

**The Concepts of Economic Resilience:  
An Information and Technology Based Assesment  
(Case Study of Micro and Small Enterprises in Jakarta)**

**Dedi Purwana, M.Yasser Arafat Marsellisa Nindito dan Diena Noviarini  
Lecturers of Economy Faculty, State University of Jakarta**

**ABSTRACT**

*This research aimed to find out what explains the concepts of economic resilience through information and technology based assesment for the purpose of studying the micro and small enterprises in The Jakarta Province. In collecting the research datas, interviews were being conducted while the answers from the informants would lead the researchers' conclusions.*

*This research have resulted on confirmation that there is a growing trend of economic development in the community of micro and small industrial center as a way to enhance economic resilience. The Jakarta province should reinforce this kind and a like industrial center to build the strengths of the enterprises as economic stimulation to the community.*

*Another result is in the terms of information and technology based assesment, we have found that the concepts of economic resilience could be achieved through the distribution of economic development in the attempt of increasing businesses' productivity as the result of information and technology applications.*

*Furthermore, the respectively regulation and laws coming from the authorities have provided the protection and guidance needed by the enterprises in the creation of economic development and long-term businesses' growth.*

*Keywords: stimulation, economic development, long-term businesses growth, information and technology based assesment*

## **Introduction**

### **The Research Background**

The Jakarta Province's have determined the direction of the society economic development in the DKI Jakarta local government work plan of the year 2012. In the work plan have been pointed out that the funding of economic development through the investment was carried out by all level of community as to improve the region's ability to managing the economic resources efficiently and successfully.

The economic development through the investment funding has been the main device of enhancing the society economic resilience, as the index point of Indonesian human development in 2011 have reached the level 124 out of world rank with the index of Indonesian civil health at the percentage of 0,779, the education at 0,584 and economical at the percentage of 0,518. The overall index have showed an increasing tendency.

This phenomenon of increasing index was being observed and studied as the intended plans of the regulators and it has emerged under several circumstances. The academic research has thrown out the idea of economic development as the attempts of enhancing the community's economic resilience. Hence arise the

questions of how the concepts of economic resilience been explained by the information and technology based assesment and under what condition that this economic resilience have been applied in the micro and small enterprises community? The aim of this paper is then how the concepts of economic resilience been explained by the information and technology based assesment and the micro and small enterprises should be the study object of this research.

### **Problem Formulation**

According to the research background that has been presented then the following were made to formulate the problem:

1. Is there a growing trend of economic development in the community of micro and small industrial center?
2. Could economic resilience be achieved through information and technology development and the distribution of economic development?
3. Has the regulation and laws from the authorities provided the protection and guidance needed by the enterprises?

### **The Objectives of The Research:**

The research objectives based on the research background that described above, among others, are as follows:

1. To explain the concepts of economic resilience through a trend of economic development
2. To assess economic resilience through information and technology
3. To explain the regulation and laws that provided the protection and guidance needed by the enterprises

### **The Benefits of The Research**

The study are expected to have the following benefits as to make contribution in the economic resilience research especially through the information and technology based assesment. Furthermore, the benefit that expected was the awareness of all parties that taking part entirely or partly to the economic development in the micro and small industry center in Jakarta so as the inputs for the regulators to continue on protecting and empowering the enterprises to the success.

### **Theoretical Background**

#### **The Concepts of Economic Resilience**

Resilience can be interpreted in many different ways depending up on the system being addressed (Hardik Gajjar, 2012). Hardik Gajjar noted that resilience is the ability of the system to absorb, adapt to, rapidly recover from a potentially

disruptive event. Thus according to Edward W.(Ned) Hill, (2008), the concept of resilience is the extent to which a regional economy is able to avoid being thrown out of its previous equilibrium state by an exogenous shock. Edward stated that the shock could be avoided altogether or withstanding the shock with little or no adverse impact (Briguglio, et al., 2006).

In the concepts of economic resilience, Briguglio et al., (2006), in the research of Stephanie Vella, (2011), pointed out to identify four main determinants index of economicresilience which are, macroeconomic stability, good governance, socialdevelopment and microeconomic market efficiency. This index list consisted of 86 countries of Carribean Small States in different stages of development and sizes though it could not be used to explain the economic resilience elsewhere. However, this research is focusing in the microeconomic market efficiency determinant and taking information and technology based assesment as the device to explain the concepts of economic resilience.

