

# THE HUMAN CAPITAL AND THE INSTITUTIONAL CHANGES OF TRIPLE HELIX IN HANDICRAFT CREATIVE INDUSTRIES

**GENDUT SUKARNO**

*UPN "Veteran" Jawa Timur*

E-mail : sukarnogendut@yahoo.co.id

**LIELI SUHARTI**

*Faculty of Economics and Business, Satya Wacana Christian University*

E-mail : Lieli.suharti@staff.uksw.edu

## ABSTRACT

**2015 will be the year of commencement of economic integration among ASEAN member countries in the form of the ASEAN Economic Community (AEC). In order to face the era of free market in Southeast Asia, the world of business must take strategic steps to compete with other ASEAN countries, especially the creative industries sector. Of the 14 sectors of the creative industries, the value added fashion and handicrafts subsector is dominant, respectively for 43.02% and 25.12% of the total contribution of the creative industries sector. One major obstacle factor for Cooperatives and SME sectors including creative industries to compete in the free market is the quality of human resources (HR) SMEs are generally still low. Not quite managed by institutions as static and partial, but necessary changes and institutional reform in the face of MEA in 2015. There are at least three major institutions in the innovation system in Indonesia, namely research institutions including universities and non-departmental agencies, industry and the government, known as Triple Helix.**

**This study aimed to assess the contribution of human capital and institutional changes of The Triple Helix on the growth of handicrafts creative industries in Surabaya. The population in this study were all the owners / managers of creative industries from 14 sectors, with a sample of 40 respondents of handicrafts creative industries in Surabaya. The data analysis technique used was PLS (Partial Least Square) which was an alternative method of analysis with Structural Equation Modeling (SEM) based on variance.**

**Results of the study found that human capital was able to provide a significant contribution to the growth of the handicrafts creative industries in Surabaya, as well as the institutional changes of Triple Helix was also able to contribute significantly to the growth of the handicrafts creative industries in Surabaya.**

**Keywords:** *Human Capital, Triple Helix, Creative industry, The Institutional Changes*

## INTRODUCTION

ASEAN Economic Community (AEC) was implemented in 2015 after a long time delay for its application. In facing MEA, Indonesia should begin to be prepared if it does not want to become an easy target for the products invasion from the ASEAN member countries. There is an integration of "free trade area" to be occurred through MEA, a removal of trade tariffs among ASEAN countries, as well as free labor market and free capital market, which will affect the economic growth and the development of each country member. The existence of the ASEAN Economic Community (AEC) will bring opportunities and will also raise the threats to its members.

Some parties considered that until this time, the government has not made any comprehensive policy to face AEC that is coming nearer. In fact, other countries such as Malaysia, Singapore and Thailand have already had special strategies so that their economies can take optimal advantage in the ASEAN free market. Towards the implementation of the AEC in 2015, it seems that Indonesia has not been able to make a proper preparation related to Human Capital improvement. It is seen in the Human Development Index (HDI) indicator in 2013 that was issued by UNDP (United Nations Development Program), Corruption Perceptions Index (CPI) 2013 that was issued by Transparency International, and Global Competitiveness Index (GCI) 2013-2014 which was issued by World Economic Forum (WEF).

In terms of human capital strength, Indonesia is still fairly far behind some neighboring countries. HDI in Indonesia is still fairly low, at only 0.62 and It is involved in the group of countries with HDI category of medium human development. HDI in Indonesia is still far below Singapore (0.89) and Brunei (0.85) which are able to perform very advanced in the group of countries with HDI category of very high human development. Malaysia is also

quite far above Indonesia with HDI of 0.76 and it is classified in the category of high human development countries.

One of the main obstacle factors for SMEs including creative industries to compete in free market era is the quality of human resources (HR) of SMEs agents that is generally still low. Related to the increasing competition in business, small manufacture industries in Indonesia should make sense that organizational competition success can be achieved with the management of their potential human resources (employees). HR can be used as a source of sustainable competitive advantage and is not easily imitated by the competitors because successful compete obtained from the effective HR management can be a company's competitive advantage. Therefore, the implementation of Human Capital Management has become something that must be implemented by the company.

