

# Econder |

International Academic Journal

[Econder], 2020, 4 (1): 190/202

## Economic Literacy Levels: A Case Study in Indonesian University

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### Makale Bilgisi / Article Information

**Makale Türü / Article Types** : Araştırma Makalesi / Research Article

**Geliş Tarihi / Received** : 10.06.2020

**Kabul Tarihi / Accepted** : 11.06.2020

**Yayın Tarihi / Published** : 30.06.2020

**Yayın Sezonu** : Haziran

**Pub Date Season** : June

**Cilt / Volume: 4 Sayı – Issue: 1 Sayfa / Pages: 190-202**

**Atıf/Cite as:** As'ad, M , Zulfikar, R . (2020). Economic Literacy Levels: A Case Study in Indonesian University. Econder International Academic Journal , 4 (1) ,190-202 . Retrieved from <https://dergipark.org.tr/tr/pub/econder/issue/54189/750474>

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# Economic Literacy Levels: A Case Study in Indonesian University

## Abstract

It is thought that economic literacy helps in achieving macroeconomic targets, increasing savings, using sources efficiently, increasing entrepreneurship intentions. Because of this reason the academic and politic interest in economic literacy is gradually increasing. Policy makers try to develop new policies to increase economic literacy in their countries. The aim of this research is to measure economic literacy of Indonesian university students and get ideas about students' potentials. To this aim we conducted a test and a survey on private university students in Indonesia. It is revealed that economic literacy of Indonesian students is in moderate level. Also macroeconomic literacy level is higher than microeconomic literacy level.

**Keywords:** Economic Literacy, Literacy Levels, University Students, Economics Education, Indonesia Education.

## 1. Introduction

Economics, which is one of the oldest branches of science, occupies important place in people daily life. People generally make many economic decisions about many items such as consumption, production, business life, evaluating assets (Yayar & Karaca, 2017, p.50). These decisions are complex due to limited sources and unlimited needs (Barış and Şeker, 2017, p.80). Globalization and developments in technologies make these decisions more complex. Making right decisions, reaching economic targets and understanding developments in economic situation mostly depends on having experience and economic knowledge (Dilek et.al. 2019, p.91; Durmuş and Yardımcıoğlu, 2018, p.169). Because of this reason having economic knowledge and being economic literate is important for rational decision makers. To survive in complicated social world, they should have enough economic knowledge.

Policymakers and academicians in the world are increasingly recognizing the importance of economic literacy. Generally, it is thought that economic literacy has many benefits to economic targets of states. For example; economic literacy of parents affects consumption behaviour of students (Aprillia, 2016), enhances entrepreneurship intentions of students (Dilek et.al. 2019; Kahya and İmamoğlu, 2015; Seyrek and Gül, 2017; Usama et.al. 2018), provides participating decision-making processes actively (Kahya and İmamoğlu, 2015, p.141), gives individuals the habit of cooperating with others (Dilek et.al. 2018, p.16).

In this research we aim to measure economic literacy of university students in Indonesia. We achieved this goal by conducting a test contains both micro and macroeconomic questions. In first part we reviewed literature about economic

literacy. Then we shared results of test which is conducted on a private Indonesian university.

## 2. Economic Literacy

Economic literacy can be defined as the ability to interpret economic developments and their effects, evaluating public policies, obtaining, analysing economic data, examining profits and costs (Kahya and İmamoğlu, 2015, p.140; Gerek and Kurt, 2011, p.60; Çömlekçi, 2017, 1424). Economic literacy does not only include having economic knowledge but also understanding of economy that will facilitate decision making processes and instilling necessary courage to take initiative. Another definition for economic literacy is the ability of measurement of amount response to yield, organizing, aggregation of economic proves, evaluation of results of changes at local politics, analyzation of promotion at working place, describing of prices and their benefits, alternatives and problems originating from economic (Şahin et.al. 2016, p.181). There are many other definitions such as “the ability to identify economic problems, alternatives, costs and benefits; analyse the incentives at work in economic situations; examine the consequences of changes in economic conditions and public policies; collect and organize economic evidence; and weigh costs against benefits (Grol et.al. 2017, p.290). Economic literacy is also known as financial literacy because these concepts are very close to each other (Barış and Şeker, 2017, p.80; Dilek et.al. 2016, p.1867).

Rational individuals should interpret economic developments in the world and understand economic trends to make right decisions. It is hard to make right decisions while there are limited sources and unlimited needs. Globalization and developments in communication and capital markets make these decisions more difficult and risky (Dilek et.al. 2019, p.91; Barış and Şeker, 2017, p.80; Durmuş and Yardımcıoğlu, 2018, p.170). It seems that trend will continue and in the future economic and financial system will be riskier and complex.

