Indonesian Animation Industry: Its Mapping and Strategy Development

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Abstract: The problem of the animation industry in Indonesia is the Gross Domestic Product (GDP) contribution of animation, video, and film sub sector is lower than other sub sectors, which is 0.17%. On the other side, Indonesia has a potency to grow the animation industry through creativity and human thought power. This research was a descriptive research which uses in-depth interviews. CV Imaji Studio, PT the Little Giantz, PT Ayena Mandiri Sinema, and PT Kinema Systrans Multimedia are the research object. Based on the analysis, the animation studios have many problems; such are a few numbers of animators, a few infrastructure facilities, the high price of technology, the low quality and quantity of both education and trainee. It needs the cooperation of the stakeholders to create the strategy development. Business sector, government, community, academy, and media are the stakeholders which play a role to develop the strategy. Business sector is the leader to develop co-working space, incubation scheme, and financial system. Communities have the role to establish the exhibition and training. Academicians have the function to make the education curriculum and developing the animation technology. Media is the channel distribution of animation products to promote them.

Key-words: outsourcing, intellectual property, creative industry.

I. INTRODUCTION

Creative Industry is also called the Creative Economy. Creative economy highly encourages innovation and creativity; support the cultural knowledge, particularly intangible assets such as culture and technology. The creative industry is a high-value-added industry with independent intellectual property rights. The creative industry brings enormous economic and social benefits for the development of social innovation (Dong and Gao, 2012).

The animation industry is one of the creative economic sectors, which is being a target point to increase the national economy. Bureau of Statistics Central (BPS, 2016) shows that the contribution of the creative economic sector to national economic is 7.44% (Figure 1). It is the third-largest number after the United States and South Korea. The Gross Domestic Product (GDP) contribution of Animation, video, and film sub sector is lower than other sub sectors in the creative economy sector, which is 0.17%. Still, the growth of GDP is higher than other sub sectors in 2016. The data represented that Indonesia is the potential to enhance the national economy by optimizing of a creative economic sector. Indonesia is one of the countries which has abundance of natural resources, art, and cultural. Therefore, Indonesia also has the potential to develop the creative economic sector through creativity and human thought power.

Nowadays, the creative economic sector is a catalyst for economic growth. Hidayat and Asmara (2017) said that the creative economy concept is focusing on the role of creativity as a force in contemporary economic life, stating that economic and cultural development. It is a new economy sector, which is to boost and to accelerate the economy. The study of Bekraf and Seni Rupa IKJ (2016) showed that the Bureau of Creative Economic gives the bigger thoughtfulness in this sector. It aims to increase the potency and opportunity of creative economic more developed.

Optimization of the creative economy aims to introduce the distinctive characteristics of Indonesia to the international market. Indonesia has involved in a long time in the animation industry, which is evidenced by some animation film exports. These are Bilu Mela and The Battle of Surabaya. The animation sub sector is part of creative economy sub sectors, which is being the target to increase of Indonesia economic. On the other hand, the animation sub sector in Indonesia has many problems, such as the few numbers of animators, a few infrastructure facilities, the high price of technology, the low quality and quantity of both education and trainee. Therefore, it has to create the strategy development for solving the problems in animation industry. This research also aims to analyze the mapping of the animation industry in Indonesia. It has also benefited several stakeholders. For the researcher, this research would enhance skills in science management. To the animation industry, the research can give information about the development of the animation industry in Indonesia. Lastly, to government, the research can be referred to create the policy brief for increasing the competitiveness of the animation sub sector.

II. RESEARCH METHODS

This research is a descriptive research which uses depth interview to obtain information of respondents. Objects of this research are animation studios in Indonesia, such as CV Imaji Studio, PT The Little Giantz, PT Ayena Mandiri Sinema, and PT Kinema Systrans Multimedia. It was also interviewing the government to obtain the information of Indonesia animation industry. There is Bureau of Creative Economy, Ministry of Tourism and Creative Economy. The research is conducted in November 2019. The selection of the objects used purposive
sampling. List questions to animation studios consist of profile and company management, production process (pre-
production, production, and post-production), demand,
chance, conditions factors, price, firm strategy, structure,
rivalry, related and supporting industry, and government
regulation. They examine the strategy development of two
business models based on the analysis of problems and
Diamond's Porter result.