The importance of Human Capital's role in sustaining the performance of small industry is reinforced by a research conducted by Santos (2012) to 140 SMEs in Spain. The results showed that Human Capital was able to contribute to Cumulative Growth Rate of SMEs in Spain. The findings of other study conducted by Huang and Hsueh (2007) showed that the combination of capability, competence, satisfaction, employee sustainability would create human capital productivity. Several other studies (Seleim et al., 2007; F-Jardo'n & Martos, 2009), also showed a positive influence of Human Capital on Business Performance. A number of other studies (Chen, 2004; Cabrita & Bontis, 2007; Sharabati et al., 2010), more specifically indicated that Intellectual Capital variable (IC including Human Capital) had significant and positive imoact on Business Performance.

Another important thing to do in Indonesia in order to take advantage of the opportunities that arise in AEC era is to build a major force in which each element incorporated in the Country should be synergistic and participative. There are at least three

major institutions in the innovation system in Indonesia, namely research institutions including universities and non-departmental agencies, the industries and the government. All three are known as Trio ABG or popularized by the Triple Helix concept that includes academic, business, and government (Etzkowitz & Leydesdorff; 2000).

Application of Trio ABG concept is not a new concept when it is applied partially or each field runs for itself. But there should be institutional change and renewal in every area, whether in the field of academic, in the field of Business, as well as in the field of government, especially in facing AEC. The changes may occur at any level, there is no permanent institution, but it always turns towards more efficient institutional setting (institutional arrangement).

The bond of each institution should go well so that the flow of knowledge from one institution to another institution may run smoothly. In this thing lies the importance of national innovation system. Indonesia has no concept that really binds these three institutions so that it can be said that each institution runs for itself, whereas one another cannot be separated or interconnected. It is also necessary to develop a regulation to strengthen the Trio ABG (Triple Helix) institutions.

University academics are introduced to the concept of entrepreneurship in order to foster change and anticipate very fast changes. For the mastery of technology, it cannot be negotiable. Thus, the college graduates are designed not only to be able to master their competency fields, but also experts in observing the market changes. Related to the industry, there is still no tagline in Indonesia which is actually incorporated with this. Indonesia should establish the national and regional industrial clusters to enhance the competitiveness of the country and national wealth equitable distribution as well as strengthening the unity and integrity.

In the running process of the two institutions above, it is necessary to build bureaucratic efficiency. The government needs to support their performance and tackle it directly. In addition, there should be a clear emphasis on the regulation of these two institutions. Furthermore, there should be a clear policy on the country vision in achieving social prosperity through Trio ABG (Triple Helix) institutions.

According to Etzkowitz & Leydesdorf (2000), the resetting of ABG relations in Triple-Helix is the result of expectation on the level of communication and networking. Relationships that appear in Triple Helix, are generally started from efforts to solve problems and generate strategies in facing problems in innovation, rather than determined from a certain pattern. Through this interaction process, changes will occur in actors and the roles they do (Leydesdorff, 2005). Thus, the pattern of triple-helix innovation is dynamic along with time change. The above description shows that Trio ABG not only need to improve the industry innovation, but more importantly to improve the change pattern in the institutions.

Other studies submitted by Sukarno (2014) found that the Triple Helix had a significant contribution to the growth of creative industries. Another study conducted by Smith & Leydesdorff (2012) entitled "The Triple Helix in the context of global change: dynamics and challenges". The findings in this study demonstrated the dynamics and reciprocal exploration of innovation in the Triple Helix and systemic global economy. In another study (Ivanova & Loet Leydesdorff, 2014), it was concluded that the Triple Helix (TH) was a national system, which contained sectoral and regional systems, and was a constituent part in technology system and supra-national innovation that required institutional improvement in Science, Business and Government dimensions.