Economic literacy and basic economic knowledge help individuals in making right decisions to achieve their economic goals. In other words, economic literacy is related with knowing and using main economic theories in making rational decisions (Dilek, et.al. 2018, p.13). For instance; financial and economic literacy affect retirement planning of individuals positively (Lusardi and Mitchell, 2006, p.3). Addition to this, economic literate individuals contribute on efficient working of capital markets. Inversely, economic mistakes made in life can be costly (Lusardi and Mitchell, 2009, p.3).

Economic literature confirms that illiterate individuals can not behave rationally (Barış and Şeker, 2017, p. 80). So, it is absolute that economic literacy is necessary for all members of society. Preferences and decisions of citizens also affect whole economy and macroeconomic variables (Dilek et.al. 2018, p.14). Increase in number of individuals, who are economic literate, makes easier to reach macroeconomic targets such as increasing savings, decreasing costs (Dilek et.al. 2016, p.1866; Barış and Şeker, 2017, p.80-81). Therefore, financial and economic literacy is an essential factor for economic growth and development targets of developed and developing countries (Dang et.al. 2017, p.205). This is why states and firms give economic courses to citizens and employees (Ripain et.al. 2017, p.60). Some researches reveal that most of individuals are not well economic and financial literate (Lusardi and Mitchell, 2009, p.3; Yıldırım and Öztürk, 2017, p.2) while other researches show that majority have high basic financial literate (Dang et.al. 2017, p.211). Generally, it is thought that economic illiteracy causes negative financial results due to wrong economic decisions. Though economic literacy has ultimate importance, most of people hesitate about economics and find it incomprehensible. Citizens accepted that knowing economics is valuable position (Yıldırım and Öztürk, 2017, p.7). Developments in economies, systems and laws supported the understanding of the importance of economic literacy (Kocabıyık and Teker, 2018, p.118).

Economic literate individuals can achieve these goals successfully (Gerek and Kurt, 2011, p.61).

- a) As a producer, consumer and investor, they can make more informed preferences by evaluating their limited sources to meet their unlimited needs.
- b) They can evaluate all methods by considering profits and costs
- c) They can identify motives that shape individual behaviours
- d) They can understand how competition, trade barriers, scarcity and the interaction between firms and consumers affect prices
- e) They can identify the economic roles of public and private corporations
- f) They can understand risk, investment, unemployment, inflation and interest rates
- g) They can identify benefits and costs of public policies by evaluating them
- h) They can understand the importance of entrepreneurship and the roles of firms

Young individuals generally can behave more inexperienced while making economic decisions due to lack of economic literacy and experience. Economic

education aims to develop skills to make rational decisions which enhance resource allocation and rise efficiency (Dutkowski et.al. 2008, p.2).

### 3. Literature Review

Wood and Doyle (2002) conducted a telephone survey to employees of corporations and shared results. This research aimed to reveal how much economic knowledge people retain after they graduated. Finally, 67% of participants answered questions which measure economic literacy level, correctly.

Lusardi and Mitchell (2011) found difference in economic literacy between Whites, Blacks and Hispanics. The difference comes from the opportunity inequalities that causes high schooling rates of whites.

Şahin et.al. (2016) conducted a survey to measure economic literacy levels of managers in forest industry. As a result of this research it is found that 72% of managers consider their income while making an instalment plan, 60.9% of them comment the effects of economic crisis on unemployment plan.

Aprillia et.al. (2016) examines the impact of parent's economic literacy and education on consumption behaviour of students.

Dilek et.al. (2016) measured economic literacy levels of Kastamonu University students by conducting a survey with a scale. As a result of this research it is revealed that students in Economics and Administrative Sciences faculty are more economic literate than other students.

Bariş and Şeker (2017) conducted a survey on students in Amasya University Social Sciences Vocational School. The results show that economic literacy level is in moderate level. They analysed economic literacy in sub-dimensions and found that the highest score is due to individual budget planning while the lowest score is due to economic knowledge dimension. Also economic literacy levels of males are higher than females. Another result is that economic literacy of working students are higher than non-working students.

Lestari et.al. (2017) search the relationship between consuming behaviour and economic literacy by using explanatory survey method in Indonesian university. In this research they found a positive and significant correlation between economic literacy and consumption behaviour.

Yıldırım and Öztürk (2017) conducted a survey on experts. This research shows that experts generally find economic education insufficient. Also most of participants agreed that economic education should be given in secondary school and designed according to interdisciplinary approach.

Kocabıyık and Teker (2018) examined the financial literacy of Suleyman Demirel University students by conducting a survey. They reached that financial literacy of students is below expectations. Also financial literacy of males are higher than females. As many other researches, it is found that students in Economics and Administrative Sciences Faculty has higher scores than the students in other faculties.

