

Mediating Role of Creativity in Determining Innovation towards Competitive Advantage in Batik Creative Industry Indonesia

Wiwiek Harwiki^{#1}, Mujiarto^{#2}, Sri Hartati^{*3}

^{#1}Dr. Soetomo University, Surabaya, Indonesia

^{#2}Universitas Muhammadiyah Tasikmalaya, Tasikmalaya, Indonesia

^{*3}Airlangga University, Surabaya, Indonesia

¹wiwiek.harwiki@unitomo.ac.id

²mujiarto@umtas.ac.id

Corresponding Author: ¹wiwiek.harwiki@unitomo.ac.id; ²mujiarto@umtas.ac.id

Abstract— This study purposed to analyse the effects of (1) innovation on competitive advantage; (2) innovation on creativity, (3) creativity on competitive advantage. The analysis used quantitative analysis, and as a descriptive analysis as well as an inferential statistics (SEM-PLS= Structural Equation Modelling-Partial Least Square). 55 respondents has been taken from the population of Batik Craft in East Java.

This study proved the interesting findings that the diversity in samples appropriate with the diversity in population if eliminated: (1) product and process indicators of innovation; (2) novelty and elaboration indicators of creativity; and (3) competitive price, rarely found and not easy to be replaced indicators of competitive advantage. Therefore the rest of indicator is organizational innovation for innovation variable; resolution indicator for creativity variable; and 2 indicators for competitive advantage variable are: uniqueness and difficult to imitate.

The result of probability value (*T*statistic) through bootstrapping of SmartPLS characteristic demonstrated the significance influence of (1) innovation on competitive advantage; (2) innovation on creativity, (3) creativity on competitive advantage. The result also found that the influence of mediation category of the relationship innovation to competitive advantage through creativity as mediator in complementary partial innovation on competitive advantage.

Keywords—Creative industry, batik craft, innovation, creativity, competitive advantage

1. Introduction

Howkins [1] in "Creative Economy, How People Make Money from Ideas" defined creative economy as an economy activity which inputs and outputs are ideas. The essential of creativity is ideas, thus can be described that creative people earn much income through their creativeness.

As the concept of creative economy, industrialization can be developed towards creative industry. Term of "creative industry" points the industry produced the usefulness of innovativeness, creativity, skill and individual

talents to create the value, employment, and the increasing quality of life. Creative economy is a concept as a legal protection of creative industry in 21 century.

Potential of economy resource is the great of source of Indonesia. The growth of economy Indonesia is supported by small medium enterprises (SME). The contribution of SME almost 99% for economic growth of Indonesia suhartini [2]. The main trigger of economy Indonesia is increasing wealth of society.

Anonym [3] added that SME have a central and strategic roles in developing society welfare in Indonesia. The flexibility of SME, their simple organizational structure, their low risk and their receptivity to changes are essential features for enabling them to be innovative both within the organization and in the external market usman [4].

Hence batik industries as a part of creative industry could be better focusing and to be mentored by government, Universities and another stakeholders in technology, production process, information technology and human resources management. These creative industries are spread in various area among others in Middle of Java, Madura, Bengkulu, Borneo even in Papua. These matters should be understood as a huge potential market must be developed in the long lasting existence.

Batik Indonesia as a Masterpiece of the Oral and Intangible Cultural Heritage of Humanity UNESCO[5] dominated by SME. Simon [6] asserted that the existence of innovation product is important for small industries. To satisfy customers, SME must offer quality products.

Innovation commonly was perceived as an imperative requirement of successfulness and sustainability of organization. Innovative product becomes a crucial point in the industry where through innovative product, customers gain benefits from the sides of either the new feature, design or function Khin et al [7]. Without innovation an enterprise –included SME- and what it provides quickly become obsolete Okpara [8].

Creativity is the ability and power to develop recent ideas and has been viewed as the construction of ideas or products useful potentially Rentschler et al [9]. Creativity is also an attitude, to bring into existence something new whether a new solution to a problem, a new method or device or a new artistic object or form and moving from the recognized to the un recognized Okpara [8].

Innovation and creativity are compulsory parts of competitiveness. Without innovativeness and creativity enterprises hardly become competitive Porzshe et al [10]. The goal of competitiveness is to ascertain the productivity of enterprises, but enterprises build their competitiveness and provide services. The majority of services providers, which make a quite unique group of companies typical of modern society, employ the traditional methods of obtaining and maintaining competitiveness Tomski [11].

The competitiveness resides the ability of firms to consistently and profitably produce products that appropriate with the requirements of an open market in terms of price, quality, etc. Any firm must meet these requirements if it is to remain in business, and the more competitive a firm relative to its rivals the greater will be its ability to gain market share. Vice versa, uncompetitive firms will find their market share decline, and ultimately any firm that remains uncompetitive – unless it is provided by some ‘artificial’ support or protection – will go out of business Sipa *et al* [12].

One type of companies that seeks to achieve competitive advantage is the Batik SMEs in Indonesia. Competition among batik industries has demanded managers to improve their capabilities to achieve competitive advantage. Moreover, Batik SMEs in Indonesia needs quick access to competitors in responding consumer needs with product innovation to support their competitive advantage Nuryakin [13].

1.1 Creative industry in Indonesia

To empower the competitiveness, government synergized with the stakeholders of SME to encounter the global market by changing challenges become opportunities. One of industries can contribute to economic growth of Indonesia is creative industry.

Creative Industries as those industries which have their origin in individual creativity, skill & talent, and which have a potential for wealth and job creation through the generation and exploitation of intellectual property and content. The Creative Industries are less qualification driven than most industries, with many employers recruiting workers because of reputation and creative talent Guile [14]. Despite this, there is evidence that the creative workforce tends to be highly educated.