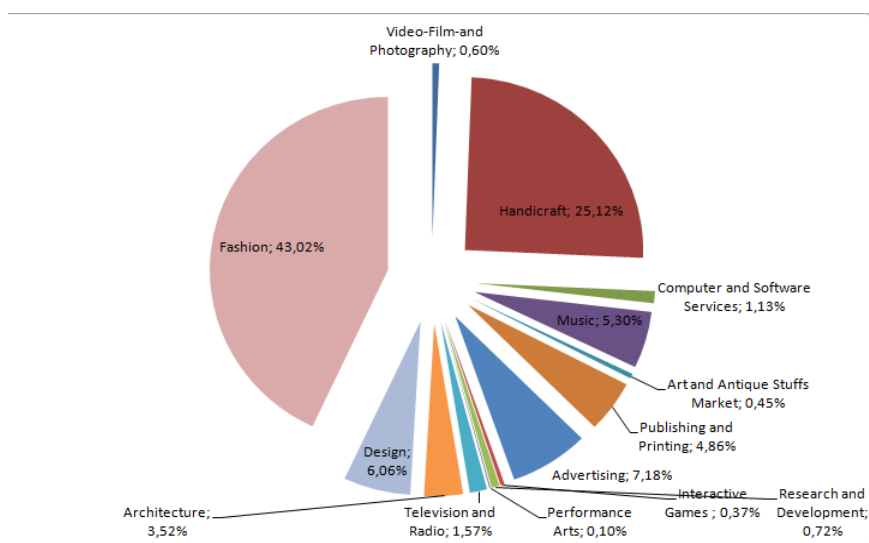
To face the free market era in Southeast Asia, the business world must take strategic steps in order to face competition with other ASEAN countries, and creative industries sector

is not excluded. Creative industry has been announced by the Ministry of Tourism and Creative Economy of Indonesia to consist of 14 sub-sector fields in it, namely: Advertising, Architecture, Art and Antique Stuffs Market, Handicraft, Design, Fashion, Video-Film-and Photography, Interactive Games, Music, Performnace Arts, Publishing and Printing, Computer and Software Services, Television and Radio, Research and Development.

Fashion and Handicraft sub-sectors are the dominant creative industry sectors in contributing to the economy. Both industry types have become the locomotive in national creative industry development. The contribution of fashion and handicraft is far above the contribution of other small industry types, both in plus value, the number of labors, and the export level (Director General of Small and Medium Enterprises, 2014, [www.harianterbit.com](http://www.harianterbit.com)). From the 14 sectors of the creative industries, the plus value generated from fashion and handicrafts subsectors in 2010 were 43.02% and 25.12%, respectively from the total contribution of creative industries sectors.

Figure 1

**The Mean of Creative Industry Contribution towards Creative Industries (2006-2010)**



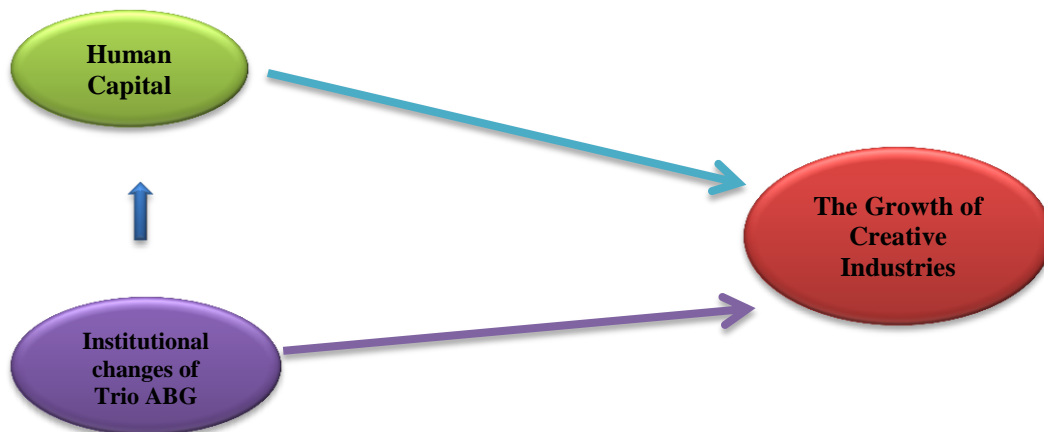
Based on empirical studies above, this study aims to synergize the concept of Human Capital and Institutional Change in the context of Trio ABG to enhance the growth Handicraft sub-sector of creative industry in East Java, Indonesia. The main issues raised in the study are: 1). Is Human capital able to contribute to the growth of Handicraft creative industry?; 2). Are institutional changes of TRIO ABG able to contribute to the Human Capital of Handicraft creative industry?; 3). Are institutional changes of TRIO ABG able to contribute to the growth of Handicraft creative industry?