#### **Information and Technology Based Assesment**

Information and technology assesment is the study and evaluation of

new technologies that come around (Wikipedia, 2012). Further stated that though the new technology comes with new developments and was discovered by the scientific community, it is relevant for the larger world than the origin community itself and its progress could never be free of ethical implications. The concepts of technology assesment were devided into practised and concepts introduced by the particular institution that used such literatur as labels and they are devided into (Wikipedia, 2012):

#### **Parliamentary Technology Assessment**

This kind of assesment consist of various kinds activities of a parliament. It may be performed directly by members of the parliaments,by institution or by organisations that is not directly connect to the parliament

#### **Expert Technology Assessment**

This assesment was carried out by a team and technical experts.Some inputs were taken from the actors through some media as documents though they were not assuming as part of technology assesment.

#### **Participatory Technology Assessment**

This kind of act would involved various kinds of social actors as assessors and discussants of whom would conduct actievly, systematically and methodologically activities.

#### **Constructive Technology Assesment**

This concept was developed in the Netherlands though applied and discussed elsewhereas attempts to broaden the design of the new technology through feedbacks.

#### **Discursive Technology Assessment**

This assesmentaims to deepen the political and normative debate about science, technology and society. It was taken the ethics, policy discourse analysis and the sociology of expectations in science and technology as inspirations.

#### **Health Technology Assessment**

This kind of assesment was specialised type technology of assesment expert that informed the policy makers about efficacy, safety and cost effectiveness issues of pharmaceuticals and medical treatments.

The information and technology assesment in this research covers series of activities to observed and explain the new technology application and implications that not only promoted by experts but also have taken feedbacks from other actors such as the regulatories and technology users to applied and discussed broadly than its origin place (Wikipedia, 2012).

## **Micro and Small Enterprises' Challenges**

The micro and small enterprises have faced such challenges in the development of their own businesses as well as the development of the regional community at the place they are situated. The challenge that they have encountered as to consistently develop their products through innovations and quality improvement by the using of information and technology applications such as graphic design software for certain use and spreadsheet software also the use of internet network for supporting the backoffice administration and the purpose of promotion. Thus those kind of innovations would require a large number of investment therefore the support from the government as the authority have been expected to be fulfill.

## **Research on Factors Information and Technology Based Assesment in The Concepts of Economic Resilience**

Some studies that examined the factors affecting competition and efficiency appropriate polices to encourage competition and efficiency, within the context of promoting a business environment that is congenial to small and medium sized enterprises which are the

main drivers of economic growth in small states (Stephanie Vella, 2011). While Hardik Gajjar (2012) talks about developing an economic resiliency assessment framework of which would help the interested parties to create investment strategies for the allocation of the available finance and to retain business continuity during or following any disruptions.

The study of economic resilience in Indonesia examines the factors that define the economic resilience concepts of which included the microeconomy factors such as the basic necessities of human life resilience of food and cloth and product creativity development. In this study we examine the microeconomy factors regarding to the human basic necessities and without any less meaning we haven't taken any other factors that affecting the microeconomy economic resilience.

## **Research Methodology**

### **The Types of Research**

The research have taken the phenomenon as the object of the study to observed and explain the best concepts that indicated the economic resilience through the information and technology based asesment.

Jessica in the research of Yin, (1994), defined that case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. Myers (2003), in Jessica's research also noted that the case study is the most common qualitative method used in information systems. Some qualitative methods, according to Jessica, were developed in the social sciences thus deemed to be more appropriate to the study of social and cultural phenomena rather than the quantitative methods.

### **The Research Location**

The researchers have conducted this study at the location of DKI Jakarta Province and focusing in the micro and small industry centre of which this community could be best representative of the research object.

### **The Research Instruments**

We have used a series of interviews and data both coming from the informants or through the internet that we collected during the research observation and the drill to micro and small enterprises' employees several months earlier before the research took place.

### **The Research Data Samples**

The samples of this research have been selected through random samplings, they are the subjects of garment as for clothings and food businesses that placed in the community of micro and small industry center in Jakarta.

### **The Determination of Informants**

We have interviewed the staff and the manager of the enterprises' and during the interview session we have taken necessary note to provide the information required in this research.

### **The Analysis of Data**

The analysis of research data having met a qualitative descriptive analysis of which it was compared through another but similar business enterprises.

### **Finding & Discussion**

The results of this research would be explained in five types of analysis. These analysis was made through a various activities which were interviewing the respondents, observing the objects of research and making comparison between the objects of the research's profile with similar type of enterprises' profile in another region.

