

INTELLECTUAL CAPITAL DEVELOPMENT IN HIGHER EDUCATION IN INDONESIA

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***Abstract:** In the level of competition in the management of universities, Private Higher Educations are required to have a competitive advantage that can improve the performance, one of which is the presence of a high intellectual capital, which can provide more value for customers. This study aims to assess and analyze the intellectual capital of the private universities at Kopertis Region IV. This study is a qualitative-descriptive survey. The populations is private universities at Kopertis Region IV, while the samples is 157 private universities at Kopertis Region IV, which is obtained by using proportional probability sampling technique, where the sample size is determined using power analysis-power test approach. Data collected by observation, interview and questionnaire that have been tested for validity and reliability. Results of this study concluded that the private universities have a valuable intellectual capital, which means that private universities have a valuable human capital, sufficient quality of structural capital, and quite valuable customer capital, so that they have sufficient ability to provide more value for customers.*

***Keywords:** Intellectual Capital, Human Capital, Structural Capital, Customer Capital*

INTRODUCTION

Companies that succeed in competition and in achieving the benefits do not just rely on tangible assets, but also rely on intangible assets and intellectual capital, which are important indicators for the competitiveness of companies in the future (Kuang et al, 2010). Within the company, the creation of long-term competitive advantage can only be achieved by managing the resource asset, where intellectual capital becomes an important source and has significant impact to achieve business excellence (Marr, 2005; Bontis et al, 2000; Zhou and Dieter Fink, 2003). Currently, in the knowledge-based economy, intellectual capital is one of the most important things in the organization that can affect the performance of the organization (Balkaoui, 2003). This is also supported by Huseman and Goodman (in Lim and Peter Dallimore, 2004), who conducted research in 1999 to more than 200 large companies in the United States. They found that, more than three-quarters of

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companies surveyed have started using innovative methods with an emphasis on intellectual capital, so that it can be inferred that intellectual capital is one of the research area that rapidly developed. In this way, the researcher that examined the intellectual capital at a university confirms that the university is the most important center of knowledge sources in every nation. The most important asset in any university is a human resource, i.e. faculty, staff and students, organizational processes, and its communication networks. These resources constitute a major and important part in the intellectual capital, but not taken seriously by the university, and only a small number of universities in the world that think about the management of intellectual capital (Anthony and Rojas, 2007).

Education is a very important thing to be noticed by the leader of the country, as a developed country depends on the education level of its citizens. In this regard, education is the key to create the quality human resources. Human development index (HDI) is a reflection of the quality of human resources in a country where one indicator is education. UNDP report (IMD world.com, 2014) showed that the quality and productivity of Indonesian labors ranked 37 out of 61 countries, because the HDI of Indonesia was at medium human development, was ranked 108 out of 187 countries in the world, far below other countries as Malaysia, Thailand, and Philippines. Although climbed 3 ranks, but HDI of Indonesia is still below the average of World HDI. The UNDP report also highlights the lack of decent and well-paid jobs, especially for young people, with the unemployment rate in Indonesia is relatively high at 22% (Gengaje and Ramadhani, 2014). This is a major challenge for the Indonesian government to put a higher priority on job creation and focus on investment in education to increase employability. This is supported by Trankmann (2014) which states that education should be accessible in remote areas of eastern Indonesia. This is a challenge faced by Indonesia in the future. It is emphasized that Indonesia needs to invest in education and to improve the quality of education, to move the Indonesian human development into a better position.

The phenomenon shows that the unemployment rate in Indonesia reached 7.4 million people, with increasing open unemployment rates from the level of higher education, which dominated by productive ages. Based on BPS data, the unemployment of S1 graduate rose to 5.34% from the previous year at 4.31% (Sari, 2015; Susanto, 2015). Even the Chamber of Commerce predicts that unemployment in 2015 will increase by approximately 2%. The unemployment rate is suspected partly because the private universities are not maximized in scrutinizing the needs of the graduates (users), especially in the preparation of the curriculum. Private universities are not maximized to collaborate with external parties and not maximized in fostering networking with the local government, some industries, and professional associations, as well as with some high schools or equivalents. Private universities have not yet obtained the maximum feedback from user, that

useful for designing the curriculum, so that the majority of the graduates still require a waiting period of more than six months to work (Indiyati, 2014).