Nurjanah et.al. (2018) studied on students in Jakarta, Indonesia. They found a negative and significant influence between economic literacy to student consumptive behaviour. Addition to this, a positive and significant influence between conformity to student consumptive behaviour is found.

Teyyare et.al. (2018) examined economic and fiscal literacy of Abant İzzet Baysal University students. It is revealed that education in Economics and Administrative Sciences Faculty increases economic and fiscal literacy levels so that students become literate person who can make rational economic decisions.

Efendi et.al. (2019) searched the relationship between selfcontrol, impulsive buying and economic literacy by conducting a survey on Yogyakarta State University students. The results show that there is a negative and significant influence between impulsive buying and self-control. Also it is seen that economic literacy mediates the relationship between them. As economic literacy increase, impulsive buying decreases.

According to Martins and Vega (2019), additional economic courses should be given to students in colleges and universities. Because these additional courses contribute to rational decision making, better informed society on economic issues.

Zorkun and Dilek (2020) searched the relationship between fiscal and economic literacy by studying on students in Karadeniz Technical University. They reached a conclusion that finance and economic courses affect entrepreneurship intentions and potentials positively. Therefore, in all units of universities, it will be better to give economic and finance courses.

#### 4. Method

A test is conducted on students who are educated in private university in Indonesia. Questions are taken from previous research of Dilek et.al. (2019). 520 students answered these questions, but 7 of them is eliminated due to missing filling.

So, 513 tests are taken into account. At first, demographic questions are asked. Then in the second part, questions which are used to measure economic literacy are asked. Second part has two parts which are micro and macroeconomics.

## 5. Findings

The results of demographic questions are given in Table 1. Most of participants are female (56.7%). 43.3% of participants have low income while 44.8% of them of them have middle income. Only 11.9 of participants have high income. 84% of participants are between 18 and 21 years old. Approximately half of participants (48.3%) live in big city. Most of participants have family with 4-6 members.

**Table 1. Demographic Results**

<b>Gender</b>	<b>F</b>	<b>%</b>	<b>Income</b>	<b>F</b>	<b>%</b>
<b>Male</b>	222	43.3	<b>Low income</b>	222	43.3
<b>Female</b>	291	56.7	<b>Middle income</b>	230	44.8
<b>Total</b>	513	100	<b>High income</b>	61	11.9
<b>Age</b>	<b>F</b>	<b>%</b>	<b>Total</b>	<b>F</b>	<b>%</b>
<b>Smaller than 18</b>	11	2.1	<b>City in lived</b>	<b>F</b>	<b>%</b>
<b>18-19</b>	250	48.7	<b>Village</b>	84	16.4
<b>20-21</b>	181	35.3	<b>City</b>	181	35.3
<b>22-23</b>	36	7.0	<b>Big City</b>	248	48.3
<b>24 and bigger than 24</b>	35	6.8	<b>Total</b>	513	100
<b>Total</b>	<b>F</b>	<b>%</b>	<b>Family Members</b>	<b>F</b>	<b>%</b>
			<b>1-3</b>	99	19.1
			<b>4-6</b>	397	77.4
			<b>7+</b>	18	3.5
			<b>Total</b>	513	100

In the second part questions about micro and macroeconomics are asked and the results are given in Table 2. As it can be seen that mean scores of participants in microeconomic test is low only 40.4%. The highest score (77.6%) belongs to question 10 which asks monopoly market. The lowest score (15.2%) is due to question 9 which asks about emergence of monopolies. Macroeconomic scores are not only higher than microeconomic test scores but also 50%. The highest score (71.5%) belongs to question 1 which asks GDP where lowest score (28.5%) belongs to question 7 which asks Keynesian economic proposes. More than half of participants answered truly 2 microeconomic questions and 5 macroeconomic questions.

**Table 2. Micro and Macroeconomic Questions**

<b>Microeconomics (Mean:40.4%)</b>	<b>True</b>	<b>%</b>
<b>1-) Which happens if prices increase in ceteris paribus? Demand of good decrease</b>	291	56.7
<b>2-) Which one do not affect demand of one good to consumers? Prices of Raw Materials</b>	194	37.8
<b>3-) Which one do not affect elasticity of good? Prices of Raw Materials</b>	86	16.8
<b>4-) Which happens in the fish market if the fishermen hunt well (supply increases)? Prices of fish decreases</b>	253	49.3
<b>5-) What happens if government set minimum price which is higher than the equilibrium price? Supply surplus</b>	173	33.7
<b>6-) What happens if labor is increasing when tools, machines remain constant in production process? Production increases rapidly, then increase slowly finally decreases</b>	239	46.6
<b>7-) The fixed cost is 1000 rph and variable cost is 5 rph. What is the total cost if firm produces 500 products? 3500</b>	207	40.3
<b>8-) What happens to average costs as production increases? (consider average cost curve). Decrease at first then increase</b>	152	29.6