Herewith 16 sectors creative industry in Indonesia as follow: advertising, architect, craft, design, fashion, game, video, film and photography, music, showbiz, printing and publishing, computer-software and information technology, broadcasting, research and development, and culinary.

Now days, the taste of human behavior more dominated in consuming products and services. The demand can change the industrial approach. The model of industrial approach is demand driven Purnomo [15]. For doers, diversities in culture and social become the source of inspiration and innovativeness since as the supporting of ideas which full of popularity such as architects, music performance and arts.

Creative industries create the positive business and build the nation identity. In the other hand, creative industries based on renewable natural resources stimulate innovativeness and creativity, thus the development of creative industries should be systematically managed, measurable and integrated evaluation by government as a regulator.

1.2 Batik craft

Batik has an important position in society both cultural and economically. The reflection of symbols of living from time to time. The wearing of batik by society is flourishing with many of varieties in motives, colors and qualities. The huge development of batik proved by the increasing of exports in 4 years (2012-2016) amount of US\$ 738 million (2016), and the peak number was US\$ 867.6 million (2014). The biggest number (50%) was exported to USA around US\$ 413.22 million in 2016 ([3]).

Batik Indonesia has a valuable symbol related to a social status, local community, history and heritage; giving Indonesian an identity and an important sustainable components during their whole life: since they were born till the dying day, developing continuously without less its traditional meanings.

2. Literature review

Innovation as one sources of competitive advantage still remains a question to be answered. Competitiveness among SME in Indonesia are increasing all the time Widiyanto [16]. The innovation power owned by Management will always create differentiating attributes in their products. Therefore innovation management in organization becomes a noteworthy in overcoming the ever increasing competition in industry. Innovation need to be seriously examined and developed.

Innovation is often stated implementation of a new idea which relates to result and process. However Zaltman *et al* [17] and Amabile *et al.* [18] added that innovation is a successful new implication of a relatively new creative idea in an organization. Booz [19], Olson *et al.* [20], Lukas *et al* [21] examined on innovations which relate to product attributes. Whereas Song *et al* [22] and Cooper *et al* [23] relate innovation to an alteration of system, and Gatignon *et al* [24] proposed that innovation can be measured from product attributes and change of process which offer added value to products.

This research cited the study of Exposito *et al* [25]; Tsambou *et al* [26] stated innovation refers: first, idea on product innovation which refers to the introduction of a good or a new or improved service on the level of its characteristics or the use to which it is intended; secondly, we have process innovation which is the idea of the implementation of a method of production or new or improved form of distribution; thirdly, organizational innovation which refers to a new form of work organization, a new system of knowledge management, new methods of mobilization of the creativity of workers, as well as new forms of relationships between the company and its environment.

Unfortunately, until now studies on the extent of innovation or productivity in developing countries, specifically Indonesia, are performed in limited conditions Widiyanto [16].

The concept of creativity and innovation are often used interchangeably in the literature. Some definition of creativity focus on the thought process and intellectual activity used to generate inside or solutions to problems. Other definitions focus on the personal characteristics and intellectual abilities of individuals and still others focus on the product with the regard to the different qualities and outcomes of creative attempts (Arad *et al* [27] and Udwardia [28]). This research refers to the latest and follows as previous Basemer and Trevinger [29] stated that dimensions categories of creativity included novelty, resolution elaboration and synthesis as well as Munandar [30] explored that 3 indicators of creativity are novelty, resolution and elaboration.

Mappigau *et al* [31] stated that the core competence of a company may create competitive advantage. Their finding also shows that core competence development will focus on the development of design, color and exclusiveness of motives for new materials and material interior and souvenirs. Batik included as one type of companies trying to achieve competitive advantage. This research cited Bharadwaj *et al* [32] founded 5 (five)

indicators of competitive advantage as follows: uniqueness, competitive price, rarely found, difficult to imitate and not easy to be replaced.

2.1 Innovation on competitive advantage

Han *et al* [33] propose that the chief source of competitive advantages is the innovation power owned by the management. A management with a high innovation power will always create differentiating attributes in their products. In consequence, innovation management becomes a noteworthy strategy for the management in surmounting the ever increasing competitions in industry, and innovation needs to be seriously and carefully considered and developed.

The innovative activity of organizations significantly influences competitiveness based on incomparable skills and abilities. Attaining a higher competitiveness by means of innovations means producing less costly products of better quality compared to those manufactured by competitors.

If an organization is not capable of introducing innovations on an ongoing basis, it risks that it will lag behind and the initiative will be taken over by other entities. Innovation is a strategy that companies use to create a competitive advantage, producing things that nobody else can, doing things better than everyone else, or introducing superior, cheaper, and faster services Aziz *et al* [34].

The study of Distanont *et al* [35] proved that innovation had a significant positive relationship with competitive advantage. Further they added that Innovation is an important weapon that can be used to improve and strengthen a business so that it can create competitive advantages equal to or greater than those of foreign businesses and thereby realize sustainable economic development in the frozen food industry at the SME level.

Previously, the well-known Drucker [36] stated that innovation is a prominent tool of the entrepreneur in creating competitive potential in business and wealth by taking existing resources or by composing new ones, including development using new knowledge.

Based on the literature reviewed, this study formulates the following hypotheses:

H1: Innovation influenced on competitive advantage.

2.2 Innovation on creativity

Creativity is needed for creative industries in order to build competitive advantage. Therefore, the relationship between creativity and innovation is still interesting to be explored. Previous research studies have focused on small and medium scale businesses as well as insurance while the research object is creative industry. Research on creative

industry has not been conducted by many other researchers yet, hence it is needed Sutapa, *et al* [37]

The capability to increase creativity in discovering new and unique product and service are needed to compete in the global market. Creativity in establishing product and service should be done sustainably based on consumer's needs.

Innovation can be broadly thought of as new ideas, new ways of looking at things, new methods or products that have value. Innovation contains the idea of output, of actually producing or doing something differently, making something happen or implementing something new. Innovation almost always involves hard work; persistence and perseverance are necessary as many good ideas never get followed through and developed.