Based on the regulations set by the Indonesian government, which is in the Law No. 14 of 2014 on Teachers and Lecturers, the requirements to become a lecturer must have a minimum education of master level. In fact, lecturers of private universities with S2 educational level are 43.3%, while the rest are the lecturers with educational level below S2. Private universities lecturers who do not have academic positions are 61.6%, while those with academic positions of Professors only reached 0.86%. Thus, the impact is that the lecturers who have been certified only reached 10.6%. In addition, it can be stated also that the productivity of lecturers is not maximized, only 0.08 papers per one million population of Indonesia, because lecturers are not maximized in conducting research, generating scientific work and scientific publications (Dirjen Dikti, 2009; Kopertis Wilayah IV, 2013; Indiyati 2014). In the competition of international universities, however, an international scientific publication is a most calculated indicator. All the facts demonstrate that the universities in Indonesia are still not able to compete optimally at an international level. This is confirmed by the Webometrics (2013) data that the universities in Indonesia entered the world rankings in the top 500, private universities in the top 800, and private universities at Kopertis Region IV in the top 3000 (Indiyati, 2014).

Based on the phenomenon and some of the issues that have been described, this research is more focused on private universities at Kopertis Region IV, with the formulation of the problem of how the development of intellectual capital in private universities at Kopertis Region IV. The purpose of this study is to examine and analyze the intellectual capital on private universities at Kopertis Region IV.

THEORETICAL ANALYSIS

Some experts expressed the development of the concept of intellectual capital with differences in definitions and classifications, but expressed the same opinion that the intellectual capital is an intangible asset that can determine an organization's tangible assets.

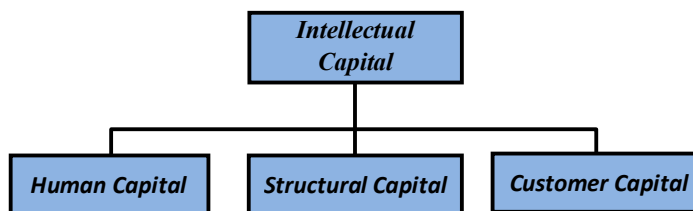
Intellectual capital is conceptualized as intangible assets that can generate value in future (Hunter et al, 2005). Stewart (1997) defines intellectual capital as the sum of everything everybody in your company knows that gives you a competitive edge in the market place. It is intellectual material-knowledge, information, intellectual property, experience-that can be put to use to create wealth. According to Nahapiet & Ghoshal (1998), intellectual capital refers to the knowledge and capabilities of a social collectivity, as an organization, the intellectual community or professional practice. While Ulrich (1998) and Burr and Girrardi (2002) have same opinion that the intellectual capital is a product of the interaction between

competence and commitment. Bontis, et al (2000) states that intellectual capital is elusive, but once it is discovered and exploited, it may provide an organization with a new resources-base from which to compete and win, intellectual capital means individual employee and organization's knowledge that contribute towards sustainable competitive advantage.

Sanchez et al (2007) who develop Bontis' conception, proposed classification of intellectual capital at a university, which can be seen in figure 1 below:

- Human capital is a combination of education, genetic inheritance, experience and attitude, which is considered as individual knowledge, which is not visible from the members of the organization. Bontis, et al. (2000) states that the human capital represents the stock of staff knowledge in an organization.
- Structural capital is an invisible knowledge associated with the "tacit knowledge" that embraces the organization. It is associated with a wide range of diversity to manage the company in a coordinated way. According to Amiri et al (2010), structural capital deals with the system and structure of an enterprise.
- Customer capital includes the development of knowledge about customers, suppliers and associations related to the industrial or government, where it is a comprehensive knowledge in the field of marketing and dealing with customer.

Figure 1: Conceptualization of Intellectual Capital



ESSENCE	Human Intellectual	Organizational Routines	Market Relationship
FIELD	Internal (employees)	Internal (organization)	External (organizational links)
PARAMETERS	Volume	Efficiency	Longevity
ENCODING DIFFICULTY	High	Middle	Very High

Source: Bontis (2002); Sanchez et al (2007)

Besides that, Zuhail (2010) also develop the classification of intellectual capital into human capital, structural capital, and relational capital.