## STUDY FRAMEWORK AND HYPOTHESES

The conceptual framework of this study can be described as follow

Figure 2

### Conceptual Framework



### Hypothesis:

1. *Human capital affect the growth of Handicraft creative industry*
2. *Institutional changes of TRIO ABG affect the Human Capital of Handicraft creative industry*

3. *Institutional changes of TRIO ABG affect the growth of Handicraft creative industry?*

**Study Methods**

This study was an explanatory study, which aims to observe the relationship between variables by using quantitative approach. The population in this study were all handicraft business which is one of 14 creative industry sectors located in Surabaya. While the samples in this study were the owners or managers of Handicraft creative industries as many as 40 respondents who were determined by using accidental sampling technique.

The measurement of the variables studied used a scale from previous studies. Human capital variable (X1) reflects the company's collective ability to produce the best solution based on the knowledge possessed by the people in the company. Human being as human capital is reflected in the form of knowledge, ideas, creativity, skill, and labor productivity to produce professional services. Human capital measurement variable in this study used human capital component according to Mayo (2000), which consists of a. Individual capability, b. Individual motivation, c. leadership, d. the organizational climate, and e. workgroup effectiveness.

Institutional changes of Trio ABG variable (X2) is a change concept that is a creation of three poles synergy between academia, business, and government parties which has a goal of sustainable economic development based on knowledge. The indicator used in this study used the scale developed by Murniati, (2009) which includes: 1. Academics/Intellectual: a. R & D Changes; b. Resources Changes; 2. Business: a. Production changes; b. Commercialization Changes; 3. Government: a. Regulatory changes; b. Entrepreneur Changes.



Creative industry is an industry that is derived from the utilization of creativity, skills and individual talents to create wealth and jobs by generating and exploiting the creativity and inventiveness of the individual. The growth of creative industry can be measured by the indicators according Anggriani, (2008) which include: a. Individual creativity; b. More Employment; c. Improving standard of living.

The data collection technique used a structured questionnaire, in which all statement items are stated in the Likert scale of 1-5, where 1 means strongly disagree and 5 means strongly agree.

Data analysis techniques used in this research was Partial Least Square (PLS). According to Wold (1982) PLS was a powerful analytical method, and therefore it was not based on many assumptions. PLS method has its own advantages such as: data do not have to be in multivariate normal distribution (indicator with a scale category of ordinal, interval until ratio can be used on the same model) and the sample size should not be large.

## **RESULTS AND DISCUSSION**

### **Reliability Test**

**Table 1**

#### **Cronbach's Alpha and Composite Reliability**

<b>Variable</b>	<b>Cronbachs Alpha</b>	<b>Composite Reliability</b>
Human Capital (X1)	0,785981	0,853059
Handicraft Creative Industry (Y)	0,770549	0,866903
Institutional Changes of Trio ABG (X2)	0,650629	0,784814

Cronbach's Alpha coefficient was calculated for estimating the reliability of each scale. Consistency reliability test results for each construct produced good reliability, with most of Cronbach's Alpha coefficients obtained were  $>0.70$  [0.785981; 0.770549; 0.650629] and met the required rules of thumb i.e  $\geq 0.7$  (Jörg Henseler, et.al., 2013). Construct Reliability was measured by the composite reliability value, the construct was reliable if the composite reliability value was above 0.70 then the indicator was called consistent in measuring its latent variables. The test results indicated that the constructs (variables) of Human Capital, Growth of Creative Industries and Institutional Changes of Trio ABG had composite reliability values greater than 0.7, thus they were reliable.

### **Validity test**

#### ▪ *Outer loading*

Variables with reflective indicator were Institutional changes of Trio ABG, Human Capital, the Growth of Creative Industries, showed that all variables and all indicators had factor loading greater than 0.50. So that the indicators were the indicators of the variables of Institutional changes of Trio ABG, Human Capital, the Growth of Creative Industries and have met Convergen vailidity and good validity.

#### ▪ *Average variance extracted (AVE)*

It is required a good model when the AVE value of each construct is greater than 0.5 (Jörg Henseler, et.al., 2013)..