III. RESULT AND DISCUSSION

The Mapping of Animation Industry in Indonesia

There are two business models of animation industry in
Indonesia: outsourcing and intellectual property (IP). Feichin
and Tschang (2004) presented that business model based on
outsourcing does not need high capital, low disadvantage risk.
Also, the business model can get the pay faster than other
business models. Gereffi et al. (2005) explained that
outsourcing business model involves contracting with external
company for partial projects or full. The outsourcing business
model is making the animation product by ordering the
customer, which is the concept and idea is from the customer.
This model has had a sureness market. Different from the first
model, the business model of IP needs the depth research to
get the demand market and to create the figure character
and storyline. It does not have a sureness market. The company
has to offer the media or distribution channel, which would
like to show the animation product. Santoso (2018)
represented that Intellectual Property (IP) is a masterpiece,
design, and creativity invention which should be patented and
protected by law.

The objects of this research are CV Imaji Studio, PT The
Little Giantz, PT Ayena Mandiri Sinema, and PT Kinema
Systrans Multimedia. Figure 4 showed that PT-The Little
Giantz, PT Ayena Mandiri Sinema, and PT Kinema Systrans
Multimedia are the companies which have the intellectual
property (IP). The idea is the main factor to develop IP in
animation industry. The company will create the initial
animation concept, then the concepts will be developed,
typically to include a brief, the characters and a set of initial
storyboards. The next stage is making agreement terms with
broadcaster. The studio or production company then engages
with broadcasters to obtain an initial funding commitment.
The last stage is production. Once the production budget is
raised production can begin. The main products of the IP
business model are films and TV series and the other products
are merchandise, toys, and DVD. The main products are
shown by TV, You tube, and cinema.

IP has a value, which is an idea, cultural production, and
design. IP is still not yet to get government support. It can
show the cultural and local wisdom of the nation. CV Imaji
Studio is the only subject in this research that has no
intellectual property. The company is a service company
which receives projects from other animation studio. Not only
creating the IP but also the other three companies obtain the
service from other animation studios.

Figure 5 showed that outsourcing business model of Indonesia
animation studios which the customer from foreign country.
Different with IP business model, the idea of outsourcing
business model is from the customer. There are four
animation studios which is outsourcing firms of foreign
company. After developing and producing the animation
products, there is no activity to agree term with broadcaster,
because the activity is conducted by foreign company. The
main products of this business model are films and TV series
and the other products are merchandise and toys. The
channels of the main products are TV, You tube, and cinema.

The outsourcing of animation studio is making the figure 2D
and 3D, advertising, website, or others based on demands
customer. The animation products of four companies have
shown on television and you tube. The employee in the
animation studio is divided into two types. There are
permanent employees and contract employees. Head of
Division, Manager, Production Supervisor, Senior Artist, and
supervisor are the position of permanent employees. The
position of contract employees is staff, mid crew, technician,
and junior artist. The products of animation industry are not
only films and series, but also advertising, DVD, toys, and
merchandises.

The outsourcing animation studios are not only in Indonesia,
but also many in many countries. The typical of the animation
industry is labor-intensive, so it needs many people to do the
projects. Yoon (2017) said that there are animation studios in
Seoul and Mumbai had been subcontractors for animation
studios based in Hollywood and Japan since the 1970s.
Wescott (2010) represented that Mumbai is also the country
that is being outsourcing of animation studio from the USA,
Europe, and Asian Countries. Mumbai is the center of
animation industry in India. Feichin and Tschang (2004)
explained that Indonesian companies such as Infosys and
Wipro which are IT outsourcing service providers have
moved up the value chain. They are developing IT consulting
capability, by going into product design and development
(especially in embedded systems), and by offering other
higher-end services.

The problem of outsourcing Business Model

The animation industry can be classified in two ways. There
are two-dimensional (2D) and three-dimensional animation
(3D). 2D is hand-drawn, but nowadays, it is mostly computer-
aided. 3D animation is al involving some software, such as
advanced computer software and processing power. Much of
American animation is outsourced to be “produced” by the
animation projects overseas, such as Japan, Korea,
Philippines, and Indonesia. PT Kinema Systrans Multimedia
is one of the animation studios which gets the projects of American animation studio. Also, the company gets the animation projects from Canada and Europe. The company divides its projects to the other studios in Indonesia, such as animation studios in Jakarta, Bogor, Bandung, and Malang. CV Imaji Studio is one of Indonesia’s animation studios, which is cooperating with PT Kinema Systrans Multimedia by outsourcing to create the animation.