9-) Which of the following is not one of the reasons for the emergence of markets where a single firm exists? Regulatory institutions	78	15.2
10-) In which market, firms have higher power to set prices? Markets with single firm	398	77.6
<b>Macroeconomics (Mean:50.4%)</b>	<b>True</b>	<b>%</b>
1-) What is the sum of the values in market prices of all final goods and services produced within a country's geographical boundaries in a given time period? GDP	367	71.5
2-) Real GDP in 2014 is 950 rph in a country. This value increases to 1050 rph in 2015. What is the growth rate of 2015? %10,5	306	59.6
3-) what is the ratio of individuals who wants to work in non institutional working age population? Participation ratio to labor force	204	39.8
4-) What happens if economic growth increases? (Okun Law) d) unemployment rate decreases	335	65.3
5-) Which one is not the effects of inflation? Prices decreases	240	46.8
6-) What happens if interest rates increase? investment decreases	220	42.9
7-) what to do if there is unemployment and idle capacity in economy? (According to Keynesians) Government expenditures should be increase	146	28.5
8-) What is the depreciation of national currency against foreign currencies in the fixed exchange rate system? Devaluation	323	63.0
9-) Which one is not in the current account? The bond purchase of foreign citizens in country	182	35.5
10-) What is the Central Bank Purchase of bonds from the market or selling bonds to the market? Open Market transactions	264	51.5

Addition to this we test some hypotheses and the results are shared below.

H1: There is significant difference in microeconomic test results according to gender. Rejected. Male mean:4.03, Female:3.99. Independent Sample T test result sig:0.736

H2: There is significant difference in macroeconomic test results according to gender. Rejected. Male mean:4.87, Female:5.09. Independent Sample T test result sig:0.232

H3: There is significant difference in microeconomic test results according to age. Rejected. Below 18: 3.54, Age 18-19: 3.97, Age 20-21: 4.01, Age 22-23: 4.22, Age 24+: 4.14. One Way Anova test result sig:0.634

H4: There is significant difference in macroeconomic test results according to age. Rejected. Below 18: 5.09, Age 18-19: 4.86, Age 20-21: 5.13, Age 22-23: 5.14, Age 24+: 5.11. One Way Anova test result sig:0.673

H5: There is significant difference in microeconomic test results according to income. Accepted. Low income mean:3.83, Middle income:4.14, High income:4.15. One Way Anova test result sig:0.046. Tamhane's T2 result: low income and middle income sig:0.047

H6: There is significant difference in macroeconomic test results according to income. Rejected. Low income mean:4.88, Middle income:5.20, High income:4.63. One Way Anova test result sig:0.073.

H7: There is significant difference in microeconomic test results according to place they lived in. Rejected. Village mean:4.03, City:3.95, Big City: 4.04. One Way Anova test result sig:0.788

H8: There is significant difference in macroeconomic test results according to place they lived in. Accepted. Village mean:4.98, City:4.60, Big City: 5.29. One Way Anova test result sig:0.002. Tamhane's T2 result: City and Big city sig:0.001

Also we tested correlation between microeconomic success and macroeconomic success. Test results are given in Table 3. It is found that there is weak relationship between microeconomic and macroeconomic results.

**Table 3. Correlation (micro and macro)**

	Micro	Macro
Micro	1.00	0.366 sig:0.000
Macro	0.366 sig:0.000	1.00

## 6. Conclusion

Economic literacy is very useful tool for individuals who have made many economic decisions every day. Rational individuals do it by analysing and interpreting economic events, evaluating public policies and examining costs. Increases in individuals who make right economic decisions help policymakers in developing policies to enhance wealth. Because of this reason, academic searches about economic literacy increases day by day. Our aim is to measure economic literacy levels of Indonesia university students. To this aim we conducted two tests which include microeconomic and macroeconomic tests. It is found that economic literacy levels of Indonesia university students are moderate level. Also macroeconomic test results are higher than microeconomic test results. According to these results, it can be said that economic literacy levels of Indonesia university students should be increased to reach development and growth goals of country. Another result we reached is the microeconomic test results change according to income group. As microeconomic literacy increases the wealth of individuals increases. This is not surprising. Another result is that there is weak relationship between microeconomic test and macroeconomic test results. We have two recommendations for further researches. Other researchers should conduct new tests in other samples and search benefits of economic literacy.

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