In the other hand, creativity is an active process necessarily involved in innovation. It is a learning habit that requires skill as well as specific understanding of the contexts in which creativity is being applied. The creative process is at the heart of innovation and often the words are used interchangeably. Hence this study formulates the following hypotheses:

H2: Innovation influenced on creativity

2.3 Creativity on competitive advantage

Martín-de Castro *et al* [38] proved that developing successful technological innovations is essential for creating and sustaining an organization's competitive advantage. Innovative activity of organizations significantly influences competitiveness which is based on inimitable skills and abilities. Achieving a higher competitiveness by means of innovations means producing less costly products of better quality compared to those manufactured by competitors.

Innovations are a vital source of a competitive advantage that determines the economic success of each organization. If organizations wish to survive and grow in today's turbulent environment, they have to make every effort to introduce an innovative approach and creativity, therefore top management's support is essential.

Anjaningrum and Sidi [39] proved that innovation and product creativity influenced on performance of creative industry significantly and positively in obtaining competitive advantage.

Hartono [40] has explored the relationship between creativity, leadership and innovation on competitive advantage.

Based on these literature review, this research formulates the following hypotheses:

H3: Creativity influenced on competitive advantage.

3 Research methods

Data for this study were collected using survey based on salient issues revealed in the previous research discussed below and we administered this survey to 55 participants of Batik crafters population in East Java. These questionnaires fulfilled by email. The analysis used quantitative analysis, and as a descriptive analysis as well as an inferential statistics (SEM-PLS= Structural Equation Modelling-Partial Least Square).

SmartPLS 3 program counted the indirect influence (indirect effect) to analyze the significance correlation of mediator variable and the other variables. Mediation occurred when a variable influences the relationship between independent variable on dependent variable. The change of independent variable causing the change of mediator variable, therefore causing the change of dependent variable. This study used a modest mediation model, namely creativity as one mediator variable. Zhao *et al* [41] is adopted to analyze a modest mediation model.

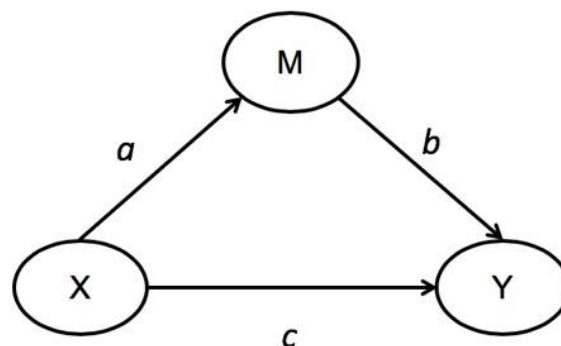


Figure 1. Mediation Analysis (Zhao *et al.*, 2010).

Analysis of mediation influences used values of:

- c is the direct influence (the *direct effect*)
- Multiplication of $a \times b$ is the indirect influence (the *indirect effect*),
- $c + (a \times b)$ is the total influences (the *total effect*).

All the values above counted automatically through SmartPLS 3 program when bootstrapping procedure is processed after hypotheses testing. The result of counting should be fulfilled in the path analysis.

Zhao *et al*[41] (2010) divided the effect of mediation into 5 groups, as follow:

- Complementary (partial mediation)* if $a \times b$ significant, c significant, and $a \times b \times c$ significant.
- Competitive (partial mediation)*: if $a \times b$ significant, c significant, but $a \times b \times c$ non-significant
- Indirect-only (full mediation)*: if $a \times b$ significant, but c non-significant

(d) *Direct-only (no mediation)* if $a \times b$ non-significant, but c significant

(e) *No effect (no mediation)* if $a \times b$ non-significant, as well as c non-significant.

When 3 variables (Figure 1) related simultaneously to the goodness fit model, therefore several indicators of each variable must be eliminated, such as: innovation omitted product and process indicators since Value of Loading Factor less than 0.5.

Indicators of creativity are novelty and elaboration must be deleted as well as competitive

price, rarely found and not easy to be replaced as indicators of competitive advantage.

Further, this study proved innovation encouraging creativity, especially if eliminated 2 (two) indicators such as: product and process innovation, although study Pitra [42] examined the opposite outcome that innovation is the result of employees' creativity in an organization and must be always targeted at customers and bring added value.

3.1 Scale and measurement

Table 1. Variable and Indicator

Variable	Indicator	Source	Scale
Inovation (X)	(x1) Product	Exposito (2018)	Likert
	(x2) Process		
	(x3) Organizational		
Competitive Advantage (Y)	(y1) Uniqueness	Bharadwaj <i>et al.</i> , (1993)	Likert
	(y2) Competitive price		
	(y3) Rarely found		
	(y4) Difficult to imitate		
	(y5) Not easy to be replaced.		
Creativity (M)	(m1.1) Novelty	Munandar (2009)	Likert
	(m1.2) Resolution		
	(m1.3) Elaboration		

3.2 Validity and reliability testing

Table 2. Validity and reliability (first test)

Measurement Model (Before Eliminated Indicator)	Result		Critical Value	Model Evaluation	Discriminant Validity	Indicator	Cross Loading	Critical Value	Model Evaluation
Outer Model						x1	0,360	>0,5	Not Valid
Convergent Validity	Variabel	AVE	>0,5			x2	0,497		Not Valid
	Innovation	0,424		Not Valid		x3	0,946		Valid
	Competitive Advantage	0,391		Not Valid		y1	0,917		Valid
	Creativity	0,455	Not Valid		y2	0,257	Not Valid		
Cronbach's Alpha		CA	>0,7			y3	0,215		Not Valid
	Innovation	0,247		Not Valid		y4	0,943		Valid
	Competitive Advantage	0,213		Not Valid		y5	(-)0,338		Not Valid
	Creativity	(-) 0,246		Not Valid		m1	(-)0,596		Not Valid
Composite Reliability		CR			Not Valid		m2		0,892
	Innovation	0,659	>0,7	Not Valid		m3	0,461	Not Valid	
	Competitive Advantage	0,566		Not Valid					
	Creativity	0,259		Not Valid					

