Economic Literacy: Does It Matter for Policy Understanding?

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Abstract

The quality of human capital is indispensable for economic growth and sustainability. The developed nations have shown evidence of a positive relationship between education and economic development. In all respects, a better understanding of economics among citizens has led to more efficiency in implementing economic policies. In this paper, we explore a possible relationship between economic literacy and policy understanding. Policy knowledge, interest and explanation are measured through policy understanding. This study used the students' teachers as a sample and found that economic literacy was below 50 per cent. Meanwhile, the level of policy understanding was moderate. Interestingly, our findings showed that economic literacy is not strongly associated with economic policy understanding. Policy interest appeared as an important element for policy understanding among the sample. In a volatile economic environment, the level of economic knowledge among the population is a vital factor for the implementation of economic policies. A further investigation must be conducted to assess this issue.

Keywords: economic literacy, policy, knowledge, understanding

1. Introduction

The success of a country's economic policies depends on how the policies are implemented and accepted by the public. Educating the public on the rationale behind the economic policies is important in helping our economy to run smoothly and to instil confidence in our economic system (Bernanke, 2006). Regrettably, one of the issues in our educational system is that it does not cover economic education for all students. The development of economics and financial intellectuality is a long process, but it is essential because individuals are part of society who are characterized by economization among all aspects of life. The public should not only master the necessary economic knowledge but should also possess the abilities and qualities of economic thinking and awareness. Decision-making based on the economy is associated with uncertainty and risk (Oehler, 2011; Moussa, 2018). A variety of economic activities and decision-making are more accessible for those who have acquired economic literacy.

Furthermore, individuals making decisions in economics are at risk as information technologies, and innovation developments are continually changing. One way to decrease such associated economic and financial risk is to possess a good knowledge of financial literacy (Werner & Oehler, 2008). However, the importance of economic literacy and the effectiveness of economics education does not attract much attention among policymakers.

In Malaysia, for example, an economics subject was introduced as a subject matter to year four secondary school students, as an optional subject. By contrast, a developed country like the USA has embedded economic literacy as part of its education since primary school. The critical requirement does not just extend towards consumer issues, but instead, they also believed in the response from government policies. Is the economic policy associated with economic literacy? The low level of economic knowledge does not prevent the public from making any decisions (Steiner, 2001; Loukil, 2017), but it will lead them to unhealthy economic decisions (Lusardi & Mitchell 2011). It remains questionable whether the public is as matured and educated in terms of economic and financial matters as commonly assumed. Therefore, to gauge the economic literacy of the population concerning public policies is relevant. As public literacy affects government policies (Hill and Hinton-Anderson 1995), it is, therefore, pertinent to increase the economic literacy of the population.

Given that when there is a better understanding of causal relationships between the policies that can improve the individual and social welfare, those policies can gain greater public acceptance. Furthermore, consumer protection is better for those who have obtained economic literacy. Therefore, the ability to measure economic literacy is essential.

Against this background, we with this conclusion that there is a need to measure economic literacy and policy understanding. To our knowledge, there is no empirical evidence to date that focuses on economic knowledge, literacy and policy understanding in Malaysia. To fill this gap, we started an investigation with students' teachers at an educational university. This paper aims to investigate and explore literacy among students' teachers, and to examine the relationship between economic literacy and policy understanding.

2. Literature Review

Harris (2009) argued that individuals without an understanding of economic knowledge would encounter difficulties in managing their financial resources once they start work or when they embark on a career or enter working life. It is because primary education is part of social and economic life (Bowles & Gintis, 1979). Economic literacy involves understanding, organising and synthesis the skills that needed in translating the science of economics, either theoretically or practicality in life. For developing countries, economic literacy may consider as a new concept, but, undoubtedly, is a fundamental issue. We need to be able to describe the different levels of economic knowledge, which will have an impact on the quality of life (Stern, 2002; Nazal, 2017). People who are using economics, as a principle will help them think and acting better on an issue that concerns them. Without basic knowledge and understanding of economic concepts, one would be left behind and are inclined to make the wrong decision (Rivlin, 1999).