Tschang and Goldstein (2004) said that the reasons for outsourcing in the animation industry are cost, quality, and lack of talents. Every eleven minutes of animation can be done by three months and fifty employees. Therefore, the animation projects need many employees and outsourcing is the solution to overtake the deadline. The price of the outsourcing projects is given by who gives the projects. The company is also conducted the quality control of the animation projects outsourcing. The reason for outsourcing is because the animation industry is labor-intensive. Same for some of these reasons, Gulbrandsen et al. (2009), MnNally and Griffin (2004) explained that outsourcing business model can enhance company performance because it helps to operate more efficiently, so the cost production will be reduced and the company managerial can focus on the core competencies.

Moreover, the industry also needs highly skilled employees. Yoon (2017) presented that outsourcing of this work is possible because the required codified knowledge can be easily transferred to other regions through codification and the use of manuals. Codified knowledge is usually obtained by on the job training or local technical trainers. Outsourcing is the solution to make animation industry more efficient.

The animation industry has been developing in developed countries, such as the United States and Japan. Its production cost is prohibitive. In a developing country, the animation industry starts to develop, but the production cost is cheaper than a developed country. It is the reason why animation studios in developed country shift the job to the animation studios in developing country by outsourcing system, although the standard cost is the international standard cost, the production cost can be cheaper.

There are four animation studios in this research receiving the service animation project from other animation studios both in domestic and international studios. The clients of PT Kinema Systrans Multimedia are Walt Disney and Sunrise. CV Imaji Studio has clients in domestic and international, namely MNC, PT Kinema Systrans Multimedia, and Tiny Island Studio. Anima Point, Ubisoft, and Wil Film are customers of PT The Little Giantz. The problems of outsourcing cause the clients to untimely manage the project timeline. The customers do not understand that the pre-production process is the crucial process that needs a long time to do the projects. This business model has a low loss risk because the market has already formed. In financial management, there is problem that the customers are often late in terms of payments. It is the main factor which can disrupt the financial division.

This business model also has problems in several divisions, such as human resources, finance, production, and operations. The number of qualified employees in the animation industry is low, so they are challenging to get. It is because the number of education majors and teachers for animation are low. The lack of human resources in animation studio causes the animations studios often reject the projects. The average rejected projects per year are two until three projects. Murphy et al. (2012) also presented their opinion that the biggest problem in outsourcing business model is lack of resources, such as employee, production and operations tools. On the other side, this is an opportunity and challenge for animation studios development.

Creating the concept and storyline is also influenced by the artist’s mood. If they are not in the right mood, it takes them too long to finish the job. The lousy mood artist may also cause the writing script and design not attractive. Meanwhile, in the finance division, if the clients are not on time to project payment, it will obstruct the cash flow.

The high cost of software and technology is the problem in production and operation division. The animation industry is not only labor-intensive but also capital intensive. The length of the rendering process is also a problem. Sometimes it causes the company losses. It is not only high of fixed cost but also the variable cost is high, such as electricity and water cost. Even though the cost of creating the animation products is high, sometimes the clients give the price under the production cost.

*The problems of Intellectual Property (IP) Business Model*

Intellectual property (IP) which is defined by World Intellectual Property Organization (WIPO) is creations of the thought, such as inventions, literary, artistic, designs, and symbols used in commerce (Boediman 2008). IP is protected by law. For the example patents copyright and trademarks which make the people to obtain the recognition or financial from that invention. By achieving the balance among innovator and public interest, IP system has the goal to grow up the environment of creativity and innovation.

In Indonesia, the implementation of the legal system protection by copyright law is not sufficient. The registration of copyright is low. This is the crucial problems in IP business model in Indonesia. Humphreys et al. (2005) also researched that the great challenge in the next few years is how to protect and control the IP. The problem of creating the IP is the policy regulated by contract. It can restrict the innovation. In Japan, there is strategy to develop the animation industry by emphasizing the IP piracy. Harris et al. (2012) said that to enhance the number of IP in creative industry, the support governments is the crucial key for developing it. They formulate five keys to drive the IP creation in country, there
are talent, funding, market access, be as open as possible, and convergence of the regulatory environment.