Human capital consists of: 1) Implicit knowledge (competence and education); 2) Skill, the expertise of employees in accordance with the fields of competence and soft skill such as networking, lobbying, leadership, managerial, entrepreneurial spirit, and areas of expertise of each science; and 3) Attitude, namely responsibility, visionary, honesty, discipline, cooperative, fair, caring, fighting spirit, perseverance. Zhou and Dieter Fink (2003) notice that human capital associated with knowledge, expertise and skills of employees. Ulrich (1998) proposed a measurable human capital, which is a product of the competence and commitment.

Structural capital consists of: 1) Explicit knowledge, in the form of journal, research, patents, writing, creativity, publications, competitions; and 2) Process, in the form of: ICT infrastructure, matrix systems work, computerization, and information management systems.

Relational capital consists of: 1) Networking, in the form of external cooperation, partnerships, presence in various national and international events; 2) Reputation, in the form of awards and recognition; and 3) Customer, in the form of alumni of the college, bureaucrats, government, industry, research institutions, financial institutions and other related institutions.

Relational capital as the composite of knowledge embedded in external networks especially knowledge about customers (Curado and Bontis, 2007). Kavida and Sivakoumar (2009) stated that relational capital consists of customer relations, loyalty, customer satisfaction and trust as significant indicators of customer capital while brand equity, goodwill and reputation.

Commitment reflects how to employees relate to each other and feel about a firm (Hsu, 2006). According to Panggabean (2004), commitment is a strong recognition and engagement of a person in an organization. Human resources are committed in the form of affective commitment (the degree of how far HR emotionally familiar, bound, and was involved in the organization); continuance commitment (where employees are tied because it is needed and because of the costs); and normative commitment (a the level of how far HR bound psychology because it has such a feeling of pride, loyalty, and pleasure). Related to the **competence**, Andersen (in Martin, 2002) defines competence as a basic characteristic of being able to distinguish performed and not performed human resources, which consists of knowledge, skills and personal attributes.

It means that the intellectual capital is an asset of the university in the form of intangible asset that can provide more value for customers, which is a combination of human factors (human capital), process/structure (structural capital), and

customers (relational capital). It may be able to create a competitive advantage for universities, and ultimately can improve the performance of universities.

METHODS

The population in this research is the private universities at Kopertis Region IV. The samples are 157, obtained using power analysis-power test approach and the sample size was determined by proportional probability sampling. The respondents in this research are deans, vice rectors, vice directors, and vice chairperson of private universities at Kopertis Region IV. To collect the data, observation, interview, and questioner are used. The questionnaire has been tested for validity and reliability.

RESULTS AND DISCUSSION

Table 1 and Table 2 display the result of questionnaire validity and reliability of Intellectual Capital, respectively. Based on Table 1 and Table 2, it can be concluded that all the items of the statements used to measure intellectual capital variable are valid, because the entire validity indexes are greater than the critical value of 0.30, so it can be used for further analysis. Similarly, all the statements are reliable, because the reliability coefficient are greater than 0.70.

The analysis in this research refers to any existing indicators in each variable studied. To make it easier to interpret the variables studied, the categorization is made, by referring to the following table.

Table 1
Result of Questionnaire Validity of Intellectual Capital

<i>Items</i>	<i>Validity Index</i>	<i>Critical Value</i>	<i>Validity</i>	<i>Items</i>	<i>Validity Index</i>	<i>Critical Value</i>	<i>Validity</i>
Item 1	0,585	0,30	Valid	Item 13	0,647	0,30	Valid
Item 2	0,515	0,30	Valid	Item 14	0,723	0,30	Valid
Item 3	0,645	0,30	Valid	Item 15	0,596	0,30	Valid
Item 4	0,641	0,30	Valid	Item 16	0,608	0,30	Valid
Item 5	0,688	0,30	Valid	Item 17	0,685	0,30	Valid
Item 6	0,674	0,30	Valid	Item 18	0,709	0,30	Valid
Item 7	0,636	0,30	Valid	Item 19	0,693	0,30	Valid
Item 8	0,653	0,30	Valid	Item 20	0,670	0,30	Valid
Item 9	0,700	0,30	Valid	Item 21	0,701	0,30	Valid
Item 10	0,709	0,30	Valid	Item 22	0,566	0,30	Valid
Item 11	0,525	0,30	Valid	Item 23	0,670	0,30	Valid
Item 12	0,723	0,30	Valid				