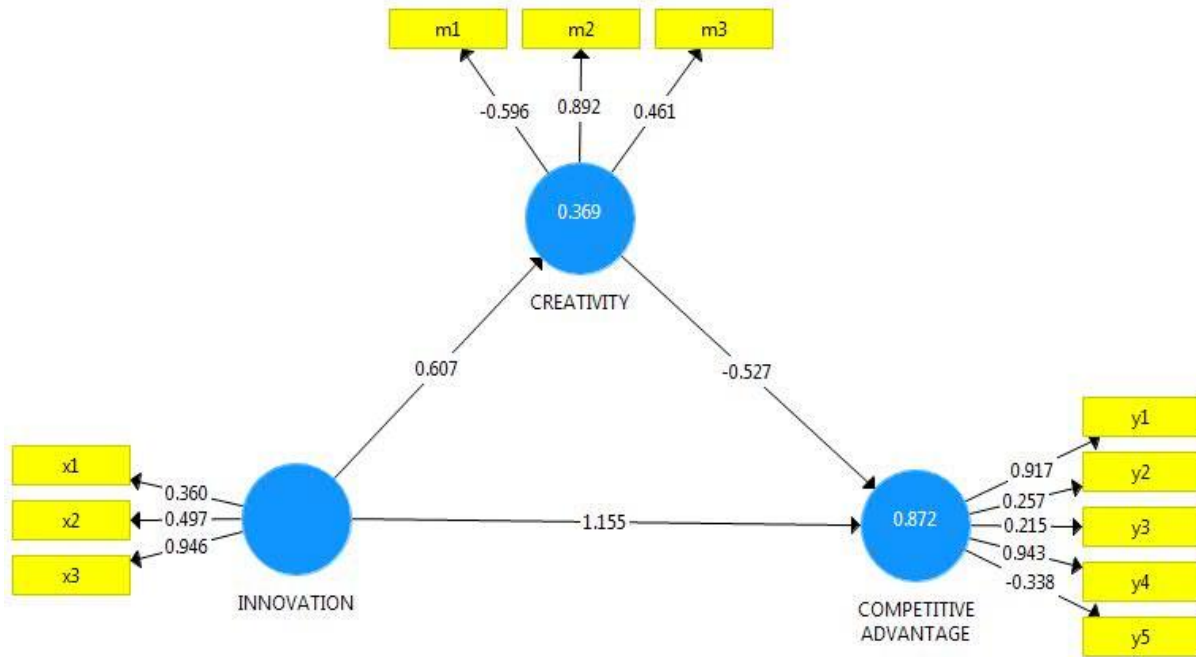


Figure 2. Model Innovation, Creativity and Competitive Advantage

First running data used calculate PLS algorithm, at *convergent validity* AVE (*Average Variance Extracted*) value of 3 variables < 0.5, therefore these 3(three) variables were invalid. 7 (seven) indicators did not meet criteria (rule of thumbs)

through the outer loading, hence these 7(seven) indicators eliminated and would not be tested later in order to increase model measurement score (outer loading) for each items and convergen validity score.

Table 3. Validity and reliability (last test)

Measurement Model (After Eliminated Indicator)	Result		Critical Value	Model Evaluation
Outer Model				
Convergent Validity	Variabel	AVE		
	Innovation	1,000	>0,5	Valid
	Competitive Advantage	0,878		Valid
	Creativity	1,000		Valid
Cronbach's Alpha		CA		Valid
	Innovation	1,000	>0,7	Valid
	Competitive Advantage	0,862		Valid
	Creativity	1,000		Valid
Composite Reliability		CR		Valid
	Innovation	1,000	>0,7	Valid
	Competitive Advantage	0,935		Valid
	Creativity	1,000		Valid

Discriminant Validity	Indicator	Cross Loading	Critical Value	Model Evaluation
	x3	1,000	>0,5	Valid
	y1	0,930		Valid
	y4	0,945		Valid
	m2	1,000		Valid

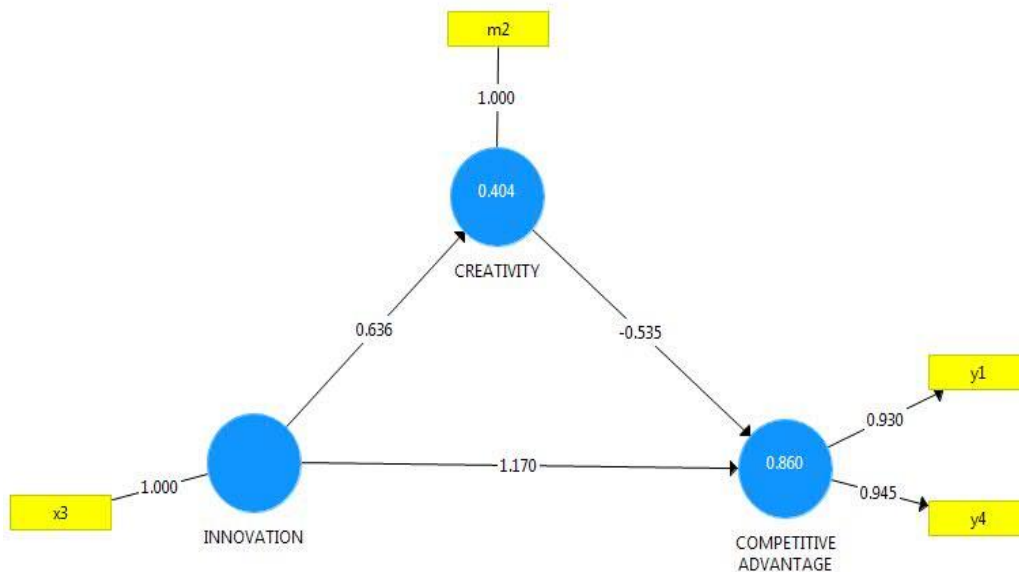


Figure 3. Reliability test performed by value of Cronbach’s alpha and composite reliability.