### **The Concepts of Economic Resilience**

This research have resulted on confirmation that there is a growing trend of economic development in the community of micro and small industrial

center in Jakarta. The Jakarta province should reinforce this kind and a like industrial center to build the strengths of the enterprises as economic stimulation to the community. According to the BPS Statistic Institution of whom have provided the supporting datas, the Java island have contributed to the National Gross Domestic Product as much as 57,5% in the first and second semester of 2012 compare to the year 2011 of which totally 57,6% a year (Tabel 1). From the percentage, DKI Jakarta percentage is (16,2 %), East Java (14,8 %), West Java (14,2 %), and the Central Java (8,4 %). Therefor can be concluded that the DKI Jakarta Province have the highest contribution to the National Gross Domestic Product index in the first and second semester of 2012.

**Individual Consumption  
Based on Goods and Services,  
Indonesia, 1999, 2009-2011**

Goods and Service	2009	2010	2011
<b>Non Food and Groceries:</b>			
- Housing and housekeepings	19.89	20.36	19.91
- Goods and Services	17.49	16.78	17.92
- Clothings	3.33	3.38	2.02
- Durable Goods	5.88	5.14	7.52
- Insurance and Tax	1.41	1.57	1.64
- Ceremony and party necesseties	1.36	1.32	1.53
<b>Total</b>	49.38	48.57	50.55

*Adopted from BPS Statistic: National Economy and Social Survey, Consumptive Modul 1999, 2002 and 2005 (2003, 2004 and 2006 consisted of 10.000 housekeeping panels, meanwhile for 2007, 2008, 2009 and 2010 consisted of 68.800 housekeeping panels). As for the year 2011 is the data of first trisemester (March 2011) with 75.000*

**Tabel 1**

**The Average Percentage of Monthly**

housekeeping samples.

Meanwhile the average percentage of monthly individual consumption of goods and services in Indonesia in clothings consumption have decreased by 1,36% in

2011, this put as the contrary to the uprising chart (tabel 3) of non oil and gas export as much as US\$362 million (tabel 2).

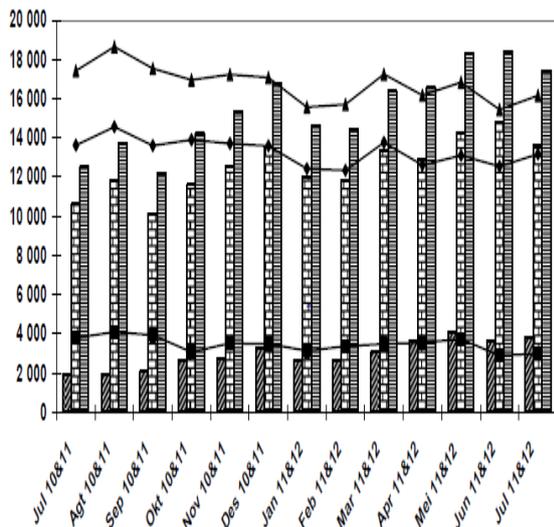
**Tabel 2**  
**The Summary of Indonesian Export Development**  
**January – Juli 2012**

Desc	Value of FOB (Million \$US)						
	June 2012	July 2012	Jan-Jul 2011	Jan-Jul 2012	% July to June 2012	% Jan-July 2012 to 2011	% Total Jan – July 2012
Non Oil & Gas	12 541,8	13 173,8	92 650,5	89 965,5	5,04	-2,90	79,54

Adopted from: BPS Statistic 2012

**Tabel 3**  
**The Export Development of Oil and Gas**

**And Non Oil and Gas**  
**July 2010 – July 2012**



- Non Oil and Gas
- Oil and Gas

Although the average percentage of monthly individual consumption of

Adopted From: BPS Statistic 2012

goods and services in Indonesia in clothings consumption have decreased by 1,36% in 2011, the chart of import of Non

