

THE IMPACT OF INNOVATION TECHNOLOGY AND ORGANIZATION ON GROWTH OF A CREATIVE INDUSTRY: THE CASE OF BANDUNG CITY IN INDONESIA

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Abstract— The purpose of this paper is to present an evaluation of the development of new innovation technology and organization innovation in Bandung. Bandung is famous for its good atmosphere for creative industries' activities in Indonesia and has more than 150 companies which have turned into creative industries. In the Global City Competitiveness Index, Bandung ranks 150th and the rank is estimated to increase up to 5 grades higher in 2025 above Karachi, Hanoi, and Nairobi. Indonesian government has embarked on numerous approaches to promote various innovations, including innovation in technology because innovation is a powerful idea to implement the application of innovation in order to create new various products of technologies, new processes, and new services. The biggest problem faced by Bandung's creative industries is the culture of innovation in the organization especially in the small and medium-sized enterprises. This paper will discuss the impact of innovation technology on creative industries and how to manage an organization in order to attain the growth required.

Keyword- Innovation, intellectual capital, organizational innovation, creative industries, competitiveness index

I. INTRODUCTION

In recent years, several developed countries have started using a new concept which is based on 'innovation' and 'creativity' in improving the quality of life of individual, business products, technology, management, and marketing to their organization. This can be seen from so many countries which use slogans as their 'icon', such as: 'No single day without innovation.', 'Innovation is the foundation of our business.', 'our company is Innovative organization', 'Innovative technology is our product', 'Innovation is new way to new wealth' (Hesselbein & Johnston, R., 2002) and so on. Most of the products on the theme of creativity and innovation highlight the most successful technology they develop, particularly in the field of Information Technology and Communication (ICT) which is more and more sophisticated and widespread together with its rapid growth. It is conceivable that ICT's progress is seen growing every three months and keeps growing in turns viewed in various aspects of capabilities, speed, memory capacity, even the model, color and type. Some countries like USA, Japan, China and Korea have their both economic and business growth significantly improved due to an ability to develop their innovation and creativity especially in technology, thus, creating the competition in industrial works which is highly competitive such as Microsoft, Google, Yahoo, Samsung and so on.

The under developing breakthrough provides the widest possible opportunities on the mastery of technology and innovation in order to win the competition against competitors and their suppliers to get an effective way to regulate the product and the process of transition in which the main task is to reach the point of peak science by making intimate relationship between innovation technology process and organization innovation.

A very important change in products of technology, services, operations, administrative procedures generates new strategies, new organizational structures and new operating procedures which are necessary to achieve the peak achievement. In general, according to Etlie (2009); An enterprise will get double benefit if their team is able to build a harmonious integration between advancing technological innovation and organizational innovation (see figure 1).

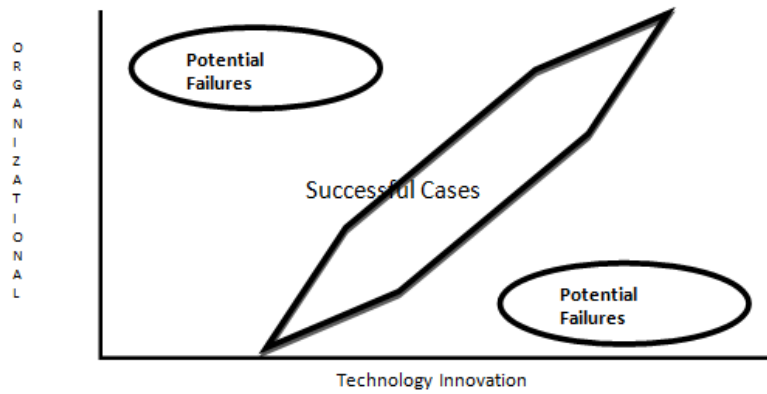


Figure 1. The success of management between technological and organizational innovation has been obtained from Ettlie, JE (2009).

According to Howkins (2001) the presence of a new wave in the economy which is based on innovation and creativity thrive upon realizing that the export value of the copyrighted work of the United States in 1996 reached a value of sales amounted to 60.18 billion dollars which has exceeded other exports such as agriculture and automotive. An important thing in this new wave business is the acts and legal validity of intellectual property (intellectual property rights), royalties, brands, and designs which are applicable to a deal all over the world. Thus, the economic value of the business in today's digital era, products and services are not determined by the cost of raw materials or production systems like in the industrialization era, but more grounded in creativity and innovative products as well as an outstanding customer response. The sad reality is that the position of Indonesia in this high technology only serves as a major consumer of the world countries.