**Table 2**

**Average Variance Extracted (AVE)**

Variable	AVE
Human Capital (X1)	0,541980
Handicraft Creative Industry (Y)	0,686292
Institutional Changes of Trio ABG (X2)	0,439820

The test results showed that the AVE value for constructs (variables) Human Capital, the Growth of Creative Industries had AVE value greater than 0.5, so that they were valid. Institutional Changes of Trio ABG variable had AVE value smaller than 0.5 so that its validity was low.

▪ ***Goodness-Fit Model Test***

The test on the structural model was performed by looking at the R-Square value as test for goodness-fit model. The  $R^2$  value explained how much an exogenous (independent) variable in the model was able to explain the endogenous (dependent) variable.

**Table 3**

**R-Square**

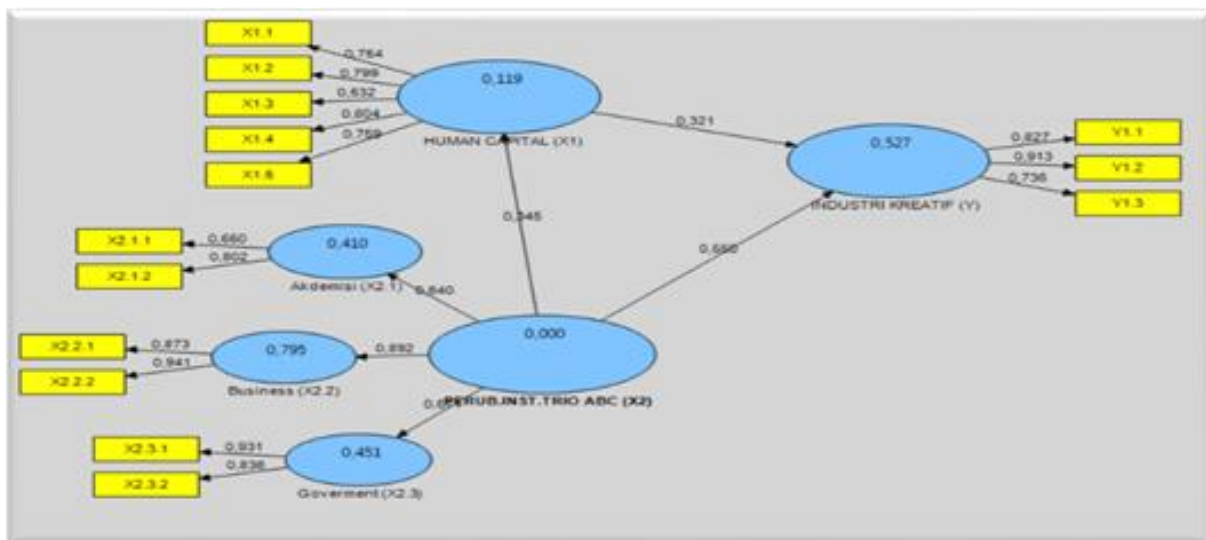
Variable	R-Square
Human Capital (X1)	0,118865
Handicraft Creative Industry (Y)	0,526963
Institutional Changes of Trio ABG (X2)	

Based on the table above, it can be seen that the influence Model of Human Capital on the Growth of Creative Industries and Institutional Changes of Trio ABG gave R-Square value of  $R^2 = 1 - (1 - 0.118865) (1 - 0.526963) = 0.5832$ . Thus it can be interpreted that the model had a pretty good ability in explaining the phenomenon of the Creative Industries, amounting to 58.32% while the remaining 41.68% was explained by other variables (in addition to Human Capital and Institutional Changes of Trio ABG), which have not included into the model and error.

- *Path Analysis*

Figure 3

The Diagram of PLS Output Result Path



▪ *Causality Test*

**Table 4**

**The Results of Causality Test**

	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>Standard Error (STERR)</b>	<b>T Statistics (O/STERR)</b>
Human Capital (X1) The → Industry Growth (Y)	0,320552	0,323809	0,135352	0,135352	2,368274
Institutional Changes of Trio ABG → (X2) Human Capital (X1)	0,344768	0,378227	0,200020	0,200020	1,723668
Institutional Changes of Trio ABG → (X2) The Industry Growth (Y)	0,550107	0,551854	0,105884	0,105884	5,195398

The data analysis results based on tables 3 and 4 above show that:

1. Human Capital (X1) could contribute to the growth of handicraft creative industries (Y) with a path coefficient of 0.320552 with T-Statistic value = 2.368274 greater than the value of  $Z \alpha = 0.10 (10\%) = 1.645$
2. Institutional Changes of Trio ABG (X2) could contribute to Human Capital (Y) with a path coefficient of 0.344768, with T-Statistic value = 1.723668 greater than the value of  $Z \alpha = 0.10 (10\%) = 1.64$

3. Institutional Changes of Trio ABG (X2) could contribute to the growth of Handicraft Creative Industries (Y) with a path coefficient of 0.550107 with T-Statistic value = 5.195398 greater than the value of  $Z \alpha = 0.10 (10\%) = 1.645$

## DISCUSSION

### **The Effect of Human Capital Towards Handicraft Creative Industries**

One of the main obstacle factors for SMEs including creative industries to compete in free market era is the quality of human resources (HR) of SMEs agents that is generally still low. In terms of human capital strength, Indonesia is still fairly far behind some neighboring countries. HDI in Indonesia is still fairly low, at only 0.62 and It is involved in the group of countries with HDI category of medium human development, and this is still far below Singapore (0.89) and Brunei (0.85) which are able to perform very advanced in the group of countries with HDI category of very high human development.

In line with the above description, the results of causality test showed that Human Capital was able to contribute to the growth of the handicraft creative industries in Surabaya. These conditions indicated that the higher the human capital owned by the handicraft business which includes individual capability, Individual motivation, leadership, the organizational climate, and workgroup effectiveness, the higher the growth of creative industries. It can be observed from the loading of each indicator that tended to be high: 0.753591; 0.798672; 0.531645; 0.803807; 0.758533.

Related to the aspects of individual capability and Individual motivation, handicraft creative industries in Surabaya greatly appreciated/agreed the need to increase the individual's ability and individual's motivation as business agents. The ability should always

be innovative in terms of the ability of design and craft creations. Besides, the motivation as business agents in the handicraft world must be continually built and should not be extinguished. Another aspects of leadership and organizational climate in creative industries should be continuously controlled. So, the leaders in creative industries must be able to manage their subordinates. A leader who has a brilliant intellectual should certainly be able to create a good organizational climate in handicraft business. The other thing is workgroup effectiveness that is needed in building a strong human capital. Workgroup effectiveness owned by handicraft creative industries will be able to produce a high performance as a result of obtaining the effective work group. A solid human capital will have an impact on the growth of the creative industries that is reflected by the increasing creativity of individuals, the increased availability of employment; and can improve the standard of living of the entrepreneurs.

The above description is in accordance with the researches conducted by Santos et al., (2011); Huang & Hsueh (2007); Seleim et al., (2007); F-Jardo'n & Markos (2009); Sharabati, et al., (2010); Chen et al., (2004); and Cabrita & Bontis (2007), which also found that Human Capital affected the business performance. From the above phenomenon we could see the need for the continuous improvement of the Human Capital in handicraft creative industries in the form of attention, improvement, and guidance to the Human Capital.

### **The Influence of Institutional Changes of Trio ABG Towards Handicraft Creative Industries**

Indonesia condition which was reflected in the discussion above was not managed by institutions in static and partial manner, but the changes and reformation as well as institutional synergy are necessary. Institutional changes can be made in the institutional aspects of: R & D changes; resources changes; production changes; commercialization

changes; regulatory changes; entrepreneur changes and it could be seen from the loading of each indicator that tended to be high: 0.6496; 0.8019; 0.8732; 0.9414; 0.9305; 0.8355.

In line with the above description, the results of causality test showed that the institutional changes of Trio ABG were able to contribute to the growth of handicraft creative industries. That condition indicated that the handicraft creative industries in Surabaya appreciated/agreed and required the role of all three institutions (Trio ABG) in promoting growth of handicraft creative industries in Surabaya. But the more important thing is not only the role of the three institutions in partial and static manner, but the synergic role with the changes of each institution (academics, business, and government).