Item will be reliable if Cronbach’s alpha value > 0.7 and composite reliability value > 0.7. Validity convergen value is very good if AVE score 0.5 (Henseler et al [43]). The model tested and the Goodness of Fit (Gof), subsequently do hypotheses

testing through inner model test with the bootstrapping features at Smart PLS application to obtain probability value (T-statistic) for variables relationship.

Table 4. Bootstrap result (path coefficient)

Relation	Tstatistics
Innovation -> Competitive Advantage	12,489
Innovation -> Creativity	6,879
Creativity -> Competitive Advantage	4,528

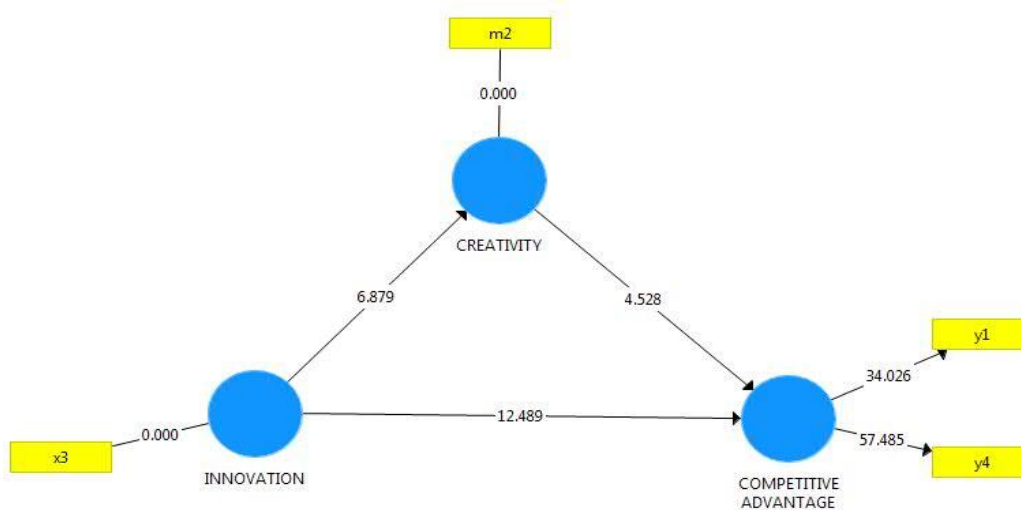


Figure 4. Boot strap model

Table 5. Hypotheses result

Relation	T-Statistics	T-Table	T test status
Innovation -> Competitive Advantage	12,489	1,68023	Accepted
Innovation -> Creativity	6,879	1,68023	Accepted
Creativity -> Competitive Advantage	4,528	1,68023	Accepted

Significance measurement to support hypotheses using the comparison of *T-table* value and *T-statistic*. If *T-statistic* value higher than *T-table* value thus the hypotheses is confirmed. Level of confidence 95% (alpha 95%) thus T-table value for the one tailed hypotheses > 1.68023.

Table 6. Mediation test

Notasi axb	Indirect Effect	Direct Effect	Mediation effect
	(Tstatistic axb)	(nilai c)	
(X -> M)(M -> Y)	31,1481	(X -> Y)	Complementary
(6,879)(4,528)	(Signifikan)	12,489	(Partial Mediation)
		(Signifikan)	

In this study, creativity as intervening variable as stated by Baron and Kenny (1986) that the mediator is considered an intervening variable which influences the relationship between independent variable and dependent variable. Hypotheses mediation testing as performed by Zhao *et al* (2010) as follows:

"a" value described the relationship of innovation to creativity, whereas "b" value represented the relationship of creativity to competitive advantage. Value of indirect effect is "a x b", in the other hand "c" value is direct effect indicated the relationship of innovation to competitive advantage.

3. Results and Discussion

Product innovation is intended to make firms more technologically competitive (Bogliacino *et al*[44] but almost all SME in Indonesia tends to be labor intensive, thus organizational innovation such as factors of production and employees constituted indicators have to be kept in maintaining competitive advantage, although the other indicators (product and process) eliminated.

Individual innovation provides an organization foundation for high performance. It also enables an organization to improve its competitiveness. Much

of the popular literature, as well as some academic literature, stresses the importance of an innovative climate to the success of an organization. In addition, the organization should sense of trust that impact the adoption of something advanced.

Innovation is very noteworthy, especially for organizations that produce unique, rare and special goods, with the lack of ideas and the discouraging to create something new it is impossible to compete by competitive price, aesthetics & arts taste, recent motives and renewable germinality.

Prior study of Van de Ven [45] stated that organizational factors may unequally influence innovation in different types of organizations, as extra organizational context and the industry or sector in which an organizational is located influence innovativeness. Damanpour [46] supported relationships between organizational factors and innovation, in the other hand Olufemi *et al*,[47] proved that organizational innovation has a positive relationship between competitive advantage.

SME Batik Indonesia are still simple in product and process innovation, but the human resources need to be trained. A well in functioning innovation system seems critical for development. It also confirmed the importance of governance and the quality of institutions.

This study revealed that innovation impacted to competitive advantage as Barney [48]; Barney *et al*. [49] and Grant [50] stated previously that innovation is one key resource in creating competitive advantage for the firms as well as they had examined the relationship between innovation and performance and innovation and firm profitability separately.