Source: Research Data, 2011

Table 2
Result of Questionnaire Reliability

<i>Variable</i>	<i>Reliability Coef.</i>	<i>Critical Value</i>	<i>Reliability</i>
Intellectual capital	0.948	0.70	Reliable

Source: Research Data, 2011

Table. 3
Categorization Guidelines of Average Score Rating

<i>Interval</i>		<i>Intellectual Capital</i>	
1.00	-	1.82	Low
1.83	-	2.65	Not So High
2.66	-	3.48	Fairly High
3.49	-	4.31	Adequately High
4.32	-	5.14	High
5.15	-	6.00	Very High

*based on the value of quartile

The analyses of intellectual capital at private universities at Kopertis Region IV are described as follow.

Table 4
Intellectual Capital of Private Universities at Kopertis Region IV

<i>Sub Variabel</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Variance</i>	<i>Means</i>	<i>Category</i>
Human capital	2.813	5.875	0.328	4.269	Adequate
Structural capital	1.333	5.611	0.639	3.784	Adequate
Relational/Customer capital	1.000	6.000	0.799	3.843	Adequate
Intellectual Capital	1.286	5.500	0.556	3.973	Adequate

Source: Research Data, 2011

Based on the average value in the table above, it can be stated that in general the private universities at Kopertis Region IV have intellectual capital in adequate condition. The private universities have an adequately high human capital, where the lecturers and staffs have an adequate competence and commitment. The

universities have an adequate structural capital, from the explicit knowledge and ICT infrastructures, and have an adequate relational capital (adequate networking, reputation, and contribution of users to the universities).

Intellectual capital is the intangible asset, which can provide value added, which is a combination of human capital, structural capital and customer capital (Stewart, 1997; Hsu, 2006). In order for companies to survive and win in the competition, then the company must have a high intellectual capital and should be more focus on all forms of intangible assets, so that those assets have added value or can provide more value for customers, among others, human capital should have more and different competence (Melinda, 2008). Without intellectual capital, there is no innovation in products, services and commercial processes (Balkaie, 2003).

Thus, it can be interpreted that private universities at Kopertis Region IV have an adequately high human capital, structural capital and customer capital, so they have sufficient ability to provide more value for customers. Among the intellectual capital of Private universities at Kopertis Region IV, the human capital is the highest asset (4,269), followed by customer capital, and structural capital.

This research is in accordance with Sugeng (2005) and Melinda (2008) that human capital is the starting point of other intellectual capitals. Employees with high human capital are more likely to provide consistent service and high quality. This finding is also supported by Hsu (2006) which states that human capital is the main intellectual capital that is consistently different. However, these findings are not consistent with the findings of Lim (2004) which states that the customer capital has a higher value than other forms of intellectual capital.

The human capital of Private universities at Kopertis Region IV, in form of competence and commitment, is described as follows.

Based on the average values in table 5, it can be interpreted that private universities at Kopertis Region IV have an adequate human capital. This could be due to lecturers and staff on Private Universities at Kopertis Region IV that have an adequate competence and commitment, to have sufficient ability to provide more value for customers.

Table. 5
Human Capital of Private universities at Kopertis Region IV

No	Notes	Min	Max	Means	Variance	Criteria
1.	Lecturer's level of education	2.33	6.00	4.30	0.63	Adequate
2.	Staff's level of education	2.00	6.00	4.23	0.70	Adequate

3. Staff's Skills	2.00	6.00	4.14	0.58	Adequate
4. Lecturers' Skills	2.00	6.00	4.32	0.70	High
5. Lecturer's Personal attributes	2.33	6.00	4.33	0.59	High
6. Staff's Personal attributes	2.00	6.00	4.20	0.65	Adequate
Competence	2.75	6.00	4.25	0.37	Adequate
7. Lecturer's commitment	2.33	6.00	4.36	0.61	High
8. Staff's commitment	2.50	6.00	4.27	0.62	Adequate
Commitment	2.50	6.00	4.31	0.47	Adequate
Human Capital	2.81	5.88	4.27	0.33	Adequate

Source: Research Data, 2011

Intellectual capital of a company derived from human knowledge (human capital), which is the source for creating excellence, generating greater wealth to provide added values. Therefore, human capital should have more and different competencies and have high commitment, so that it can be regarded as superior human resources (Melinda, 2008; Ulrich, 1998). In order that human capital to have value-added, there are several things to do by adding the value of information (Stewart, 1997). Huang (2010) stated that the competence of human resources should be tailored to business strategy, so adapted to the requirements specified.