The synergic institutional changes of Trio ABG could impact the growth of the creative industries that is reflected by the increasing individual creativity; more employment; and improving standard of living with a high enough indicators of 0.827; 0.913; 0.736. The results are consistent with several previous studies conducted by Etzkowitz & Leydesdorff (2000); Leydersdorff (2005); Sukarno (2014); Smith & Leydesdorff (2012); Ivanova & Leydesdorff(2014).

### **The Influence of Institutional Changes of Trio ABG Towards Human Capital**

Reading from the discussion above, in terms of the strength of human capital, Indonesia is still fairly far behind some neighboring countries. HDI in Indonesia is still far below Singapore (0.89) and Brunei (0.85) which are able to perform very advanced in the group of countries with HDI category of very high human development. HDI in Indonesia is still fairly low, at only 0.62 and it is involved in the group of countries with HDI category of medium human development.

Such Human Capital phenomena condition can be overcome with the role and involvement of other parties which are performed continuously on the bargaining position of



human resources. Other parties such as discussed in the section above is the 3 Institutions called Trio ABG. All of these three institutions are the agents of change that are expected to provide care and improvement of human capital in handicraft creative industries.

In line with the above description, the results of causality test showed that the institutional changes of Trio ABG were able to contribute to Handicraft Human Capital in Surabaya. The condition indicated that the handicraft creative industries in Surabaya appreciated and needed all attentions for the improvement and enhancement of human capital in terms of changes in Academics, Business, and Government institutions concerning the aspects of: individual capability, Individual motivation, leadership, the organizational climate and workgroup effectiveness.

The description above is in accordance with the research conducted by Etzkowits, H & L. Leydesdorff, 2000; Leydesdorff, 2005); by synergizing the 3 helix (Academic, business, government) accompanied by reformation and institutional changes in the agencies optimally 3, solid human capital excellence will be generated.

## **CONCLUSION**

The study results found that Human Capital was able to contribute in the growth of craft creative industries in Surabaya. The same thing, the institutional changes of Trio ABG were able to contribute to craft Human Capital in Surabaya. Furthermore, Trio ABG changes could contribute to the growth of craft creative industries in Surabaya, East Java.

These findings indicated that the craft creative industry agents needed the attention for the improvement and enhancement of human capital in the aspects of: individual capability, individual motivation, leadership, the organizational climate, and workgroup effectiveness.

Likewise, Trio ABG institutional changes were able to contribute to the growth of craft creative industries. The agents of craft creative industries needed the role of all three institutions (Trio ABG) in increasing the growth of creative industry.

### **RECOMMENDATION**

1. Creative industry agents need to have awareness and high motivation towards the importance of Human Capital increasing as an unapparent asset, but plays as an asset that is categorized as a competitive advantage. Business agents must continually develop and improve the quality of human resources involved in their business activities.
2. Given the significant influence of Human capital on the growth of creative industries, it is recommended that the government through the relevant agencies can facilitate various structured training and human resource development in creative industries.
3. The role of Academic institution (A) to provide transfer of knowledge to the creative industry business agents cannot act alone, but requires the role of Business institution (B), as well as the role of government (G). Not only the involvement of Trio ABG, but the institutional change of 3 helixes is also necessary. The changes of the 3 institutions should be performed immediately, university research to SMEs do not just target research grants, but needs to be followed up by the Focus Group Discussion and perform constant business mentoring. In providing attention to SMEs/creative industry agents, businessmen/Industries have to change the mindset that SME is not an object but it is a business partner in the commercialization of business. The role of Government (G) is to not apply populist policies but policies that are at the side of creative industry's bargaining position in dealing with the implementation of MEA.

4. Toward the creative industry agents, the government could soon realize tax incentives by reducing costs incurred in researches and development to be a deduction of taxable income. Thus, the competitiveness of creative industries in the country could be better. Many other countries have already levied a double tax deduction for all research and development costs. So the research results and development costs can be 100 percent deductible from taxable income during commercialization, and the reduction is also allowed for all expenses incurred during the research process and early development activities.
5. The role of financial institutions that support creative industries should be maximized the gain more access to venture capital funds and Corporate Social Responsibility funds.

