7.3446

Based on the findings of the data presented in Table 2, the following points can be analyzed:

1. Human Capital Efficiency (HCE). The mean of HCE is 2.5591 and the mode is 1.5040. It indicates that every \$1 incurred by regional development banks in the development of human capital will result in total value added of \$ 2.5591.

2. Structural Capital Efficiency (SCE). The mean of SCE is 0.5850 and the mode is 0.5328. It indicates that every \$1 of total value added generated by the development of human capital has the potential to increase structural capital by \$ 0.5850.

3. Capital Employed Efficiency (CEE). The utilization of each \$1 of physical capital and financial capital will potentially generate value added of \$ 0.4917.

4. Value Added Intellectual Capital (VAIC). The mean of intellectual capital performance is 3.6359 and the mode is 2.4042. It indicates that every \$1 of input used will result in total output of \$ 3.6359. This value is greater than the mean of VAIC™ of the banking industry in

Table 3. The mean of intellectual capital performance of regional development banks

Year	HCE	SCE	CEE	VAICTM	Category
2007	2.6425	0.5879	0.5149	3.7454	Common performers
2008	2.5373	0.5801	0.5524	3.6698	Common performers
2009	2.5400	0.5788	0.5279	3.6467	Common performers
2010	2.7198	0.5953	0.5184	3.8336	Common performers
2011	2.5001	0.5827	0.4691	3.5520	Common performers
2012	2.4187	0.5734	0.4333	3.4254	Common performers
2013	2.5552	0.5969	0.4262	3.5785	Common performers

Japan (Mavridis, 2004) and in Poland (Karol, 2013). However, this value is lower when compared to the average performance of banking in India in the period of 2000–2004 (Kamath, 2007) and all Australian owned banks in the period 2005–2007 (Joshi, Cahill, and Sidhu, 2010). Based on the categorization developed by Kamath (2007), the findings posit intellectual capital performance of regional development banks in Indonesia in the category of common performers. It is basically similar to the finding of a study by Kamath (2007), Joshi, Cahill, and Sidhu (2010), and Karol (2013).

5. If comparing the values of HCE, SCE, and CCE, then all regional development banks in Indonesia have relatively higher HCE than SCE and CCE indicators. This indicates that the performance of the regional development banks in Indonesia in the period 2007–2013 in terms of CCE and SCE has little or no impact on the intellectual capital performance.

The highest value of intellectual capital performance of regional development banks was achieved in 2010 (3.8336) while the lowest was achieved in 2012 (3.4254). Meanwhile, the value of intellectual capital performance in 2013 is 3.5785. However, when analyzed further, there is a common thread that the value of intellectual capital performance of regional development banks is in the category of common performers. Table 3 shows changes in intellectual capital performance.

4. DISCUSSION

In general, intellectual capital performance of regional development banks is in the category of common performers (Umanto, Wijaya, & Atmoko, 2015b). However, when analyzed per bank, there is one regional development bank (4%) in the category of top performers, three regional development banks (12%) in the category of good performers, and 22 regional development banks (84%) in the category of common performers. Figure 1 shows the category of intellectual capital performance of regional development banks.

In the context of banking industry, regional development banks have not been able to manage efficiency as measured using the ratio of operating expenses to operating income and labor productivity as measured using the ratio of labor expenses to total operating expenses and income level. Indonesia banking statistics of December 2014 show that operating expenses of regional development banks are higher than operating income compared to average banking sector in Indonesia. Figure 2 shows the ratio of operating expenses to operating income of commercial banks for 2013–2015.

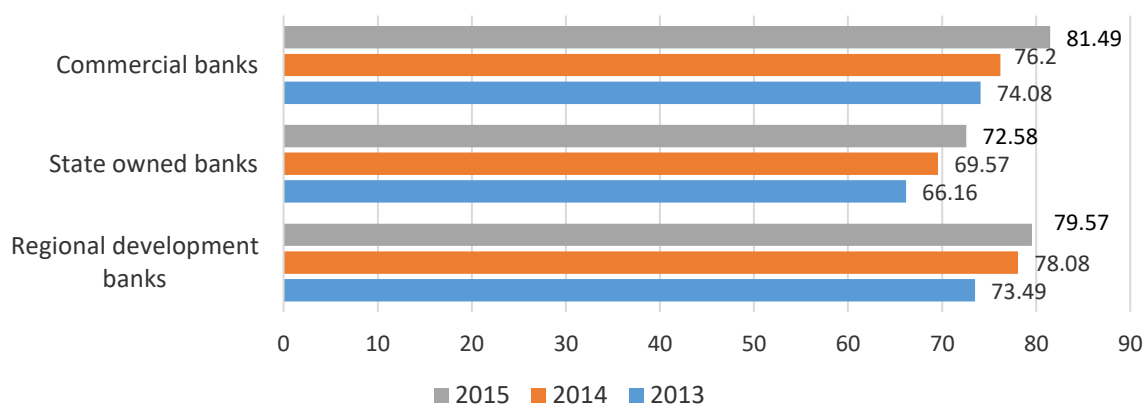**Figure 1.** Rating of intellectual capital performance

Figure 2. The ratio of operating expenses to operating income of commercial banks

The data in Figure 2 show that regional development banks are still less efficient in terms of management of input (in) into output (out). This study identifies two things that cause the condition. First, the high cost of funds. Cost of funds is sourced from high interest to attract inexpensive funds from the community. Regional development banks offer higher interest rates compared to the average industries and state-owned banks.