The importance on the mastery of technology and innovation is apparently not limited to the economic-business interests which tends to be capitalistic, but it turns out the development of technological innovation provides a broad impact in the social and cultural aspects including its positive and negative aspects. It has been proven in Brazil, Russia, India, and China (BRIC) that mastering technology has pressed down the price to very low point. Thus, this increases the level of outsourcing jobs that has been set in such a way. For example, computer programming specialists in the United States can earn \$90,000 per year, yet as outsourcing in BRIC countries, it may be lower than the half or below the value of \$ 45,000 per year. Thereby, at the same time, opening new jobs in the form of outsourcing such as in India and China gives a great influence to the structure of economic, social, and cultural focusing on technological innovation. The atmosphere thus provides a new opportunity to incorporate local wisdom (local indigenous) in innovation and technological creativity. Therefore, came the term local Industry, which is the innovation that is locally acceptable global market. This is where great opportunities for Indonesia's national economic security, considering that Indonesia is a country that has a rich diversity of very high and attractive (high-diversity). Companies that introduce a new technological innovation may acquire long-term reputation as a leader in the technology domain. Reputation can help to maintain the company's image, brand loyalty and market share, even after competitors introduced comparable products.

If we create statistical data about the rate of technological change, the position of technology, production capacity, technology infrastructure, socio-economic infrastructure, and even in the national orientation, Indonesia lags among ASEAN countries. Singapore is a nation state.

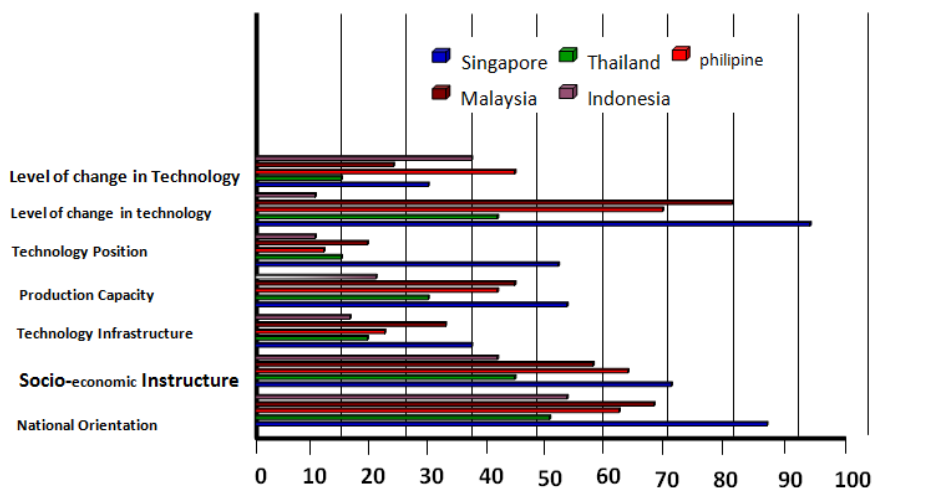


Figure 2. Comparison of ASEAN countries in technology development

Based on McKinsey's research reported by Department of Industries and Commerce (1998), Bandung High Technology Valley is the best region in Indonesia for the development of industrial clusters of ICT, considering that the region has been supported with the best universities and research bodies in Indonesia (established since the time of Dutch era). Technological innovation community in the area of Bandung is currently estimated about 150 groups spreading across the city surroundings. The great vision of the city's administration is to make the greater Bandung as a business ecosystem based on information technology and communications supported by a creative and innovative atmosphere and highly potential global market oriented (Sanny, 2009). Records have proven that some universities from Bandung have atleast won a world-class competition in the field of creative industries, robotics, computer chips and computer code. This is a basis for Bandung city to promote, maintain and enhance its competitiveness within the ASEAN community, such that there is more attraction of global investors to Bandung as one of the world's innovator warehouse (or world class innovators).

II. LITERATURE REVIEW

Innovation is not easily defined because it is complex to understand. However, there are some proposals of definitions from experts and the most appearing definition is that which refers to it innovation as invention or exploitation (Robert, E., 1988) of opportunities to create something new. Certainly, each person chooses a slightly different view, which should be more than just that definition because it involves the process of development and implementation of an invention. Specifically, we have tried to rewrite the words Rubenstein (1989) about the innovations that are defined in the original text as: "Innovation is the process whereby and improved products, processes, materials, and services are developed and transferred to plant and / or market where they are Appropriate."