Furthermore, Walstad (1992) and Harris (2009) argued that the majority of society attained the lowest level of economic literacy. Economic literacy differs among different people. Consequently, economic literacy remained an important issue, even in a developed nation; this subject is teaching at formal education or embedded in the curriculum for many years. Walstad and Larsen (1992) found that the differences in economic literacy existed not only among the teachers and students but also among professionals and businesses. One of the reasons why economic knowledge has not progressed well is because economic knowledge did not embed as part of their private and professional routine (Walsh & Mitchell, 2005). Indeed, Salemi (2005) argued that most people have the wrong interpretation when conversing about the concepts of economics (Maciuliene, Skarzauskiene & Botteldooren, 2018).

Many scholars agreed that demographical factor was one of the essential parameters to explain the differences in economic literacy among people. These parameters include gender, age, level of education, race, and status (Shoven, 2011; Walsh & Mitchell, 2005; Mujtaba, Jamal & Shaikh, 2018). Some scholars found that economic knowledge dominated by males (Caplan, 2001; Hurst, 2005; Volpe et al., 1996; Chen & Volpe, 2002). Male gender appears to be more confident in decision making as compared to the female gender (Chen & Volpe, 2002; Graham et al., 2002). Likewise, studies conducted by Palmer et al. (1979) showed that a student with economics experience in secondary school did not demonstrate his capabilities in learning economics at the college level. Also, his grades were lower than those who did not undertake economics at all. Reid (1983) also found the same pattern, which indicates that there were no significant differences in economic literacy between a student from the educational department and those who have registered for an economic course.

Previously, studies by Becker et al. (1990) suggested that learning economics in school has contributed a better understanding to the students when they are studying economics at tertiary level. They were eager to venture into economics at a higher level because they were exposed to learning economics at school (Lopus, 1997). Wood and Doyle (2002) also found that those who enrolled at one of the economic courses at a college or higher education level performed better in economic literacy than those who did not enrol for the economic subject. Similarly, Gratton-Lavoie and Gill (2009) discovered that one semester of formal economics instruction is likely to improve the economic literacy of high school students' by about 12.3 per cent. However, an observation made by Hansen (2002); Mujtaba et al. (2018), on first-year students who have completed a basic economics course found that the majority did not demonstrate a better understanding of basic economics as opposed to those who did not receive any formal economic experience at a lower level. Economic literacy is also associated with age and experience. Rajindar et al. (2008) found that the marginal effect of experience correlates positively with economic literacy but correlates negatively with age. Age and experience were the most contributing factors leading to the differences observed and not gender (Brenner, 1999). The studies showed a mixed result, which can be related to the economic background and economic literacy or knowledge. What about in developing countries, for example, Malaysia? Economic knowledge and literacy are critical aspects of our decision-making.

The development of technology and innovation makes economic decisions more complicated and risky. However, most of the people in developing countries, including national education policies, do not emphasise enough the importance of economic literacy in our daily lives. Liberalism and economic globalism provided a more challenging area in decision-making. Also, borderless market and online trading create a new environment of economic decision. Indeed, it is more vicious when the majority of people had functional economic literacy but failed to utilise it when

solving economic-related problems. The study of economics enables us to determine and create choices for a given limited range or resources. It merely means that we need to ask ourselves whether we are using our resources in such a manner that we cannot be made any better off with an alternative allocation of resources.

Furthermore, the economics of the state is more complicated. Understanding government policies do not just depend on basic economics knowledge, but also requires an economic attitude and interest. Hence, it is vital to ensure a strong basic economic literacy or knowledge. Indeed, economic literacy is a vital factor in shaping the economic attitude and opinion as well as building a relationship with the state economic policy. As a starting point, we need to know the level of economic understanding, attitude and opinion among the public. However, to measure the whole country has proven to be more difficult as it is time-consuming and costly. Thus, we have conducted a study to examine economic literacy, attitude and opinion with a small sample, using the students' teacher approach. If a teacher is concerned with developing a more positive attitude towards the subject of economics, economic institutions, or issues, this might be an effective strategy to increase economic knowledge among society. The objectives of this study are to explore economic literacy among the students' teacher approach. First, this study examines the level of economic knowledge, literacy and policy understanding among university students. Secondly, to compare the level of economic knowledge, literacy and policy understanding based on the economic background, and finally, to determine a correlation between economic literacy and policy understanding among the students. The research hypotheses are; there is no significant difference in economic knowledge by economics qualification; there is no significant difference in economic literacy by economics qualification; there is no significant difference in economic policy understanding by economics qualification, and there is no significant correlation between economic literacy and policy knowledge.