Further, Sunarsih [51] stated that uniqueness also characterized as difficult to imitate, such as Batik characterized as special product and comfortable to wear. Most of traditional batik design or motives difficult enough to imitate, since batik crafting skill is bequeathed in families during several generations and related to the cultural identity of the community through the symbolic in color and its design Harwiki & Rochman [52].

Expósito & Llopis [25] underlined type of innovation in SME considered: product, process and organizational innovation. Organization innovation such as non-technological innovation is mainly part of innovation in SME which fosters business growth, as well as in Batik SME Indonesia which prefer to provide production factors and employees than to improve product and combining the process.

Resolution is often incorporated into many definitions and models of creativity that claim something has to be both original and valuable to be creative Mayer[53], prior study of Basemer & Treffinger [29] stated that resolution is the degree

to which the product fits or meets the need problematic situation.

Batik motives and design answer enough of needs and sometimes as the solution fits in problem situation. The product is clear and practical to wear. The product is judged worthy by users because it fills physical, social and psychological need.

The main components of the wider work environment that influence employee creativity are organizational motivation to innovate (Amabile,[54]; Amabile & Conti [55]).

Innovation and creativity are needed by creative industries to grow and develop Sutapa, et al [37]. Creativity and innovation are expected to create competitive advantage. Demanding in several motives need to be increased and executed in creative behavior. At the organizational level, innovation is a function of both individual and group creativity Woodman et al. [56]. Crafter's innovation influenced on creativity as Amabile [18];Mumford & Gustafson [57]; West [58][59] examined that creativity centers on idea generation and innovation emphasizes idea implementation, creativity is often seen as the first step of innovation.

Innovation and creativity is different in this research as Anderson [60] stated that creativity and innovation are related constructs and they are by no means identical. Pirola-Merlo and Mann [61] added that mixed support for team climate on individual creativity with only organizational encouragement of innovation and support for innovation as significant predictors.

Crafter's batik interviewed confirmed that their products cushioned, long lasting and appropriate with the consumer's need. Serving is changed since consumers welcome to determine and draw motives using a digital device called *Kaleidopaint*. At least, consumers can fulfill their psychological and financial needs logically in valuable ways as Basemer &Treffinger [29] argued that resolution included behavior in producing which fit the needed, accepted, useful and giving pleasant feel and reducing problematic situation.

Crafters realized batik as the Oral and Intangible Cultural Heritage by UNESCO [5] means batik is a precious product, unique and hard to be duplicated for traditional motives in line with Bharadwaj *et al.*[32],(1993) in examining competitive advantage.

A competitive advantage that is based on the complex combination of many technologies, routines and culture, to such an extent that there is causal ambiguity, is also difficult to imitate and is sustainable (Reed&DeFillipi, [62]; Lippman&Rumelt,[63]; Hogut &Zander [64]).

The individual's ability and capacity to create and develop new, novel and useful ideas about firm's products, practices, services or procedure Kaylar [65] as well as creativity for crafters. This

study supported by several researchers proved that creativity impacted on competitive advantage (Anjaningrum,& Sidi, [39] and leadership Hartono [40]).

Organizational innovation makes innovation arises from organizing circles of exchange, where information is not just accumulated or stored and created but also an important further step to be creative in supporting competitiveness.

Without innovation an enterprise and what it provides quickly become obsolete. Innovation is the basis of competition advantages. Innovation arises from organizing circles of exchange, where information is not just accumulated or stored, but also executed later becomes creative products and services.

New ideas in mind as innovativeness never become creative in attitudes and behavior without challenges of companies. Innovation requires a recent way in looking things, therefore companies asked to facilitate employees to improve their ability how to reduce costs in producing unique and rare products as well as not easy to be replaced and difficult enough to imitate., in line with Acquaah & Ardekani [66] that differentiation firms are able to achieve competitive advantage over their rivals because of the perceived uniqueness of their products and services.

Reflects on this definition, the respondents answer and hypotheses testing that innovation influenced on competitive advantage which supported by uniqueness and difficult to imitate through creativity.

4. Conclusions

The main purposed of this study is to analyse the effects of (1) innovation on competitive advantage; (2) innovation on creativity, (3) creativity on competitive advantage.

There is no doubt to survive in the global market, enterprises want to survive should have strategy to maintain creativity and innovativeness.

Uncompetitive organizations will meet their falling down market share, eventually any organizations that remains uncompetitive – unless it is provided by some "artificial" protections – will perish in business.

The number of batik SME increased, but many countries enter the market, therefore the competition will be rigid. New motives and designs created by crafters will give many of choices for consumers. Managing innovativeness and creativity to create competitive advantage is obligatory. The study revealed that (1) innovation influenced competitive advantage; (2) innovation on creativity, (3) creativity on competitive advantage and innovation positively and significantly, in addition the influence of innovation on competitive

advantage positive and significance through creativity as mediator in complementary partial innovation on competitive advantage.