Given this definition, then as a consequence that innovation must be managed so that these innovations have economic value or value-added. Managing innovation successfully depends on the top management of the reality of the organization for its commitment to both individual and group resources to the possibility of renewing or finding something new. Thus in general we can capture an image definition that is expressed by White & Bruton (2007), Management of Innovation as: "a comprehensive, managerial approach to problem solving and action based on an integrated problem-solving framework, and an understanding of the linkages Among innovation streams, organizational teams, and organizational evolution. It is about implementation-managing polititics, control, and individual Resistance to change. The manager is an architect / engineer, politician / network builder, and artist / scientist ".

At the present, Innovation and Technology are inseparable from one another. Nevertheless, both have a different concern. In general, the general process steps grooves are developed and managed in sequence as follows: scientific discovery> Invention> Innovation> Technology.

Development of technological innovation and creativity at this time more quickly. The law of the faster the growing / changing, the sooner it becomes outdated. It is important in the development of this technological innovation, every development of innovation and creativity technology suddenly appeared in the course of other innovations outside of the context of the idea of innovation that was developed before forming a new generation of technological innovation, can be a continuity of the previous innovation or by products and various complicated combinations to always produce a new generation as a function of time or its engineering effort. Generally it can be illustrated as an S-curve as in the figure below:

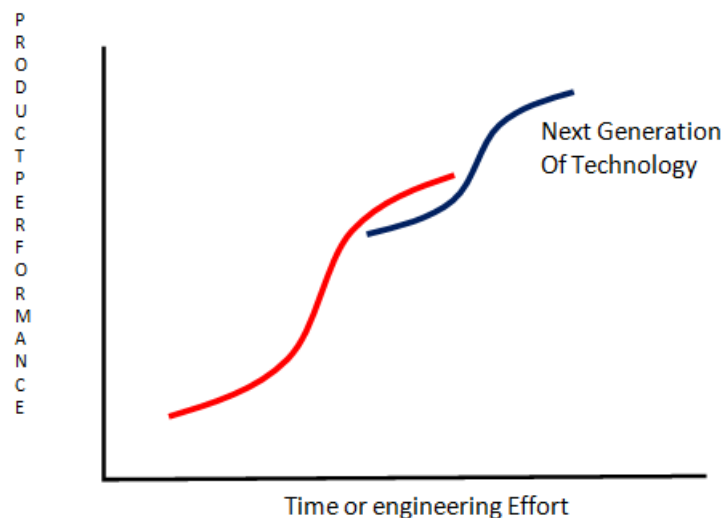


Figure 3. The relationship between product performance and function of time or engineering effort to produce a new generation of technology (adopted from Clayton Christensen, 1992)

Especially information and communication technology (ICT) has incredible speed and takes more and more faster time. In the 1970s a new generation emerged after 5 years, in 1980 after 2 years, in 1990s every year, but in 2000s appeared new generation each semester, and now in 2010 almost every quarter producing a new generation of technological innovation.

A. Innovation Organization

This analysis is needed in order to know how far the role of innovation is in the development of creative industries. In this case, the possible thing in current state is hybrid model approach in running the wheel of organization. The pioneer of open source programming, Steve Jobs, 1981 in his interview with Fortune Magazine stated that:

‘Innovation has nothing to do how many R&D dollars you have...it’s not about money. It’s about the people you have, how you’re led, and how much you get it.’

Therefore, it can be concluded that ‘people are our greatest asset’. In this term, organization innovation variable is divided into four groups which will be analyzed, they are: organization innovation paradigm perspective, organization innovation process perspective, product perspective and position perspective in a way to identify how far each community is able to develop their organization innovation. Below is the one and only quiz with analyzed frequency.

Innovation in organization includes vision, leadership and willingness to innovate. According to Tid and Bessant, 2009:

“the key features for innovative organization are clearly articulated and shared sense of purpose and stretching strategic intent ‘Top management commitment’.

Important components in organization innovation are vision, leadership, structure, key individual, effective team work, high-involvement innovation, creative climate, external focus (West, 1996; Robbins and Judge, 2007).

The results of the assessment of the "Global Competitiveness Index 2013-2014" by the World Economic Forum (WEF) can be used as a reference for measuring the relative progress of a country in terms of parameters Innovation and Sophisticated, Indonesia ranks third among the major ASEAN countries, but ranks number 33 out of 148 countries of the world with the score 4.13. This shows that Indonesia is well above the world average value. That is true in terms of parameters of Innovation and Sophistication. Meaning Indonesia is not inferior to other developed countries.

III. RESEARCH MODEL

The business model developed by BHTV is a group of innovation technology SME entrepreneurs who each work forming a kind of house design which is working separately to meet market’s needs. Each developer and technology inventors initiatively has their technology findings patented which are based on the findings of intellectual both in national and international levels. Most of the work is in the form of outsourcing from developed countries.