The result of the interview of the IP of animation companies, they said that IP products do not have the market certainty. After releasing the IP products, the company would like to market to the distribution channel. The low bargaining power compels to create the cost more efficient. They have to find the advertisement to make sure the sustainability of animation IP. The low-qualified employee is also a crucial problem in the animation industry. Moreover, the high price of software and technology are the problem both in outsourcing and the IP business model. They hope the government can help by creating the sureness market through some regulations.

Same for the research which conducted by Islam et al. (2013), Bangladesh animation industries have also the problems in their business. The lack of qualified employee is the crucial problem which can be handled by training has already started as several course, such as diploma and bachelor course and a few institutes of government and private. Lee (2010) confirmed that the availability of a skilful workforce is the important instrument to enhance the competitiveness in animation industry. Gill & Pratt, 2008; McRobbie, 2002; explained that the animation industry needs a young creative workforce that finds great opportunity between work, pleasure, and personal identity. Lee (2010) represented that the role of government policy in developing the animation industry cannot be easily generalized as there exists a huge diversity among countries in terms of industry structure and financing.

The analysis of factor conditions

Factor conditions refer to a nation’s position in factors of production in the animation industry, such as resource endowment, capital inputs, technology level and skilled labor. These are the basic factors which are important to support production sustainability. As the result, the involvement of governmental investment is crucial for the animation industry (Fang et al. 2018). Porter (1990) defined the factor conditions in diamond’s model are the nation’s factor of production, including natural resources and created factors, such as infrastructure and labor skilled. Also, Porter distinguishes between basic factors and advanced factors. Natural resources, climate, location, unskilled and semiskilled labor are basic factor. Advanced factors are modern communications infrastructure, scientist and engineers.

In this research, the amount and education level are advanced factors and the wages is the basic factors. The employee in the animation studio is divided into two types. There are permanent employees and contract employees. The salary average of contract employees is IDR 1.200.000 – 4.500.000 and the average salary of permanent employees is IDR 5.000.000 – IDR 15.000.000. Head of Division, Manager, Production Supervisor, Senior Artist, and supervisor are the position of permanent employees. The position of contract employees is staff, mid crew, technician, and junior artist.

The study reported that the animation industry in Indonesia is labor-intensive characteristic. The problem of animation industry is not only labor-scale, but also the lack of qualified workforce. Table 1 shows that the comparison of the number of employees in each animation firm and education distribution of employees. Besides capital, human resources play a core production of animation industry. The firms also give the basic training for all candidates which are not distinguished by education level. Recently, the curriculum education is not suitable with animation industry needed. This is the reason all animation companies applies the regulation.

The analysis of demand conditions

The study of Porter (2002) thinks that domestic demand is the impetus of industrial development. The domestic market is different from the international market in the aspect that domestic companies can find out the consumer requirement in time, which is out of the capacity of foreign competitors. Study of Yoon and Malecki (2009) found that television opened up a new market, stimulating demand for animations of varying lengths, short, feature-length, and in between, accommodated by the 30 and 60 min programming blocks. The variation of the animation products demand is motivation to animation industries for developing the animation industry competitiveness.

The animation products are more suitable for children and teenager people than adult people. It is the high market to create demand animation. Indonesia has potency to develop the animation industry because it has a significant market. BPS (2017) represented that Indonesia has a population of 267 billion. It is 3.49% of the world population. 0 – 14 years old people are 24.8% of the population total, and 68.7% is 15-65 years old. Not only domestic demand, international demand is also high demand. There are outsourcing system in animation industry shows the sub sector is prospect to be more developed. The animation studios which get the service from the international studio often rejected the projects. About 2-3 projects have been declined in one year by Indonesia animation studios. This conditions is defined by Shah and Tripas (2007) that when the target markets are turbulent and demand is uncertain, entrepreneurs face low opportunity costs and exhibit a high willingness to experiment. It is the opportunity for Indonesia to create the IP animation, which is based on cultural, art, and local wisdom. By creating the IP animation, it can introduce the Indonesia nationalism to the whole world. Papes and Clement (2008) also agreed that high turbulence and demand uncertainty favor user entrepreneurship. Today, some studios show little interest in providing content for the internet even though there is excess demand for it and customers are willing to pay. The low profitability of the internet market shows that many animation studios have missed the chance to develop the business models sustainability for serving the online customers.