Lecturers and staffs in Private universities at Kopertis Region IV has sufficient competence, because although the skills and personal attributes of its lecturers is high, but the faculty and staff have sufficient level of education, as well as staff has the sufficient skills and personal attributes. It means that, the competence is in conformity with the standards/requirements determined by government and by each private university.

It appears that the lecturers in Private universities at Kopertis Region IV have sufficient level of education in accordance with the standards set by the government. This could be due to the enactment of new regulations from the government, namely the Law on Teachers and Lecturers (Act No. 14 of 2005), especially on the minimum level of lecturers' education level. Before the adoption of the Law on Teachers and Lecturers, the minimum standard of lecturers' education level is S1, so there are some lecturers who are now studying in S2 to meet these standards, especially lecturers at the Polytechnics, Academies and Colleges. The lectures in private universities at Kopertis Region IV have high level of skills, which is in accordance with the standards set by the government and each university. The lecturer's skills is stipulate in the decision of Coordinating Minister of State Control of Development and Utilization Apparatus of the State (Menkowasbang) and Law No. 14 of 2005, namely expertise in the field of education and teaching, research and community service.

The lecturers of Private universities at Kopertis Region IV, basically, have expertise in teaching, guiding, but skills in writing scientific papers and research fields are still not maximal. This could be due to that newly appointed lecturers, whose tenure of less than one year, so that there are lecturers who do not have academic positions; it is also the evident from the number of research and the results of scientific work.

Based on interviews with some university leaders, lecturers find it difficult to write scientific papers and examined by a lack of information about the strategies in conducting research and writing scientific papers. Similarly, expertise in the field of community service is not maximized. Based on interviews and observations, the expertises of the lecturers in the field of community service are more facilitated by a team from the university. Individually, the lecturers are hampered by the difficulty in obtaining opportunities from outsiders.

In other hand, the staffs of private universities at Kopertis Region IV have adequate education level and skills, which are in line with the job specification determined by the universities. Staff skills are standard skills, such as computers, administration, while the skills to service need to be improved, because it has not reached the standard of "service excellence". In fact, according to Boedrau and Ramstad (2005), superior human resources should have expertise in the field of administration (expert in administration). Similarly, the structural leader of Private universities at Kopertis Region IV not maximized in the managerial function, whereas according to Sule (2009), in order that the college has more value for the customer, then the structural leaders must have the competence, namely good managerial abilities. Huang (2006) notes that competence should align with the business strategy. Several universities have just recently established; they have not made a clear business strategy that job specification has not been made clear, so this can influence the recruitment and selection program obscurity.

The lecturers of private universities at Kopertis Region IV have high personal attributes, which are in line with the determined job specification by the universities. Nevertheless, the staffs of private universities at Kopertis Region IV have adequate personal attributes which means that are quite in accordance with the job specification determined by the universities, where personal attributes referred to as honesty, responsibility, visionary, cooperative.

In order that employees can increase their competences (level of education, skills, and personal attributes), education and training and motivating for the employee can be implemented (in accordance with the opinion Cascio, 2003; Davis, 1996; Mondy and Noe, 2006).

In connection with the commitment, it can be stated that the lecturers of private universities at Kopertis Region IV have high commitment to their universities,

but the staffs of but staf pada Private universities at Kopertis Region IV private universities at Kopertis Region IV have adequate commitment. This is manifested in the form of a majority of lecturers and staffs remain in the private universities. Most lecturers have affective commitment, which is visible from involvement in the organization to achieve goals of private universities, such as in the teaching, join the meetings and other activities. The majority of lecturers and staffs have continuance commitment, which is needed in terms of cost, whereas only a few or a small fraction lecturers who have normative commitment.