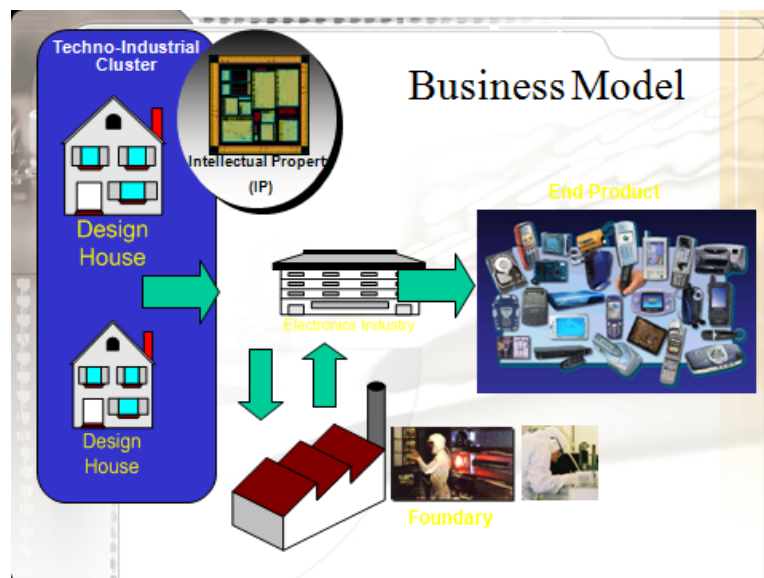


Figure 4. A business model that can be developed in the era of BHTV in developing the IC design in design house with contain (Andrianto, 2007)

Various attempts have been made to develop the industrial and technology businesses, with peddling the ability of developing innovations various fields of ICT to the needs of companies in Indonesia, as well as seizing the outsourcing business from various countries worked in industrial design house in the area of this city, which is generally a cooperative research, development, business with industries from developed countries such as the USA, Europe, Asia and Japan. Outsourcing Implementation of the current design is done in a small house on initiatives undertaken in Indonesia, because the calculation of outsourcing will be cheaper. It is hoped the resulting product will be more competitive in the international world.

Website-based entrepreneurship is a new phenomenon in business in cyberspace. Internet is like a stopover area between human interests. Even some technologies cannot function without the Internet, such as a wireless phone and a GPS (Global Positioning System) for the process of data transfer and communication which is very dependent on the internet.

Internet can eliminate some business functions, but create new functions in the business. The new activities include value chain known as reintermediation process of introduction of new types of intermediaries. Many of the new functions affect traditional supply chain in the consumer market, for example, service delivery (delivery services) has become "booming" because of the Internet. A lot of other consumers chose to have the products shipped directly to their homes, rather than going out of the house to do it by themselves. Electronic submission has become commonplace in the business market, e-commerce has created a need for new types of financial intermediaries, e-commerce can reduce the function of an online purchase. The new product (such as credit card online) and new services (e.g. online eskrow services) has been introduced, as first developed Internet usage.

IV. DATA ANALYSIS AND DISCUSSION

The above data may reflect telematics industries based on the hardware, but in fact more and more number of companies engaged in software, in particular the area of intellectual area of Bandung High Technology valley there are 126 companies listed, Bandung High Technology Valley (BHTV) is one of Indonesian government's programs to develop the electronics industry sector in order to achieve the export of 30 billion USD in 2010. But seeing the potential and the opportunities that exist, this program was expanded to the effort to build industry and attract investment in Bandung Raya region, particularly for the industrial fields of technology-based intellectual. With the passage of this program, are expected to BHTV able to contribute 50% of the Indonesian export target electronics.

Opportunity for Indonesia to enter the world electronics industry today is pretty big. The magnitude of this market electronics sector provides strong incentives for business development. The nature of the industry makes the great need for skilled human resources, product manufacturing services which never stops. BHTV opportunities enlarged lumrahnya subcontract mechanism in the industry. The progress of the transport system of goods and information technology facilitate subcontract work to be done at different places are located.

BHTV potential of human resources, especially in the potential well and has started the formation of technology-based industrial habitat. Prospective students from across Indonesia every year flooded the university in Bandung area, so that the supply of human resources of high potential always guaranteed. Bandung area is also a center of technology-based companies such as Telkom, Pindad, IPTN, LEN, CMI, Quasar, INTI, Pos Indonesia, and others. Research institutions such as PPAU Microelectronics, LIPI, Risti, Hall-Hall Depperindag also in Bandung. BHTV has concentrated on the various components needed to establish the forerunner of the global electronics industry.