The high animation demand represents that the animation sub sector is one of the keys to increase national economic
competitiveness. Subagja (2017) also said that the growing market demand indicates that the high growth of added value for creative industry products. The growth of added value becomes a crucial factor in determining the competitiveness of an industrial sector and contributes positively to economic growth.

The analysis of chance conditions

Porter (2002) represented that the events can make the opportunity for firms, such as new customers and new demand. Chance events can increase the improvement in the outside of the control of companies. Chance is the external factors which are not well foresight and it can almost be influenced by the sector. Some factors examples are new inventions, political decisions by foreign governments, wars, rapid changes in financial markets or exchange rates, surges of world or regional demand, discontinuities in input costs, and other radical technical changes. Chance is one of factors in the diamond’s porter model which influences by indirect to competitiveness. Government also influences indirect for that. Akombo and Odhiambo (2010) confirmed that chance is also another determinant that may affect or benefit a nation or industry. Barragan (2005) said that chance is the likelihood that external events such as war and natural disasters can affect or benefit a country or industry, but these events are entirely out of the control of the governments or managers within the industries. For the example of chance events, invention in basic technologies, economic crisis, wars, and shifting in foreign market demand. Oz (2002) also represented that chance events have usually been favorable for the industry.

The result of in-depth interview with animation studios, they have strategy to introduce their company. They often attend the exhibition, both domestic exhibitions, and international exhibitions. It is also their marketing strategy to obtain the animation market share. It is strategy of Indonesia animation studio to enhance “chance factor” for creating new market. It is opportunity for the animation studios to create the new market share. Porter (1990) also confirms the importance of opportunity from chance events for firms. It can promote continuous innovation and improvement. The owner of the animation studios said that the clients always repeat order, which shows that the clients are satisfied with the products. It is the opportunity for the animation industry to increase the animation product more creative. Creating a good relationship between industry and owner also can be the chance to make the company more sustainable. The chance of the Indonesia animation industry can grow larger by creating excellent value chain that involves the production until the marketing division.

The analysis of firm strategy, structure, and rivalry

Porter (2002) said that strategy business, structure, and rivalry are measured the situations which detail explain how a firm is originated systemized, managed, and how to control the domestic competition which can support the sustainability development goals of nation. National advantages emerged from a good harmony between selections and sources of competitive advantage in a particular sector. The domestic competition and the looking for it can supply the companies for succeeding it.

Porter (1990) also argued that domestic rivalry is superior to rivalry with foreign competitors. This argument may be true in large economies such as the United States, but not in small economies such as Canada, Korea and Singapore. Many success animation firms in Korea and Singapore are more concerned the international competition than domestic.

Based on the in-depth interview, every animation studio has a different strategy to develop it. There are many strategies to create a sustainable company, such as strategy in marketing, cost production, and human resource. Getting the new market or potential market is the award of the company. It represents that the company has the value and trust of the clients. The strategy to create that is creating a high-quality product. It can be achieved by having the right human resource qualified. That is a huge asset to the company. The brand company is also the key to obtain the client’s trust. The other strategy is looking for the cheaper operational equipment like software and technology. The animation studio argued that they do not have the rivalry in domestic, because the animation projects for outsourcing industries are more than the amount of animation studio in Indonesia. Particularly for outsourcing industries, they seldom reject the project because of lack of the human resources. The quality of animation product is the strategy to compete to other companies. Porter (1985) confirmed that rivalry among existing competitors and new competitors are the factor which determine the ability of a firm, whether large or small, to be successful. To succeed in building competitive advantage, a company must aim at providing buyers with what they perceive as superior value, prices lower than competitors for equivalent benefits as well as provision of unique benefits that more than offset premium price.

The analysis of related and supporting industry

Akombo and Odhiambo (2010) said that related and supporting industries where internationally competitive home based suppliers create advantages in downstream industries in several ways. They give the most efficient cost inputs effectively and rapid. Porter (1998) confirmed that far more significant is that home based related and supporting industries provide in innovation and upgrading advantage based on close working relations. Suppliers can take the short channel of communications to provide the quick and constant of information and to sustain the notion and innovation.