3. Methodology

In this study, we use the students' teacher as a sample from one of the public universities in Malaysia, i.e. university of education. Theoretically, the knowledge of the students' teacher, particularly in economic literacy, should be dispersed directly and indirectly. Supposedly, these students should be well educated/knowledgeable in terms of the content, pedagogical and general knowledge in economic literacy during training and recruiting. The population consisted of more than 10,000 students', but our sample randomly selected from those who took part voluntarily from each faculty. We surveyed one class (~ 50 students' per class) spanning nine faculties, except for two classes from the Faculty of Human Development due to the higher number of students relatively. The total sample accumulated came to 600 students.

The data collection method, which consisted of a set of questionnaires, was divided into four parts. The first part contained six questions regarding the student's background. In the second part, the respondent will answer 30 questions on basic economic terms using a scale of one to five. Score one referred to as "definitely do not know, and five are referred to as "very good in understanding or very knowledgeable". The economic's topics in our survey were comprised of basic economics (6 items), type of goods (6 items), demand and supply (2 items), production (5 items), public finance (3 items) and international trade (5 items). The respondents were ranked based on their understanding of economic terms and definitions, according to their perception.

The third part is on economic literacy (EL). The questions on EL were adapted from the Council for Economic Education (http://www.councilforeconed.org/), which were translated and modified to suit the local setting. Altogether, there were 21 questions, which included four questions on government policies, nine on financial, four on the economics sector and four questions about international trade.

The final part of the questionnaires measured what we called minimal economic knowledge (MEK) on the policies, particularly for Malaysia. MEK comprises of three different instruments whereby examining a person's level of understanding, interest and ability to explain the economic terms and policies that used in their daily life. For this purpose, 21 items, which comprises of monetary, fiscal and development policies, international trade and financial market were listed. The sample required their response using a five-point Likert Scale. It was coded from five being the highest ranking of MEK (knowledge, interest and ability to explain) down to one being the lowest ranking based on their knowledge of economics/economic knowledge. How we measured the MEK? First, we show to our sample the name of the policy (for example, National Agricultural Policy) and then, they have two or three minutes to think about it. After that, we showed our power contains the policy's explanation (or the meaning of that particular policy) and finally, our sample marked their answer based on scale one to five. The overall MEK's score was obtained by calculating each score for these items. These scores transformed into three categories, which comprised of low, moderate or higher. The mean score for each variable that falls within a range of 1.0 to 2.33 has been considered as low; 2.34 to 3.67 were moderate; and 3.68 to 5.00 as the highest-ranking, respectively (Shafai et al., 2019).

The survey that was carried out randomly at a selected classroom at the end of a lecture, and only volunteered students participated in this study. The interactive survey method has been carried out in coordination with the other lectures/lecturers. A fellow researcher conducted a brief explanation before the dissemination of questionnaires.

Table 1. Sample

Variables	Frequency (Percentage)
Gender	
Male	178 (31.2)
Female	392 (68.8)
Faculty	
Art and Humanity	84 (14.7)
Science and Technology	156 (27.4)
Human Development	189 (33.2)
Business and Economics	69 (12.1)
Sport Science	72 (12.6)
Year	
One	202 (35.4)
Two	163 (28.7)
Three	186 (32.6)
Four	19 (3.3)
Qualifications for university entry	
Higher School Certificate	396 (69.5)
Matriculation	92 (16.1)
Diploma	82 (14.4)
Economic	
No experience	248 (43.50)
Experience	322 (56.45)
Economic Education	
No formal education	248 (43.5)
Secondary education	118 (20.7)
Upper secondary/College	135 (23.7)
University	69 (12.1)