Secondary data provides the market size of Telematics and Electronics and its supporters of USD 2.4 billion in 2009 and amounted to USD 1.97 billion in 2006 (DITJEN IATT - Ministry of Industry, April 2009). Other data precision provides market size value telematics software and consulting amounted to USD 321 million or approximately USD 3 trillion, of both data sources indicate the size of telematics services industry by 16%. From the results of primary data processing, telematics market size is estimated at Rp 576 billion on the assumption that there are approximately 120 ICT companies in Bandung and its surroundings. The value of the market share value BHTV the domestic market by 19% this year. Another thing that was obtained through primary data processing is projected BHTV sales companies in 2009 are estimated at Rp 1.1 trillion by assuming the composition of telematics services sector is fixed (16%), then BHTV market share estimated at 32% in 2009.

Assuming that there are more than 120 ICT companies in the region BHTV Bandung, where these companies is dominated by small and medium-sized companies, then through the primary data processing we can statistically estimate the ICT workforce of 6000 people (with an average employment per company amounted 18and). The figure shows the value of labor productivity of ICT in Bandung at Rp. 205,685,185 / person BHTV production composition telematics services in 2009:

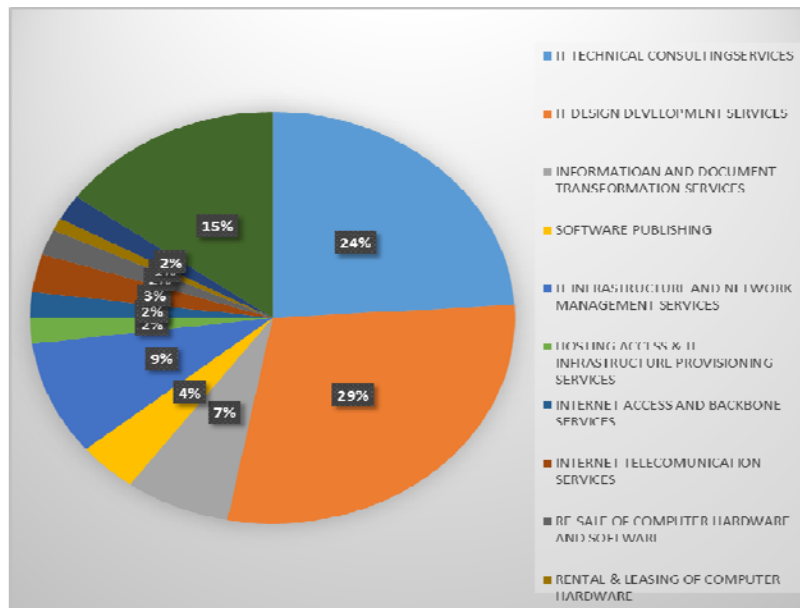


Figure 6. The Percentage of Intellectual Technology Production Type in Bandung region

From the chart above it can be seen that the production of telematics sector is dominated by consulting services, that is 24% (IT Technical Consulting Services) and 29% (IT Design & Development Services). In the third biggest, another sector reached 15%, further research is required for the business model, competence and products resulted in this sector.

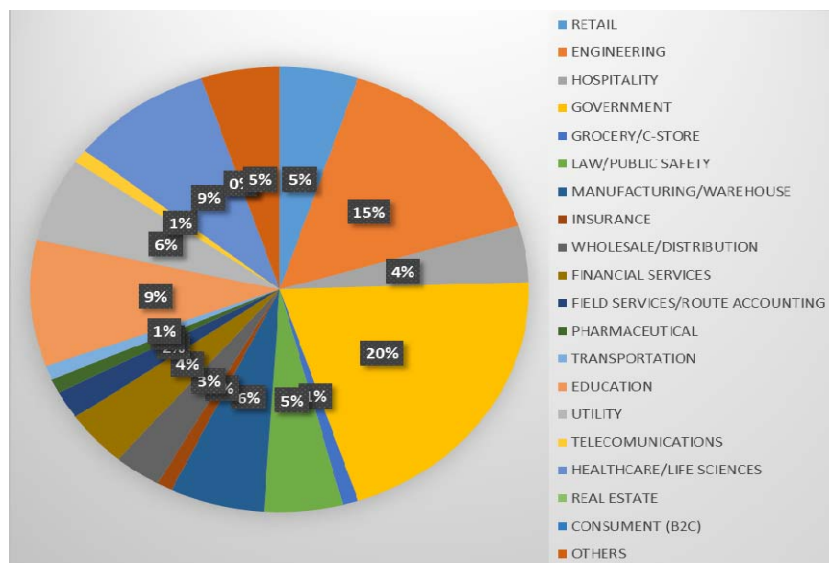


Figure 7. The Percentage of ICT Production Type BHTV Region

In the chart above it can be seen that the largest sector / industry consuming the telematics services is the government sector (Government), while at number two is the engineering sector (Engineering) is generally defined engineering sector includes the construction industry, automotive industry, and industry / other sectors related to activities of engineering.