Based on this analysis, the animation studios said that the problem of this industry is high price of technology including software. They explained that media or channel distribution of animation products is more likely the international animation products than Indonesia animation products to show in their channel because the price of international animation products
is lower than Indonesia animation products. Policy government is the crucial factor to create the animation industry more competitive. The animation studios agreed that the government help to reduce input costs by creating the incubator, especially to animation industries. The government can provide the technology and software for rent to animation studios. They can use together by incubation scheme. They can use technology and they can make the cost more efficient. The value chain of animation industry is centered on creation in the form of animations and cartoons. For the example: The series animation products “developing, producing, publishing, and performing them” are promoted by film and TV producers.

**The analysis of government**

Diamond model of Porter also includes two assistant factors, there are governance and opportunities. The impact of government policy cannot be ignored because the government can create new opportunities and pressure. Therefore, only when the government plays its role well, will it become a force to expand the diamond system (Porter, 1998). The indirect role Porter envisages for government, on the other hand, makes this diamond element one of the most criticized areas of his study (Harris and Watson, 1993; Stopford and Strange, 1991; Bosch and man, 1994). Rugman and Verbeke (1993) also confirmed that the government factor is very important in influencing nation’s competitive advantage. Government frequently pursues interventionist trade and industrial strategies. Moon (1992) explained the example for the conditions. In the 30 years, Korea’s economic growths have been marked by phases, such as government intervention in economic and business.

Indonesia animation studio, which was interviewed, said that the government had made such a policy to develop the animation industry, but its impact is not too huge for animation studios. Indonesia government by Education and Training Center Indonesia or Balai Diklat Indonesia (BDI) has conducted the training to obtain the qualified employees. They know the crucial problem in the animation industry is lack of qualified employees. Therefore, BDI earns to create the solution to the problem by training. The animation studios represent that the recruitment, which is conducted by BDI, is not active now. There are some problems, for example, the trainee cannot obtain a qualified employee in a few days. They need the notion of how to achieve the goal by efficiency and effectiveness. The animation studios also earn to get the subsidy if their animation products are shown on national television. Animation sector needs the policy government to enhance the competitiveness. The state is confirmed by Li (2011) that policy is important to the development of the Chinese animation industry, and worthy of examining specifically and critically. Chang (2008) explained that this policy is important because the reputation of animation industries is not as respectful in China as in Japan and United States. It is not easy for China which has the traditional value system. There are some countries which have policy to develop animation sector, there are Japan and Korea. They give the tax subsidy to the animation studio, which is showing the products on national television. It aims to create the local animation industry more competitive than the international animation industry.

Based on in-depth interview with Bureau of Creative Industry, they said that Indonesia has the great opportunity to develop the animation industry. Indonesia has many unique stories which is being the topic of animation films or series. Bureau of Creative Industry often make the meeting with Association of Animation Industry in Indonesia to analyze the problem of its sector and to create the policy of the problems. The solution of the lack of qualified employees is to introduce the animation industry to the schools and universities. It is strategy to get the interest of teenager to the industry. The high cost of technology is the crucial problems in the animation sector. Bureau of Creative Industry and some ministries in Indonesia are cooperating to develop the incubation scheme for animation studios. The government hopes the animation studios get the benefit of the incubation scheme which provides some facilities for the industry. The animation studios can use the technology together by rental system in incubation scheme. The strategy can reduce the input costs and increase the competitive advantages. The animations studios also hope the amount of local animation is more than international animation which is showed in national television. The animation studios eager the government can create the policy, so the local animation can succeed in their country. The result is confirmed by Li (2011) that media, geography, and policy are regarded as three main dimensions for analyzing the development of the Chinese animation industry.

**The strategy development of two business model of animation industry**

From the analysis the mapping of animation industry business model, the problem of Indonesia animation industry and the Diamond’s Porter Model, it can be formulated the strategy development of Indonesia animation industry. Based on the analysis, there are many problems in Indonesia animation industry, both internal organization or external. Lack of qualified human resources, high fixed cost and variable cost, quality products based on artist mood are the problems in internal organization. The external problems are no suitable education curriculum for animation industry needs, late payment, no involving of government in financial, and the low of airing the Indonesia animation products in domestic media.