## REFERENCES

- Anggraini, Nenny. 2008. Industri Kreatif. *Jurnal Ekonomi* Vol. XIII No.3, Desember 2008.
- Cabrita, Maria do Rosario., Jorge Landeiro de Vas., and Nick Bontis. 2007. Modelling The Creation of Value From Intellectual Capital : A Portuguese Banking Perspective, *Internationa Journal Knowledge and Learning*. Vol. 3, Nos. 2/3, pp. 266 – 280.
- Chen, Ming-Cin. 2004. Intellectual Capital and Competitive Advantages: The Case of TTY. *Journal of Business Chemistry*, Vol. 1 No. 1, pp. 14-20.
- Etzkowits, H & L. Leydesdorff. 2000. The Dynamics of Innovation: from National Systems and 'Mode 2 to a Triple Helix of Univeristy-Industry-Government. *Research Policy* 29: pp. 109-123
- F-Jardo'n, Carlos Maria & Maria Susana Martos. 2009. Intellectual Capital and Performance in Wood Industries of Argentina, *Journal of Intellectual Capital*, Vol. 10 No. 4, pp. 600-616
- Smith, Helen Lawton & Loet Leydesdorff. 2012. The Triple Helix in the Context of Global Change: Dynamics and Challenges, *Prometheus* (in press).
- Huang, Chung-Fah Sung-Lin Hsueh. 2007. A Study On The Relationship Between Intellectual Capital And Business Performance In The Engineering Consulting Industry: A Path Analysis, *Journal of Civil Engineering and Management*. Vol 13, No 4, 265–271  
<http://www.harianterbit.com/read/2014/05/17/2381/31/21/Industri-Kreatif-Jadi-Kontributor-Penting-Ketujuh-Terhadap-PDB>
- Ivanova, Inga and Loet Leydesdorff.2014. Rotational Symmetry and the Transformation of Innovation Systems in a Triple Helix of University-Industry-Government

- Relations. *Technological Forecasting and Social Change* 86 (2014) 143-156; <http://dx.doi.org/10.1016/j.techfore.2013.08.022>
- Joerg Henseler, et al, 2013. Common Beliefs and Reality About PLS: Comments on Rönkkö and Evermann (2013), *Organizational Research Methods* 2014, Vol. 17(2) 182-209. The Author(s) 2014 Reprints and permission: [sagepub.com/journalsPermissions.nav](http://sagepub.com/journalsPermissions.nav) DOI: 10.1177/1094428114526928 [orm.sagepub.com](http://orm.sagepub.com)
- Leydesdorff, Loet. 2005. The triple helix model and the study of knowledge-based innovation systems, *International Journal of Contemporary Sociology*, Vol. 42, no. 1, pp 1-16
- Murniati, Dewi Eka. 2009. "Peran Perguruan Tinggi Dalam Triple Helix Sebagai Upaya Pengembangan Industri Kreatif" *Seminar Nasional Jurusan PTBB FT UNY*, 21 November 2009.
- Santos, Helena. 2012. System of Innovation and innovative SMEs: A Model to Measure the Intellectual Capital of SMEs, *Proceedings of the 4th European Conference on Intellectual Capital Arcada University of Applied Sciences Helsinki Finland* 23-24 April 2012, p.411-420
- Seleim, Ahmed., Ahmed Ashour., and Nick Bontis. 2007. Human Capital and Organizational Performance : A Study Egyptian Software Company. *Management Decision*. Vol 45, No 4., pp 789 – 801
- Sharabati, Abdel-Aziz Ahmad., Shawqi Naji Jawad., and Nick Bontis. 2010. Intellectual Capital and Business Performance in The Pharmaceutical Sector of Jordan. *Management Decision*. Vol 48. No. 1. pp. 105 – 131
- Sukarno, Gendut. 2014. Upaya *Triple Helix* Dan Keunggulan Bersaing Dalam Menumbuhkan Industri Kreatif Di Surabaya, *Seri Monograph III, "Meneropong Pembangunan Ekonomi Indonesia"* ISBN : 978-602-18660-2-3, Penerbit Fakultas Bisnis dan Ekonomika Universitas Surabaya, dan ISEI Cabang Surabaya.
- Simon Roodhouse, 2006. The Creative Industries: Definitions, Quantification and Practice *Cultural Industries: The British Experience in International Perspective*. 2006. Online. Humboldt University Berlin, Edoc-Server. Available: <http://edoc.hu-berlin.de>. ISBN 978-3-86004-203-8.