The table below shows rankings BHTV market size and its potential in the year 2009 for each business sector telematics. Detailed data can be seen in the table below:

Table 1. Rating of BHTV market size and its profit sector

Name of the Sector		Market Size (Rp)	Market Potential (Rp)
Design & Development Services	B	168,171,296,296	404,224,537,037
Technical Consulting Services	A	140,031,746,032	346,800,705,467
Other Sectors	L	85,000,000,000	192,277,777,778
Infrastructure and Network Management Services	E	48,666,666,667	45,370,370,370
Information and Document Transformation Services	C	42,555,555,556	115,138,888,889
Software Publishing	D	24,555,555,556	13,356,481,481
Internet Telecommunication Services	H	19,259,259,259	12,469,135,802
Hosting & Infrastructure Provisioning Services	F	12,444,444,444	18,518,518,519
Internet Access and Backbone Services	G	11,111,111,111	4,629,629,630
Related Training Services	K	9,444,444,444	6,990,740,741
Re-Sale of Computer Hardware and Software	I	8,333,333,333	15,347,222,222
Rental & Leasing of Computer Hardware	J	6,666,666,667	9,444,444,444

From the data in the table above it can be seen that the telematics sector B ranks top position in the estimated market size and potential, while the second place is occupied by A sector and the final ranking is occupied by J. It can be also seen some sub-sectors will experience declining due to smaller estimated market potential than today's market estimation; these sectors are sector E, sector D, sector H, sector G, and sector K.

The table below shows the consumption rankings telematics services. It can be seen in the table below that the five largest telematics market are ordered by the Government sector, Engineering, Healthcare, Education, and Manufacturing / Warehouse. While the five smallest sequence is the Real Estate Sector, Grocery, Pharmaceutical, Transportation, and Insurance.

Table 2. ICT consumption service Ranks

NAME OF SECTOR		MARKET SIZE (IDR/Rp)	MARKET POTENTIAL (IDR/Rp)
Government	D	109,682,539,683	292,693,783,069
Engineering	B	85,626,102,293	217,204,585,538
Healthcare	Q	51,460,317,460	121,041,005,291
Education	N	50,349,206,349	165,602,418,745
Manufacturing/Warehouse	G	32,277,777,778	36,085,648,148
Utility	O	30,730,158,730	78,556,878,307
Retail	A	30,076,190,476	24,525,396,825
Other	T	29,111,111,111	9,804,232,804
Law/Public Safety	F	28,333,333,333	57,444,444,444
Financial Services	J	22,333,333,333	80,685,185,185
Hospitality	C	21,015,873,016	11,730,820,106
Wholesale/Distribution	I	19,444,444,444	9,225,308,642
Field Service/Route Accounting	K	11,111,111,111	30,546,296,296
Telecommunications	P	7,166,666,667	4,861,111,111
Insurance	H	7,063,492,063	7,113,756,614
Transportation	M	7,063,492,063	6,121,693,122
Pharmaceutical	L	6,111,111,111	3,796,296,296
Grocery/C-Store	E	4,444,444,444	1,851,851,852
Real Estate	R	2,619,047,619	4,269,841,270

The chart below shows production-consumption matrix between telematics service and other industries. The table below shows price condition, numbers of projects and the size for each telematics service.

Table 3. Price Condition of Each ICT Industrial Sector

		Average Production Price (Rp/Orang)	Work Package	Project	Company Total in a Sector	Project/Company	Average Project Measurmesnt
IT TECHNICAL CONSULTING SERVICES	A	19,882,309	7,043	141	98	1	357,881,570
IT DESIGN & DEVELOPMENT SERVICES	B	21,946,668	7,663	153	111	1	395,040,028
INFORMATION AND DOCUMENT TRANSFORMATION SERVICES	C	15,420,737	2,760	55	18	3	277,573,260
SOFTWARE PUBLISHING	D	16,780,533	1,463	29	31	1	302,049,595
IT INFRASTRUCURE AND NETWORK MANAGEMENT SERVICES	E	18,266,778	2,664	53	44	1	328,802,005
HOSTING & IT INFRASTRUCTURE PROVISIONING SERVICES	F	17,361,111	717	14	9	2	312,500,000
INTERNET ACCESS AND BACKBONE SERVICES	G	X	X	X	4	X	X
INTERNET TELECOMMUNICATION SERVICES	H	5,305,603	3,630	73	18	4	95,500,849
RE-SALE OF COMPUTER HARDWARE AND SOFTWARE	I	18,382,353	453	9	9	1	330,882,353
RENTAL & LEASING OF COMPUTER HARDWARE	J	X	X	X	4	X	X
IT RELATED TRAINING SERVICES	K	17,817,982	530	11	13	1	320,723,684
OTHER SECTOR	L	29,638,009	2,868	57	27	2	533,484,163
			TOTAL	TOTAL			
			19861	1,103			