Based on the research, there are five stakeholders in developing centers of flagship Indonesia animation industry. Freeman (1984) represented that pentahelix focuses on developing entrepreneurship or small and medium enterprises by academicians, business, community, government, and media. Stakeholders are individual or group which influences or is influenced by the achievement of organizational goal. Muhyi et al. (2017) explained that the problems of
collaboration in this case are lack of coordination and lack of commitment among stakeholders. Communication of the actors is not effective for the other actors among the stakeholders. Academicians have a role as the advisor and they facilitate the development from scientific and knowledge perspectives. Business has the role to create the value added and to make the growth sustainability. Community has the crucial role on the centers of industry. Community is a facility for businessman in developing and strengthening business entity. The government has the role as regulator and catalyst in developing industry. Media can promote the brand image of industry.

In this research, every stakeholder has a role to create the strategy development of animation industry. Collaboration and commitment among actors should be stronger to establish policy’s government. Every strategy needs the coordination between stakeholders. For the example, in designing in training program, community of Indonesia animation industry and government can collaborate to make the training program which is appropriate with animation industry needs. Sometimes, in some programs the content of training is irrelevant to the industry needs. It is for the human resource which is interested in the animation industry before working in animation studios. The teacher to trainee is professional from animation studios. By the strategy, it is hoped that it can comply with the lack of qualified employees in the animation industry. Islam et al. (2017) said the animation sub sector in Bangladesh needs skill hands in various parts of animation through training and courses. Because this is the way they can improve and empower the population in this sector. Compared to other countries, Bangladesh can provide low-priced of any animation product. The training has already started as a diploma course, certificate course, and bachelor course in a few institutes of government and private. All these courses are related to multimedia but not fully animation courses. Community of Indonesia animation industry and government also can cooperate to create the exhibition obtain the new market share, both domestic and international market. To introduce and promote the Indonesia animation industry should create an international exhibition to obtain the new market share. It is appropriate for the animation industry, which is focused on outsourcing. By promoting their company, it can get more market in an international company. It is achievable if Indonesia animation companies have greater competitiveness, both good quality, and reasonable price.

Government is the leader to form the incubation scheme based on the animation industry necessity. Collaboration between government, business sector, academy, and community can support the industry by making the incubation scheme to create the efficiency costs. The incubation gives funding to develop their company. It can provide the facility which is used by animation studios. For example, the government buys the license of software to reduce the high production costs. By incubation scheme, the Indonesia animation industry can obtain greater competitiveness. IP business model can obtain the low research cost to create the character and storyline. By the excellent incubation scheme, it is expected that IP can have more quantity and quality. The outsourcing business model can also use the facilities. The government can also make the financial policy which can enhance the competitiveness by cost efficiency, such as tax subsidy. Moreover, government develops the co-working space to reduce the saturation of mood artist. Co-working space is an office which can be used or rented for a start-up company to develop their company. The low cost of co-working space aims to reduce the high variable cost, such as electricity and water bill. The cozy co-working space has a goal to create a pleasant work environment. It is to obtain a good mood artist necessary to build the character and storyline. It is the strategy to resolve the problem for the uncertain mood of the artist.

Academicians can collaborate to develop the suitable of education curriculum with animation industry needs. It can be arranged by collaborating between business sectors, communities, and government. The lack of qualified employees in the animation industry is a crucial problem in this industry. In Indonesia, there are many educations with animation background, but the number of teacher with specific competency in the animation industry is low. Furthermore, the curriculum in animation education, both senior high school and bachelor's degrees, are not suitable for industry needs. Academicians have a role as the advisor and they facilitate the development from scientific and knowledge perspectives. Not only ideas and methods, they can contribute to create the technology which is more efficient than before to animation industry. It is the important factor to make business more sustainable.

Business sector has potency to develop the industry chain model. By collaborating between governments, communities, and academicians, it can make the animation industry chain more effective. The problems of the Indonesia animation industry are caused by the incompletion or even the chain fracture. Therefore, the innovation, technology, and creating the industry chain model are the key to the development in the Indonesia animation industry. Optimization the industry chain structure can increase the value of upstream and downstream creation supply and establish the connections and cooperation between animation products, such as cartoon, animation and derivatives. Furthermore, it can extend lifecycle of animation products chain to shape a complete industry chain by effectiveness business model. The other crucial problems in internal organization of animation industry are payment late. This problem is for outsourcing business model. Industry should arrange the payment method which is no financial loss for customer and producer. This is strategy to keep the sustainable business in financial sector.