Table 4. Average of interest rate of third party funds

Product		Commercial banks	State owned banks	Regional development banks
Demand deposit	Rupiah	2.31%	2.13%	2.47%
	Foreign exchange	0.46%	0.18%	0.50%
Saving	Rupiah	2.02%	1.48%	2.18%
	Foreign exchange	0.35%	0.23%	0.57%

Second, there is lack of human resource capabilities, particularly related to the ability to carry out banking and manage business risks of the banks, both operational and non-operational risks. In the context of banking, human resource capabilities have a strategic role mainly related to banking service. It is a challenge to improve the capabilities of regional development banks in carrying out intermediation function, particularly in extending credit, primarily productive credits (working capital credit and investment credit) and credits for micro, small and medium enterprises. Eventually, this condition affects the ability of regional development banks as an agent of regional development. This reasoning

is based on the assumption that the competence of human resources owned by regional development banks is not fully able to handle productive loan. It eventually leads to high operating expenses due to the obligation to establish loss reserve. This is apparent from the amount of non-performing loans (NPL) of regional development banks compared to NPL of commercial banks. In 2014, NPL of regional development banks amounts to 3.45%, while NPL of commercial banks amounts to 2.16%. High NPL indicates that there is an issue of uncollected credit on the regional development banks. If the area of analysis is narrowed on the quality of Micro, Small, and Medium Enterprise crediting, it can be said that regional development banks have issues related to the amount of non-performing loans (NPL). In the period from 2011 to 2014, the average NPL is 6.77%. Meanwhile, in the same period, NPL of commercial banks and state owned banks respectively amounts to 3.59% and 3.69%. In 2014, 19 regional development banks have NPLs above 5%. It indicates that in general regional development banks encounter issues in terms of quality of loan that in turn affects the quantity of credit distribution. It means that loan tends to be imposed on an attempt to meet the provisions required by the Central Bank. However, it is not balanced by the application of the principles of prudential banking, the preparedness of human resources, the readiness of information technology and standard operating procedures as the basic provisions in the Micro, Small, and Medium Enterprise crediting.

If related to the ratio of operating expenses to operating income, this study identifies that regional

Table 5. Crosstab tabulation of ratio of operating expenses to operating income with ratings of intellectual capital performance

| | | | Ratings of intellectual capital performance | | | Total |
			Common performers	Good performers	Top performers	
BOPO level	High BOPO	Count	9	0	0	9
		% within BOPO Level	100.0%	.0%	.0%	100.0%
	Medium BOPO	Count	9	0	0	9
		% within BOPO Level	100.0%	.0%	.0%	100.0%
	Low BOPO	Count	4	3	1	8
		% within BOPO Level	50.0%	37.5%	12.5%	100.0%
Total		Count	22	3	1	26
		% within BOPO Level	84.6%	11.5%	3.8%	100.0%

development banks with a lower ratio have better intellectual capital compared to regional development banks with a high ratio. This perspective is based on the assumption that intellectual capital reflects total value added as an indicator representing the level of productivity. Total value added provides an assessment of the ability of regional development banks in creating value (value creation) by comparing output with all the resources used (input).

The results of crosstab tabulation analysis in Table 5 show that the efficient regional development banks with low ratio of operating expenses to operating income have a rating of intellectual capital in the category of top performers (12.5%), good performers (37.5%), and common performers (50%). Meanwhile, regional development banks

with high and medium ratio of operating expenses to operating income have a rating of intellectual capital in the category of common performers (respectively 100%).

In the context of measuring labor productivity, this study applies the ratio of labor expenses to total operating costs and income level. The data show that the ratio of labor expenses to total operating costs in regional development banks amounts to 22.71% in the period of 2007–2013. It is still higher than the average industries (19.72%). On the other hand, the high ratio of labor expenses to total operating expenses is not followed by large growth of third party fund and loan. Indonesia banking statistics of December 2014 show that the average growth of third party funds in the last two years is 10.03% with loan growth of 17.51%. In the same
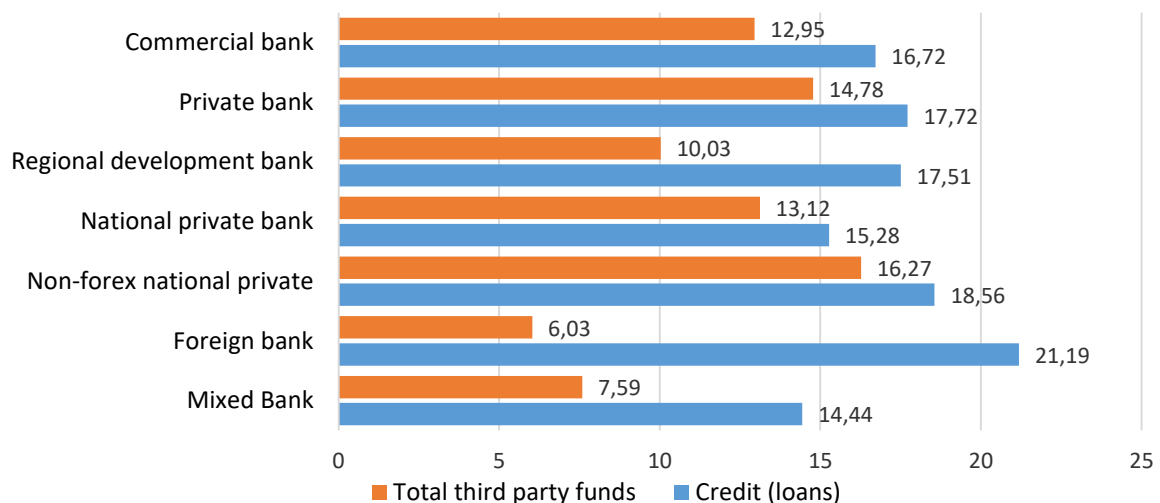
Figure 3. The growth of third party funds and loans