References

- [1] J. Howkins, *No Title Creative Economy: How People Make Money from Ideas*, New Edition. UK: Penguin, 2013.
- [2] Y. Suhartini, "Factors Influence Analysis of Competitiveness Batik Industry Based on Diamond Porter Modelling," *Semin. Multi Discip. Sci. Call Pap.*, pp. 1–6, 2018.
- [3] Anonym, *Data Development of Micro, Small, Middle and Big Business Year 2005-2009*. 2009.
- [4] H. Usman, *Pengantar Statistika*. Jakarta: PT Bumi Aksara.
- [5] UNESCO, "Indonesian Batik: Inscribed in 2009 on the Representative List of the Intangible Cultural Heritage of Humanity." 2009.
- [6] A. K. Simon M, Houghton S M, "Cognitive biases, risk perception, and venture formation: how individuals decide to start companies," *J. Bus. Ventur.*, vol. 15, no. 2, pp. 113–134, 2000.
- [7] T. Khin, S., Ahmad, N.H., Ramayah, "Product Innovation among ICT Technopreneurs in Malaysia." *Bus. Strateg. Ser.*, vol. 11, no. 6, pp. 397–406, 2010.
- [8] F. O. Okpara, "The Value of Creativity and Innovation in Entrepreneurship," *J. Asia Entrep. Sustain.*, vol. 3, no. 2, pp. 1–14, 2007.
- [9] R. Fillis, I., Rentschler, "The Role of Creativity in Entrepreneurship," *J. Enterprising Cult.*, vol. 18, no. 1, pp. 49–81, 2010.
- [10] J. Porzse, G., Takacs, S., Csedo, Z., Berta, Z., Sara, Z., Fejes, "The Impact of Creative Organizational Climate on the Innovation Activity of Medical Devices Manufacturing Firms in Hungary," *Eur. J. Bus. Manag.*, vol. 4, no. 13, pp. 1–12, 2012.
- [11] T. P., "Entrepreneurship as a Career Choice. The Empirical Perspective Polish," *J. Manag. Stud. PJMS*, vol. 9, no. 2, pp. 244–253, 2014.
- [12] A. Sipa, M: Iwona Gorze-Mitkaa, I&Skibiskia, "Determinants of Competitiveness of Small Enterprises: Polish Perspective," *Procedia Econ. Financ.*, vol. 27, pp. 445–453, 2015.
- [13] Nuryakin, "Competitive Advantage and Product Innovation: Key success of Batik SMEs Marketing Performance in Indonesia," *Acad. Strateg. Manag. J.*, vol. 17, no. 2, pp. 1–17, 2018.
- [14] D. Guile, "Access, learning and development in the creative and cultural sectors: from 'creative apprenticeship' to 'being apprenticed,'" *J. Educ. Work*, vol. 19, no. 5, pp. 433–445, 2006.
- [15] R. A. Purnomo, *Creative Economy, Pillars of Indonesia's Development*. 2016.
- [16] I. Widiyanto, "A Study of The Innovation Power of SME's in Semarang," *Manag. Enterp. J.*, vol. 16, no. 2, pp. 131–140, 2014.
- [17] J. Zaltman, G., Duncan, R., & Holbeck, *Innovations and Organizations*. New York: Wiley, 1973.
- [18] M. Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, "Assessing the Work Environment for Creativity," *Acad. Manag. J.*, vol. 39, no. 5, pp. 1154–1184, 1996.
- [19] A. Booz, *New Product Management for the 1980's*. New York: Booz, Allen & Hamilton, Inc, 1982.
- [20] R. W. Olson, E. M., Walker, O. C. Jr., & Ruekert, "Organizing for Effective New Product Development: The Moderating Role of Product Innovativeness," *J. Mark.*, vol. 59, no. 1, pp. 48–62, 1995.
- [21] O. C. Lukas, B. A. & Ferrell, "No Title," *J. Acad. Mark. Sci.*, vol. 28, no. 2, pp. 239–247, 2000.
- [22] M. E. Song, X. M. & Parry, "The Determinants of Japanese New Product Successes," *J. Mark. Res.*, vol. 34, no. 1, pp. 64–76, 1997.
- [23] E. J. Cooper, R. G. & Kleinschmidt, "New Product Performance: What Distinguishes the Star Products," *Aust. J. Manag.*, vol. 25, no. 1, pp. 17–45, 2000.
- [24] J. Gatignon, H. & Xuereb, "Strategic Orientation of the Firm and New Product Performance," *J. Mark. Res.*, vol. 34, no. 1, pp. 77–90, 1997.
- [25] J. A. Alfonso Expósito, A; Sanchis Llopis, "Innovation and business performance for Spanish SMEs: new evidence from a multi-dimensional approach," *Work. Pap. Appl. Econ.*, pp. 1–36, 2018.
- [26] B. Tsambou, AD., Fomba Kamga, "Performance Perspectives For Small and Medium Enterprises in Cameroon: Innovation and ICT's," *Timisoara J. Econ. Bus.*, vol. 10, no. 1, pp. 68–87, 2017.
- [27] R. J. Arad, S, Hanson, MA, Schneider, "A Framework for the study of Relationship Between Organizational Characteristic and Organizational Innovation," *J. Creat. Behav.*, vol. 31, no. 1, pp. 42–58, 1997.
- [28] F. Udwardia, "Creativity and Innovation in Organizations: Two Models and Managerial Implications," *Technol. Forecast. Soc. Chang. An Int. J.*, vol. 38, no. 1, pp. 65–80, 1990.
- [29] D. Basemer, S.P; Treffinger, "Analysis of Creative Products: Review and Synthesis," *J. or Creat. Behav.*, vol. 15, no. 3, pp. 158–178, 1983.