Based on observations by researchers and interviews with some leaders, that small portion lecturers of private universities do the teaching job in some other private universities. This can be caused by several lecturers that are often given the task and the work by the institution, which is not related to the duties of lecturers as set out in Menkowasbangpan and Law No. 14 of 2005 (interviews with several lecturers). This is also true with the staffs when viewed from the job description in several positions, the work cannot provide sufficient benefits (interest assignment). It is in accordance with the opinion of Robbins (2008) concerning the characteristics of the job. Ulrich (1998) expressed his opinion on how to foster employee commitment, namely reducing the need, increasing resource demands and transform into a resource.

Furthermore, it can be seen that the commitment of lecturers and staffs of private universities at Kopertis Region IV is the highest asset (4.31), compared to the competence (4.25). It means that the attachment to the corresponding private universities is a more valuable asset in the private universities at Kopertis Region IV compared to the level of education, skills and personal attributes.

The structural capital of private universities at Kopertis Region IV, in form of explicit knowledge and ICT infrastructure are described below.

Based on table 6, it can be interpreted that the private universities at Kopertis Region IV have adequate explicit knowledge and sufficient ICT infrastructure. This illustrates that the private universities at Kopertis Region IV have a quality structural capital.

The essence of structural capital is how to focus on knowledge embedded in organizational routines (Bontis, 2002; Hsu, 2006). Zuhail (2010) notes that to build the quality structural capital, it requires complete ICT infrastructure and good explicit knowledge. Organizations with high structural capital can provide more value for customers. According to Sule (2009), universities need to provide a complete ICT infrastructure such as CCTV, internet applications in various areas, computerize the system online to achieve the efficiency.

Table 6
Structural Capital of Private Universities at Kopertis Region IV

<i>No</i>	<i>Notes</i>	<i>Min</i>	<i>Max</i>	<i>Means</i>	<i>Variance</i>	<i>Criteria</i>
1.	The research produced by lecturers	1.00	6.00	3.91	0.88	Fair
2.	Scientific literature of the lecturer published in scientific journals/ scientific magazines	1.00	6.00	3.67	1.05	Fair
3.	Lecturers' research patented	1.00	6.00	3.52	1.16	Fair
4.	Lecturers' scientific works	1.00	6.00	3.68	0.80	Fair
5.	Scientific journals owned by private universities	1.00	6.00	3.86	0.95	Fair
6.	Time of issues of scientific journal/ magazine	1.00	5.67	3.57	1.27	Fair
	Explicit Knowledge	1.33	5.61	3.70	0.64	Fair
7.	ICT Infrastructures	1.00	6.00	4.29	0.80	Fair
	ICT Infrastructure	1.00	6.00	4.29	0.80	Fair
	Structural Capital	1.33	5.61	0.64	3.70	Fair

Source: Research Data : 2011

According to the rules of BAN-PT-DIKTI, study programs, faculty or college will get high scores if they have various researches, scientific papers and scientific works. It means that the private universities at Kopertis Region IV can be said to have adequate quality of explicit knowledge, because they have qualified researches, scientific papers and scientific works, and patents. They also have the scientific journal and meet the time of issues of scientific journal. Referring to the provisions regulated in Menkowasbang, and based on the result of interview and observation. The condition can be caused by more lecturers' patents generated in private universities that have the exacta study programs, and then the scientific work of lecturers were mostly unpublished college textbooks and lab module/ laboratory. It is evident that most of the lecturers of the private universities at Kopertis Region IV (53.13%) have not had any academic position.

If associated with job characteristics, one of which is the presence of feedback in the form of performance assessment, and one of the conditions of implementation of performance assessment objective are that the elements of the assessment should be measurable, so that there is clarity in giving feedback to employees, and this can motivate employees to improve performance (Robbins, 2008). Based on interviews

and observations, the private universities at Kopertis Region IV already run the assessment of faculty performance, although there are not running in a measured performance assessment, so they have not been able to support the performance of lecturers in the field of research, scientific papers and scientific publications.

Private universities at Kopertis Region IV have sufficient scientific journals published by each faculty and or department. This happens because some private universities publish scientific journals managed by private universities, which are need not published by each program of study. It is more common in High School and Academy, which only have a minimum of 2 study programs.