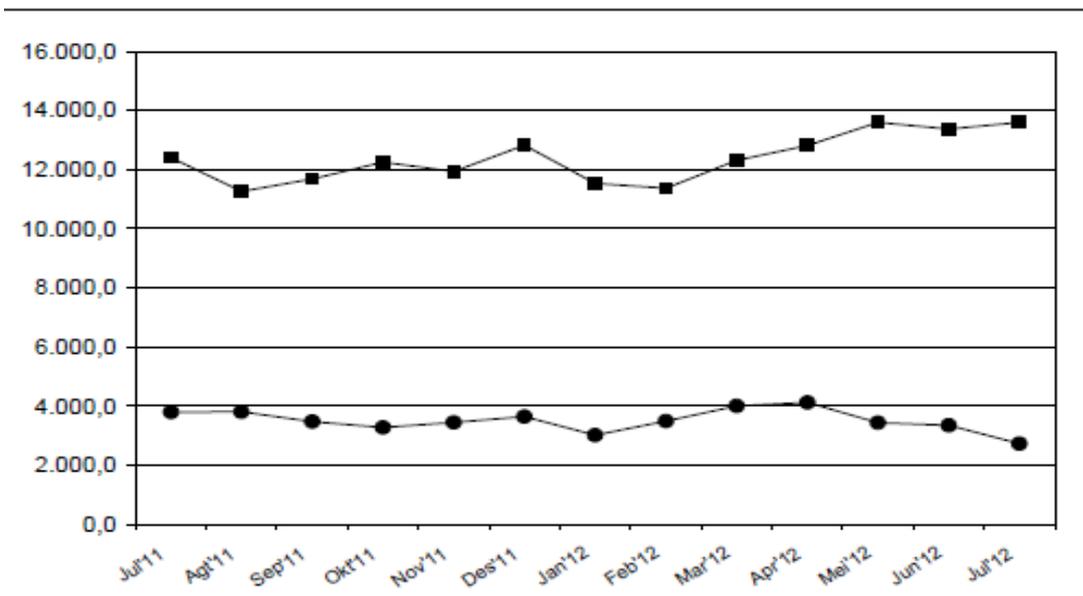
Oil and Gas (tabel 5) have increased by US\$221,5 million (tabel 4) in 2012

**Tabel 4**  
**The Summary of Indonesian Import Development**  
**January – Juli 2012**

Desc	Value of FOB (Million \$US)						
	June 2012	July 2012	Jan -Jul 2011	Jan-Jul 2012	% July To June 2012	% Jan -July 2012 To 2011	% Total Jan - July 2012
Non Oil & Gas	13 373,5	13 595,0	76 748,9	88 606,8	1,66	15,45	78,57

Adopted from: BPS Statistic 2012

**Tabel 5**  
**The Import Development of Oil & Gas**  
**and Non Oil and Gas**  
**July 2010 – July 2012**



- Non Oil and Gas
- Oil and Gas

Adapted From : BPS Statistic 2012

## **The Information and Technology Based Assessment**

The information and technology based assesment have resulted that in the micro and small industry central, the enterprises' placed in the community have used the information and technology applications to gain the competitive advantages through the increasing productivity and quality improvement. These enterprises used the information and technology to maintain their daily basis businesses through the devices of the internet technology in promoting and shippingtheir products in and out of the local regions.

The use of such technology in the production activities have become equally distributed among the enterprises as their innovations in the product development might reduced the cost and made their productt able to compete with the similar products imported from other country. 011.

The definition of DKI Jakarta Province Local Government Work Plan functions of year 2011 could be interpreted as follows (Bappeda News, 2012):

1. Creating policy certainty as the Government's commitment in conducting the affairs of government through the

Over the years this center have survived economical crisis and global competition through the sustainable development and such efforts have implicated as economical resilience in the term of maintaining their businesses.

## **The regulation and laws for micro and small enterprises**

In the research of Rida Prihatni, (2012) the government as the authority have set up regulations in developing creative economy as stated in the President Decree No. 6 of 2009 on the development of the creative economy. This decree have regulated the regional authority in this case the government of DKI Jakarta Province to regulate the micro and small industry center in the community as to provide the necessary support for its economy creativity development. This regulation was defined in the DKI Jakarta Province Local Government Work Plan in the year of 2 translation of strategic plans into operational plans and maintaining consistency between the achievement of the medium-term strategic planning objectives for the purpose of planning and annual budgeting regional development.

2. Provides an overview of the Regional Economic Framework Plan projections in 2011 as a benchmark in the preparation of the plan revenue will be

used to finance expenditure and financing regional development.

3. Provide the direction for all stakeholders in the formulation of local development and planning as well as participation in local development in 2011.