- [30] M. U., *Developing Creativity of Talented Kids*. Jakarta: Rineka Cipta, 2009.
- [31] P. & H. Mappigau, "Core competence and sustainable competitive advantage of small silk weaving industries (SIs) in Wajo District," *Procedia Econ. Financ.*, vol. 4, pp. 160–167, 2012.
- [32] J. Bharadwaj, Sundar G, P.R.Varadarajan, & Fahly, "Sustainable Competitive Advantage in Service Industries: A Conceptual Model and Research Propositions," *J. Mark.*, vol. 57, pp. 83–99, 1993.
- [33] R. Han, J., Kim, N., & Srivastava, "Market Orientation and Organizational Performance: Is Innovation the Missing Link?," *J. Mark.*, vol. 62, no. 4, pp. 30–45, 1998.
- [34] S. Aziz, N. N. A., & Samad, "Innovation and competitive advantage: Moderating effects of firm age in foods manufacturing SMEs in Malaysia," *Procedia Econ. Financ.*, vol. 35, pp. 256–266, 2016.
- [35] O. Distanont, A; Khongmalai, "The role of innovation in creating a competitive advantage," *Kasetsart J. Soc. Sci.*, vol. 30, pp. 1–7, 2018.
- [36] P. F. Drucker, *Post-capitalist society*, 1st ed. New York: Harper Business, 1994.
- [37] W. Sutapa, Mulyana, "The Role of Market Orientation, Creativity and Innovation in Creating Competitive Advantages and Creative Industry Performance," *Manag. Dyn. J.*, vol. 8, no. 2, pp. 152–166, 2017.
- [38] J. Martín-de Castro, G., Delgado-Verde, M. Navas-López, J. E. & Cruz-González, "The moderating role of innovation culture in the relationship between knowledge assets and product innovation," *Technol. Forecast. Soc. Change*, vol. 80, no. 2, pp. 351–363, 2013.
- [39] A. Anjaningrum, W., & Sidi, "Determinants of Competitive Advantage and Creative Industry Performance," *J. Ekon. Mod.*, vol. 14, no. 1, pp. 40–56, 2018.
- [40] H. Hartono, ". The Impact of Leadership, Creativity and Innovation on Competitive Advantage: Proposing A Comprehensive Framework for Better Indonesia," *Binus Bus. Rev.*, vol. 4, no. 2, pp. 756–764, 2013.
- [41] Q. Zhao X., Lynch J.G., Chen, "Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis," *J. Consum. Res.*, vol. 37, pp. 197–206, 2010.
- [42] Z. Pitra, *Management inováčních aktivit*. Praha: Professional Publishing, 2006.
- [43] R. R. Henseler, J., Ringle, C. M., & Sinkovics, "The use of partial least squares path modeling in international marketing," *Adv. Int. Mark.*, vol. 20, pp. 277–319, 2009.
- [44] F. and P. Bogliacino, "M. Innovation and Employment: a Reinvestigation using Revised Pavitt classes," *Res. Policy*, vol. 39, pp. 799–809, 2010.
- [45] V. de V. A. H, "Central problems in the management of innovation," *Manage. Sci.*, vol. 32, pp. 590–607, 1986.
- [46] F. Damanpour, "Organizational Innovation: A Meta Analysis of Effects of Determinants and Moderators," *Acad. Manag. J.*, vol. 34, no. 3, 1991.
- [47] A. O. L. O. . & P. B. S. Olufemi, "Competitive Advantage, Organizational Innovation and Profitability: Evidence from Nigeria."
- [48] B. JB, "Firm resources and sustained competitive advantage," *J. Manage.*, vol. 17, pp. 99–120, 1991.
- [49] A. A. Barney JB, *The resource-based view: origins and implications*, Hitt MA, F. Oxford: Blackwell, 2001.
- [50] R. . Grant, "Resource-based theory of competitive advantage: Implications from strategy formulation," *Calif. Manage. Rev.*, vol. 33, pp. 114–135, 1991.
- [51] N. Sunarsih, *Entrepreneurship in Multi Prespektif*. Tangerang Selatan: Universitas Terbuka, 2017.
- [52] A. S. Harwiki, W., & Rochman, *Customized Digital Product Design (CDPD) Batik Indonesia*, 1st ed. Surabaya: CV REVKA PRIMA MEDIA, 2019.
- [53] R. E. Mayer, *Fifty years of creativity research In Handbook of Creativity*. Cambridge: Cambridge University Press, 1999.
- [54] T. M. Amabile, "Motivating Creativity in Organizations: On doing what you love and loving what you do," *Calif. Manage. Rev.*, vol. 40, pp. 39–58, 1997.
- [55] R. Amabile, T. M., & Conti, "Changes in the work environment for creativity during downsizing," *Acad. Manag. J.*, vol. 42, pp. 630–640, 1999.
- [56] R. W. Woodman, R. W., Sawyer, J. E., & Griffin, "Toward a theory of organizational creativity," *Acad. Manag. Rev.*, vol. 18, pp. 293–321, 1993.
- [57] J. M. Mumford, M. D., Scott, G. M., Gaddis, B., & Strange, ". Leading creative people: Orchestrating expertise and relationships," *Leadersh. Q.*, vol. 13, pp. 705–750, 2002.
- [58] M. A. West, "Ideas are ten a penny: It's team implementation not idea generation that counts.," *Appl. Psychol. An Int. Rev.*, vol. 51, pp. 411–424.
- [59] M. A. West, "Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation- implementation in work groups," . *Appl. Psychol. An Int. Rev.*, vol. 51, pp. 355–387.
- [60] N. Anderson, "Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and

- Guiding Framework,” *J. Manage.*, vol. 40, no. 5, pp. 1297–1333, 2014.
- [61] L. Pirola-Merlo, A., & Mann, “The relationship between individual creativity and team creativity: Aggregating across people and time,” *J. Organ. Behav.*, vol. 25, pp. 235–257, 2004.
- [62] R. J. Reed, R. and DeFillipi, “Causal ambiguity, barriers to imitation, and sustainable competitive advantage,” *Acad. Manag. Rev.*, pp. 88–102, 1990.
- [63] R. P. Lippman, S.A. and Rumelt, “Uncertain imitability an analysis of inter firm differences in efficiency under competition,” *J. Econ.*, vol. 13, pp. 418–438, 1982.
- [64] U. Hogut, B. and Zander, “Knowledge of the firm, combinative capabilities, and the replication of technology,” *Organ. Sci.*, vol. 3, pp. 383–397, 1992.
- [65] M. N. Kaylar, “Creativity, Self-leadership and Individual Innovation,” *J. Commer.*, vol. 10, no. 1, pp. 20–28, 2010.
- [66] M. Acquaaah, “Does the implementation of a combination competitive strategy yield incremental performance benefit? A new perspective from transition economy in Sub-Saharan Africa,” *J. Bus. Res.*, vol. 61, pp. 346–354, 2006.