From the table above it can be seen the average price of production of all companies engaged in this sector, estimation of the number of projects and the average size of project done in 2007 – 2009. Through the previous calculation, we can get matrix correspondence between production and telematics service consumption in BHTV region. By calculating the average production price of each company in the sector and to estimate the number of companies engaged in the sector, it can be estimated the number of projects and the size of projects undertaken in this sector, while data for sectors G and J cannot be produced due to lack of sample company data on the industrial sector of ICT.

Another analysis done in this research is the business portfolio of companies in BHTV region. The business portfolio is represented by GE/McKinsey Matrix. The matrix mapped the market strengths factor and market attractiveness in telematics sectors to describe the business condition in these sectors. In this analysis, the market attractiveness is divided into six sub factors, they are; market size, industry concentration (the percentage of companies engaged in the industry of total company engaged in the telematics sector), market potential

rating, growth, sales volume rating (comparisons rating between sales and product price), consumers diversity (many other industrial sectors that become consumers of this industry). As for the factors that influence business strengths from each BHTV telematics sector are price, company experience, trademark, networking, management and personnel, as well as economic factors, politics, social and technology.

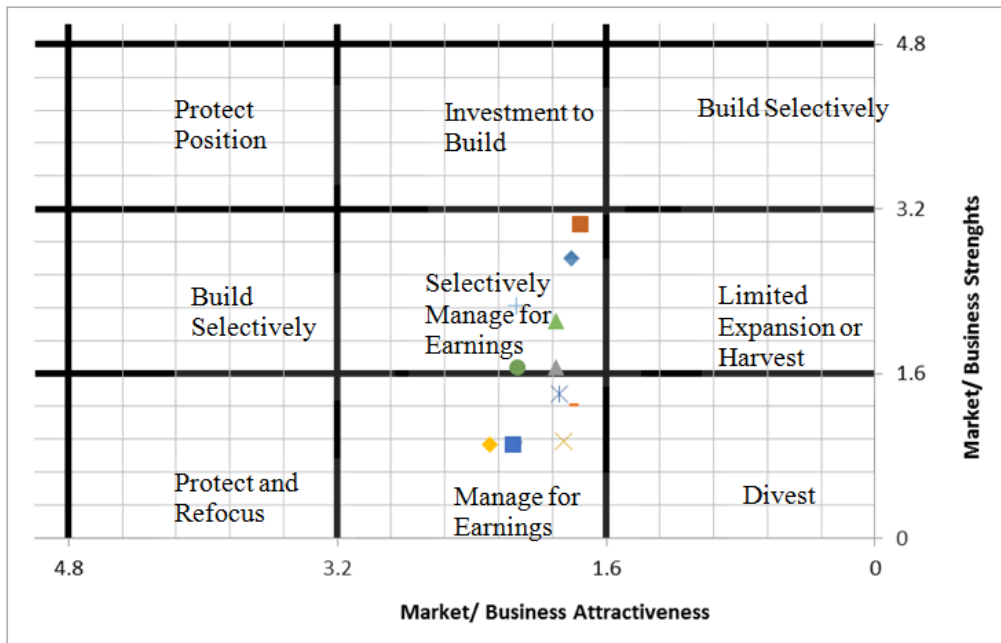


Figure 8. The Position of Market Strength and Market Attractiveness BHTV Community

A. Organizational Innovation

According to Etllie’s research (2009), the success of developing technology innovation is strongly related to growth of organization innovation. We encountered difficulty in relating the two parameters. However, we would like to understand the opinions of respondents of small-medium sized enterprises leaders in applying the vision, the strategy and their performance standard to grow their business. In order to know the role of application of organizational innovation in SME in BHTV region, we conducted questioners to 126 enterprises, however, there were 100 questioners providing perfect answers. The result of the questionnaire is as follows:

Table 4. Respondents’ Opinions on: Having Vision, Strategy and Performance Standard in Developing Organization Innovation