Media is the actors which has the role for developing and promoting the business. Media is also channel distribution of animation products. Indonesia Television is more likely foreign animation products than Indonesia animation products. It is conducted because the price of foreign
animation is lower than local animation. By coordinating all actors in Penta Helix, they can formulate the policy to develop the animation industry competitiveness, particularly reducing the input costs. Furthermore, the local animation products can be showed in national media.

IV. CONCLUSIONS

Based on the analysis of the mapping and problems of animation industry and Diamond’s Porter Model, it can be formulated the strategy development of the Indonesia animation industry. The analysis of Diamond’s Porter Model shows that there are some problems in each factor. Indonesia has a chance to grow the animation products by creativity and human thought, but there are challenges in the industry, such as lack of qualified human resources, high fixed cost and variable cost, quality products based on artist mood, no suitable education curriculum for animation industry needs, late payment, no involving of government in financial, and the low of airing the Indonesia animation products in domestic media. Government should make the policy to increase the competitiveness of Indonesia animation industry.

There are two business models of Indonesia animation industry, such as intellectual property (IP) and outsourcing. PT The Little Giantz, PT Ayena Mandiri Sinema, and PT Kinema Systrans Multimedia are the company which have the intellectual property (IP). CV Imaji Studio is the only subject in this research that has no intellectual property. The company is a service company which receives projects from other animation studio. Not only creating the IP but also the other three companies obtain the service from other animation studios. The different of them is the source of story idea and concept. The idea of IP is from own company, but the story idea of outsourcing is from the customer. After developing the idea, the next activities of IP business model are development, agree terms with broadcasters, and production. The main products of the IP business model are films and TV series and the other products are merchandise, toys, and DVD. The main products are shown by TV, You tube, and cinema. There are two types of outsourcing business models. There are the source of idea from international company and domestic company. Different with IP business model, there is no activities to agree term with broadcaster in outsourcing business model. After the company shares the concept and idea, the outsourcing company can develop and produce the products. There is not marketing activity in this business model, because the activity is conducted by customer. The main products of first type of outsourcing business model are films and TV series and the other products are merchandise and toys. The channels of the main products are TV, You tube, and cinema. Furthermore, the main products of second type of outsourcing business model are advertising and website. The channels of the main products are TV, You tube, cinema and personal website.

After analyzing of the problems and the mapping of Indonesia animation products, it can be arranged the strategy development. By collaborating between stakeholders in Penta Helix Model, it can enhance the competitiveness of Indonesia animation industry. The stakeholders are business sector, government, community, academy, and media which play a role to develop the strategy. Every actor plays in a role of each strategy development. Business sector is the leader to develop making the effectiveness payment method and industry chain. Government can be arranged the establishment of co-working space and incubation scheme. Government also plays in a role the financial system, such as tax subsidy. Community of Indonesia animation industry has the role to develop the exhibition and training by coordinating all stakeholders in the model. In the model, academicians have the function to make suitable of education curriculum with animation industry needs. Moreover, they also can contribute to create the technology which is more efficient than before to animation industry. Media which is the channel distribution of animation products plays a strong role to promote them. The media can air the local animation product.

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REFERENCES


Table 1. Education distribution of employees in the animation industry

<table>
<thead>
<tr>
<th>Education level</th>
<th>PT The Little Giantz</th>
<th>PT Ayena Mandiri Studio</th>
<th>PT Imaji Studio</th>
<th>PT Kinema Systrans Multimedia</th>
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</thead>
<tbody>
<tr>
<td>Junior High School</td>
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<td>1</td>
<td>0</td>
<td>0</td>
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<td>10</td>
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<tr>
<td>Bachelor Degree</td>
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<td>5</td>
<td>11</td>
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</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>15</td>
<td>31</td>
<td>320</td>
</tr>
</tbody>
</table>
Figure 1. Contribution of the creative economy sector to the economic sector in several countries on 2016

Figure 2. The Diamond’s Porter Model

Figure 4. Intellectual Property (IP) Business Model of Indonesia animation industry
Figure 5. Outsourcing Business model from foreign country in Indonesia animation industry

Figure 6. Outsourcing Business Model from domestic country in Indonesia animation industry

Figure 8. The Model of Indonesia Animation Strategy Development