Private universities at Kopertis Region IV have scientific journal published by the faculty or department, which is quite timely published, which sometimes published in accordance with a predetermined schedule, sometimes it does not meet the schedule. This happens because the manager is still having trouble in collecting the number of scientific papers from the lecturers that can meet the standards for the publication of scientific journals.

Private universities at Kopertis Region IV have sufficient ICT infrastructures. The universities already provide internet facilities (hotspots) within the university although sometimes untapped. The learning process is already using the LCD, although the evaluation of learning still using semi-online system, in fact there is still a manual system. Only a few universities are already using online-computerized system and CCTV in class. Based on interviews, it is due to the limited budget since the number of students is limited, and the only income comes from student tuition revenue. It can be also due to the newly established private universities or colleges manage less from the five years, so that the private universities cannot be optimal in providing the ICT infrastructure. Moreover, it appears that the private universities at Kopertis Region IV have more valuable asset in ICT infrastructure than the explicit knowledge.

The customer capital of private universities at Kopertis Region IV, including networking, reputation, and costumer contribution is described below.

Table 7
Customer Capital of Private Universities at Kopertis Region IV

<i>No</i>	<i>Notes</i>	<i>Min</i>	<i>Max</i>	<i>Means</i>	<i>Variance</i>	<i>Criteria</i>
1.	National Partnership	1.00	6.00	3.89	1.27	Fair
2.	International partnerships	1.00	6.00	3.63	1.04	Fair
3.	National and international scientific meetings	1.33	6.00	3.77	0.75	Fair

4.	Call for paper (national)	1.50	6.00	3.76	0.81	Fair
5.	Call for paper (international)	1.00	6.00	3.44	1.15	Few
	Networking	1.47	6.00	3.70	0.59	Fair
6.	Awards from external	1.00	6.00	3.87	0.87	Fair
	Reputation	1.00	6.00	3.87	0.87	Fair
7.	Contribution from alumni	2.00	6.00	4.18	0.65	Fair
8.	Contribution from users	2.00	6.00	4.20	0.65	Fair
	Customer Contribution	2.33	6.00	4.19	0.50	Fair
	Customer Capital	1.67	5.83	3.84	0.42	Fair

Source: Research 2011

Based on table 7, it appears that the Private universities at Kopertis Region IV have an adequate networking, reputation, and customer contribution to the universities. This illustrates that the private universities at Kopertis Region IV have an adequate customer capital.

Private universities at Kopertis Region IV have adequate networking, because they have adequate national partnership, international partnerships, national and international scientific meetings, national call for paper and a little bit international call for paper.

According to the rules of BAN PT, good cooperation and have high value are partnership that has a monetary value or generate money for the private universities. Based on interviews and observations, the private universities at Kopertis Region IV have adequate cooperation with professional associations, industries, and governments with respect to students who perform practical work and thesis writing. The partnerships that have monetary value or generate money are not maximized. This is proved that only 7.89% study programs get an A accreditation.

Several partnerships held by the private universities at Kopertis Region IV, national or international, obtained by the leadership of the central level in the form of MoU, but some MoUs cannot be followed up in the form of Cooperation Agreement. Although the international partnerships are mostly done with college and universities have implemented the MoU, the implementation is still not optimal, such as student and lecturers exchanges and cooperation in organizing international conferences.

Private universities at Kopertis Region IV have often attended scientific meetings both nationally and internationally, participated in the national call for papers, but few implement international call for papers. This is because the lecturers are not maximized in doing the paperwork, and the lecturers do not have

enough courage to appear on the external environment, while for the international call for paper, the main reason are communicating in English (from the interview).

Private universities at Kopertis Region IV obtain a good reputation. The reason of this is that some private universities running the college management less from the 5 years, so that the resulting performance is not maximized and cannot be maximized to gain reputation or gain recognition from outside or produce award. Based on interviews and observations, there are several universities that combine the lecturing system, although it does not mean compaction.

Private universities at Kopertis Region IV get a considerable contribution, both from internal and external customers. The contribution from the alumni are providing feedback, especially for learning materials in the curriculum, which is carried out if requested by the private universities. The alumni contribution was limited to providing information about the recruitment, while the contribution from the alumni in the form of money (which is done regularly) can not run optimally. This happens since private universities face difficulties in collecting data on the presence of alumni. While the contribution from the user associated with the input of learning materials in the curriculum, which is run through workshops or questionnaires.