No.	Response	Frequency	Percentage
1	Strongly disagree	1	1.0
2	Disagree	6	6.0
3	Neither Agree nor Disagree	38	38.0
4	Agree	46	46.0
5	Strongly agree	9	9.0
Total		100	100.0

The table above shows frequency distribution for questions about having vision, strategy and performance standards in developing the organization innovation. These questions are intentionally combined in order to find out the connection of each company’s vision, mission and performance standard. Based on the table above, it can be seen that respondents chose to agree were 46.0%, neither agree nor disagree 38.0%, strongly agree 9.0%, disagree 6.0% and strongly disagree 1.0%. The result shows that the question about having vision, strategy and performance standard in developing organization innovation was perceived positively by the respondents.

Next, we would like to know whether each company chose transformational leadership in order to grow their companies, the result of the questionnaire is as follows:

Table 5. Respondents' Opinions on: Already Chosen Transformational Leadership in Developing Organization Innovation.

No.	Response	Frequency	Percentage
1	Strongly disagree	0	0
2	Disagree	7	7.0
3	Neither Agree nor Disagree	42	42.0
4	Agree	36	36.0
5	Strongly agree	15	15.0
Total		100	100.0

The table above shows frequency distribution for question 'already chosen transformational leadership in developing organizational innovation. According to the table, it can be seen that respondents who chose neither agree nor disagree were 42.0%, agree 36.0%, strongly agree 15.0% and disagree 7.0%. The results shows question 'already chosen transformational leadership in developing organizational innovation was perceived poorly by the respondents.

In the end, we asked whether each company has organizational innovation management program, the result of the questionnaire is as follows:

Table 6. Respondents' Opinions on: Having Organizational Innovation Management Program

No.	Response	Frequency	Percentage
1	Strongly disagree	0	0
2	Disagree	3	3.0
3	Neither Agree nor Disagree	47	47.0
4	Agree	45	45.0
5	Strongly Agree	5	5.0
Total		100	100.0

The table above shows frequency distribution of question having organizational innovation management program. According to the table, it can be seen respondents who chose neither agree nor disagree were 47.0%, agree 45.0%, strongly agree 5.0% and disagree 3.0%. The result shows question having organizational innovation management program was perceived neither agree nor disagree and agree in almost the same percentage by the respondents. Therefore, it can be concluded that most of the community agree on the statement of organizational innovation management, although the others are not supposed to be absolute, there may be other consideration about the need of organizational management, feeling doubtful on transformational leadership.

The development of the market players in BHTV in creative industries seems to increase each year. It can be seen by the increasing number of small and medium-sized enterprises; 87 enterprises in 1999, 101 in 2005, 126 in 2011 and 187 enterprises in 2014. However, the development of the end results does not show significant result (stagnant).

The highest strength in BHTV innovation development and community creativity lies on the skills of IT design and development services and IT Technical Consulting services. Meanwhile the other innovation fields such as hosting and IT infrastructure and Network Management Services in GE Multifactor Portfolio matrix diagram placed in 'manage for earning/growth' although this field is the field that many small and medium-sized enterprises in BHTV. Through the concentrated certain product strategy and horizontal integration in a hope this product segment for acquiring earning and bigger target market than the present condition. For industries in 'Hosting & IT Infrastructure Provisioning Services', 'Information and Document Transformation Services', 'Software Publishing', and 'Internet Communication Services in 'manage for earning' position. Therefore, there is no synchronization between technology innovation industrial attractiveness developed by BHTV community with its business strengths.

In general, small and medium-sized enterprises in BHTV have vision, strategies and performance standard in developing organizational innovation was perceived positively by the respondents although most of them neither agree nor disagree on the need of transformational leadership. The statement of organizational innovation even though the other does not have to be absolute, there may be other consideration about the importance of organizational management. However, in general they believe that the advancement in technology innovation is

strongly related to its organizational innovation although not certainly sure about what kind of organizational innovation; even there is a thought that organizational innovation could cause negative effect to the productivity that has been created.

V. CONCLUSION

Technology innovation provides economic growth in big creative industries for the advancement of small and medium-sized enterprises in Bandung city region, especially in the development of the field of innovation of IT design and development services and IT Technical Consulting services.

The role of organizational innovation has not been seen in the development of economic growth in Bandung city region, and it might cause negative effect to the innovation productivity if done in improper way or still look for the exact type of organizational technology innovation to balance the advancement in technology innovation in order to increase economic growth.

The ranks of the largest consumption from ICT technology innovation in Bandung region in order are Government, Engineering, Healthcare and then Education.

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