4. Unite the goals of all activities through SKPD Key Performance Indicators (KPI) targetting in order to achieve the vision and mission of the city administration so that it becomes an instrument for regional government in preparing the Consolidated Statement Accountability (accountability report), Report of the Regional Government (LPPD) and Performance Report Local Government (LKPD)

5. Setting the program priorities for each of the government affairs in order to achieve the set of Key Performance Indicators (KPI) target

The regulation have set up the arrangement that put both the central and local government in cooperation of regulating and organizing the community of micro and small industrial center. This cooperation have been side by side

settling the appropriate condition for the economic development, however, certain condition regarding to the macroeconomy of the states in this case as for Indonesia might appear as challenges to micro and small enterprises' resilience.

The macroeconomy of Indonesia have noted the increasingly export development index in the non oil and gas products by the year 2011, the Indonesian Inflation Index as of the period June 2009 – 2012 have decreased by 5,52 points (tabel 6). The decreasing of this index was a sign that the level of clothings consumption of Indonesian have been reduced and the demand of clothings product is decreased. The reducing demand, however, could be the result of many factors such as the increasing import index of non oil and gas products and the invation of similar but cheaper products from other country as the result of global economy. This could be the challenge for the micro and small enterprises to deal with so they have to continuously develop their product innovations in order to winning the competition.

### **Tabel 6**

**The Indonesian Inflation  
as of Periode  
June 2009 -2012**

Year/Month	Clothings	General Index
2012	2.05	3.48
2011	7.57	3.79
2010	6.51	6.96

Adapted from BPS Statistic, 2012

Despite the inflation and the decreasing demand of clothings product, the number of irregulated businesses' unit and the number of irregulated employees have become the certain condition that have to be faced by the DKI Jakarta Province. The number of irregulated businesses' unit has an increasing trend as for the year 2003-2004 in 159,804 units (tabel 7) while the irregulated employees has been increasing by 175,765 labors (unit 8). The government of DKI Jakarta Province has to resolved this situation of irregulated businesses because the need of assessing the enterprises to determine the amount of investment that need to distribute properly. Thus the irregulated employees need to be resolved because of the local government work plan of DKI Jakarta Province considered the human

development as the agency of economic development and the uprising of the employees skill would lead into the mastering of new information and technology. The human development in the information and technology field might lead in to the ability of using the technology applications thus adding the ability in getting more income as a way to maintain the employees' economic resilience.

**Tabel 7  
The Number of  
Irregulated Businesses',  
2003-2004**

Island/ Province	2003	2004
Capital of States, DKI Jakarta	893.623 <i>(5,66)</i>	1.053.427 <i>(6,14)</i>
West Java	3.216.567 <i>(20,38)</i>	2.908.228 <i>(16,96)</i>
Central Java	3.080.105 <i>(19,51)</i>	3.508.577 <i>(20,46)</i>
Yogyakarta	469.898 <i>(2,98)</i>	409.814 <i>(2,39)</i>
East Java	3.272.845 <i>(20,74)</i>	3.551.777 <i>(20,72)</i>

**Adapted From: BPS Statistics**

**Tabel 8**  
**The Number of Irregulated Employees 2003-**  
**2004**

Island/ Province	2003	2004
Capital of States, DKI Jakarta	1.897.858	2.073.623
	(6,54)	(6,79)
West Java	5.456.515	4.719.813
	(18,79)	(15,45)
Central Java	5.587.594	6.251.797
	(19,25)	(20,47)
Yogyakarta	919.378	802.597
	(3,17)	(2,63)
East Java	5.693.486	6.156.908
	(19,61)	(20,16)

**Adapted From: BPS Statistics**

**Conclusion and Future Recommendation**

The analysis that was carried out have reached the conclusions as described below:

First, the analysis on the concepts of economic resilience have found that there is a growing trend of economic

development in the community of micro and small industrial center as a way to enhance economic resilience as it could be interpreted from the DKI Jakarta contribution to the Gross National Domestic Product.

Second, the analysis on the concepts of economic resilience through information and technology based

assesment have found the occurrence of the distribution of economic development in the micro and small industry center in the attempt of increasing businesses' productivity by the use of information and technology applications.

Third, the analysis on the regulation and laws coming from the authorities as from the Central Governement in this case the Indonesian Government and the local government in this case the DKI Jakarta Province government. The regulation and laws have provided the protection and guidance needed by the enterprises in the creation

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of economic development and long-term businesses' growth.

## Future Recommendation

The study cover the area of Micro and Small Industry Center in Jakarta therefore it would only be admitted within and need to be interpreted partially and with considerations. Thus we are strongly suggest that for further research, any researchers in this similar field might want to gather more data from wider area than Jakarta and using more factors to have the better results.

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