This could be due also since there are several newly established private universities, which have not produced graduates, have no alumni, or already producing graduates, but information about the whereabouts of the majority of the alumni is not yet clear, so it cannot give a higher contribution to the private universities.

Besides that, 37.85% of private universities at Kopertis Region IV have not been accredited. Several universities have not been asked for input both from the alumni and from graduate users.

From this customer capital of Private universities at Kopertis Region IV, it appears that the customer contribution is the highest asset (4.19), compared to the other dimensions of customer capital.

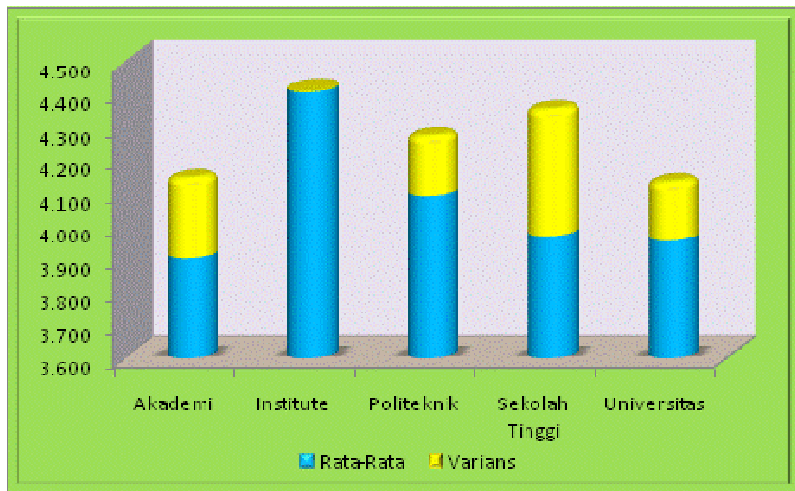
Below is shown a comparison of intellectual capital in the type of Higher Education.

Table 8
Comparison of Intellectual Capital of Private Higher Education at Kopertis Region IV

<i>Types</i>	<i>Academy</i>	<i>Institute</i>	<i>Polytechnic</i>	<i>College</i>	<i>Universities</i>
Means	3.902	4.406	4.092	3.971	3.956
Variance	0.241	0.003	0.182	0.381	0.175

Sumber: HasilPengolahan Data : 2011

Figure 2: Graphical Image of Means and Variance of Intellectual Capital based on the Type



From five types of higher education, the Institute has higher intellectual capital. This is indicated with the highest means and lowest variance. This happens because some of the Institute has been established, has experienced longer in the management of the institution, which is about 5-10 years and more than 15 years. In addition, it can be seen also that the majority Institute (50%) had the status of accreditation of B. In this case, the Academies have intellectual capital that is lower than the Polytechnics, Institutes, Colleges, and Universities. This happens since the management of the Academy are less from the 5 years. Moreover, it can also be seen that the majority of the Academy (62.07%) did not have accreditation, it can also be seen that the majority of lecturers (83.55) at the Academy do not have any academic position.

CONCLUSION

The private universities at Kopertis Region IV have an adequate condition of intellectual capital, so that they cannot be optimal to provide more value to the customers. In this regards, the private universities at Kopertis Region IV have:

1. Adequate human capital, where the lecturers and staffs have adequately high competence and commitment.
2. Adequate structural capital, where having the quality explicit knowledge and sufficient ICT infrastructure.
3. Adequate customer capital, where having adequate networking, reputation, and customer contribution to the universities.

RECOMMENDATION

For the private educational institutions, Private universities at Kopertis Region IV should improve their intellectual capital to be more valued, so that they can provide more added values to the users. In short, they have to improve: 1) the human capital by improving the competence and commitment through the various training based on the training need analysis and administered effectively and efficiently, and support the improvement of further education of the lecturers and staff; as well as to improve the sense of pride of all lecturers and staff of the private universities; 2) the structural capital by giving motivation and training for the lecturer about the strategy research proposal and writing scientific publications; as well as improving the ICT infrastructure; and 3) Customer capital by improving the partnerships with the government, professional associations, and doing the routine activities with the alumni.

Future studies should develop research on this intellectual capital, and the related impact on a wide range of variables.

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