period, the average growth of third party funds of industries amounts to 12.95% with loan growth of 16.72%. It indicates that total labor expenses are not proportional to total third party funds and loan.

If associated with revenue growth of regional development banks, the data show that there are 10 regional development banks with the level for revenue still below the average of banking industries amounted to 15.25%. In fact, there are two regional development banks experiencing minus revenue of 11.06% and 8.55% respectively. This indicates that regional development banks have not been able to carry out efficiency in labor management. In this case, it can be said that there is an imbalance between the ability of human resources and operating expenses incurred. In that sense, in terms of labor expenses, regional development banks should be able to recruit higher quality human resources as other commercial banks. Therefore, the right business strategy in the management of human resources is required, mainly related to the achievement of the vision of becoming a champion in its own region.

These conditions are basically a portrait of the management of efficiency and productivity in regional development banks. Therefore, concrete measures are required to improve the performance of human capital, relational capital (customer capital), and structural capital as three main elements forming the intellectual capital reflected in the performance of VAIC™. In the aspect of human capital, regional development banks need to carry out transformation of human resources management oriented towards long-term planning and focused on the areas directly affecting the operational business activities of banking. It is eventually related to the optimization of the use of education and training funds of 5% (five percent) of the total labor expenses. In terms of relational capital, regional development banks need to build relationships with the external elements of the organization as well as with industries or associations to achieve the strategies related to customers and competitors. Synergy with the external environment is necessary since it directly affects the existence and management of regional development banks. Itami and Roehl (1987, p. 8) identify three components associated with the external environment, namely technology, competition, and customers. Similar opinion is also expressed by Edvinsson and Malone (1997), Sveiby (1997), and Bontis (1998) that identify the importance of the ability to interact with external stockholders consisting of customers, suppliers, competitors, industry associations and regulators. It eventually positions the importance of collaborative strategy amongst regional development banks as a measure to strengthen the positioning to face the competition in banking industries both nationally and internationally. Meanwhile, in the aspect of structural capital, regional development banks need to position the importance of strengthening ICT (Information, Communication, and Technology). This is in line with the opinion by Mention and Bontis (2013) and El-Bannany (2008).

CONCLUSION

The intellectual capital performance of regional development banks is in the category of common performers. Related to the aforementioned findings, regional development banks need to focus on the management of intellectual capital related to human capital, relational capital (customer capital), as well as structural capital. In the context of intellectual capital performance, it can be said that the three components of intellectual capital that consist of HCE (Human Capital Efficiency), CEE (Capital Employed Efficiency), and SCE (Structural Capital Efficiency) have an important role in improving banking performance. The emphasis lies on the management of human capital that is oriented towards long-term planning and disseminated knowledge. In addition, the development of human capital is directed to the creation of strategic positioned by preparing human resources that can collaborate within the organization and understand well the scope of its duties.

Strengthening these three aspects is needed as an effort to strengthen the intermediation function of regional development banks within the framework of regional economic development. Regional devel-

opment banks are expected to realize their function as agents of regional development of financial inclusion through increased lending to microfinance institutions, such as rural banks, market banks, or rural banks in sub-districts or villages located in remote areas that can't be reached by other commercial banks. Referring to the results of Ali (2017), regional development banks may play a role in broadening the main financial inclusion for the development of the informal sector in the context of community empowerment.

In conclusion, this study basically does not relate intellectual capital performance to bank performance, as Mavridis (2004), Mavridis and Kyrmizoglou (2005), Yalama and Coskun (2007), Mondal and Ghosh (2012), Mention and Bontis (2013). In this context, further study can be undertaken to analyze the correlation between intellectual capital performance and bank performance, mainly to answer the question about whether bank with good intellectual capital performance can produce good performance or vice versa? In addition, further research can also analyze the role of regional development banks in building community empowerment in regions, especially informal sectors that do not have access to formal financial institutions as initiated by Ali (2007).

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