A total of 570 participated in our study, in which 178 were male (31.2 per cent), and 392 were female (68.8 per cent). Those who were studying economics totalled 322 students (56.45 per cent) and those who were not studying the subject comprised of 248 students (43.5 per cent). Of all the faculties, the Faculty of Human Development represented the highest number of respondents, with 189 students who participated in the survey, whereas the Faculty of Science and Technology comprised of a total of 156 respondents (27.4%). There were 69 students (12.1%) from Business and Economics who responded to this survey, along with 84 students (14.7%) who originated from the Faculty of Science and Technology. A total of 72 students (12%) came from the Faculty of Sports and Sciences with the lowest participants. The first-year students totalled of 202 (35.4%), second and third year comprised of 163 (28.7%) and 186 (32.6%) respectively. Only 19 (3.3 per cent%) final year students volunteered to answer our survey.

Learning economics in school is not compulsory. Formal economics' subject was introduced in secondary school was offered as an elective subject. However, some economic and related economic issues could be derived from other subjects such as business, commerce or accounting. In our sample, we found that only 322 students (56.45%) have the right experience in the economic subject. Officially, a total of 118 (20.7%) students originally graduated from the secondary level of education with economics' certification.

Meanwhile, the rest of the 180 students (31.6%) possess a School Higher Certificate, with the inclusion of an economic subject that was offered at school level (or college). Out of 570 students, 248 respondents (43.5%) did not have any economic credentials, as shown in Table 1. The survey was carried out, in a randomly selected classroom, at the end of a lecture, was only participated by students who volunteered for this study. The interactive survey method has been carried out in coordination with the other lectures/lecturers. A fellow researcher gave a brief explanation before the dissemination of the questionnaires.

4. Results

Economic knowledge among students was moderate. We found that the mean for basic economic knowledge as acknowledged by our sample was 3.49. This figure based on their self-experience and perception of 30 economic terms that were listed and ranked using the Likert scale accordance with their interpretation, preference, or what they perceive as an economic term.

Table 2. Descriptive statistics (n=570)

Variables	Minimum (Percent) [Ranking]	Maximum (Percent) [Ranking]	Mean (Percent) [Ranking]	Std. Deviation
Economic knowledge (30 items)	40.00 (26.67) [1.33]	150.00 (100.00) [5.00]	104.80 (69.87) [3.49]	22.34 14.89 0.75
Economic literacy (18 items)	1 (4.76)	18 (85.71)	9.83 (46.79)	3.51 16.72
Policy knowledge (	21.00 (20.00) [1.00]	103.00 (98.10) [4.90]	64.82 (61.74) [3.09]	12.38 11.79 0.59
Policy interest (	21.00 (20.00) [1.00]	105.00 (100.00) [5.00]	65.29 (62.18) [3.11]	12.52 11.93 0.59
Policy Explanation	21.00 (20.00) [1.00]	94.00 (89.52) [4.48]	59.69 (56.86) [2.84]	13.18 12.55 0.63

What about policy understanding? Based on the three elements that measured the understanding of policy understanding (PU), the results showed that the level of policy knowledge, interest and explanation were moderate. Table 2 showed the mean score for each element as 3.08, 3.10 and 2.84, respectively. Therefore, the overall mean score for policy understanding accumulated to just around 3.01. The lowest and the highest score for economic literacy was 1 and 18, respectively. The mean score for the correct answers was about 10. Out of 21 questions on economic literacy, the total mean score is below 50 per cent, the details scored for economic literacy are shown in Table 3.

Table 3. Economic literacy

Score (%)	Overall	Male	Female	Economic		Level of Economic			
				Yes	No	No econ	Secondary	College	University
0 - 20	41	18	23	24	17	24	11	5	1
21 - 40	161	54	107	96	65	96	29	28	8
41 - 60	231	70	161	107	124	107	51	58	15
61 - 80	126	34	92	20	100	20	26	42	38
81 - 100	3	0	3	0	3	0	0	0	3
Total	562	176	386	247	309	247	117	133	65

Table 3 illustrates a descriptive analysis based on economic literacy abbreviated as percentages obtained by the corresponding students. We found that only 129 students' scores have correct answers above 60 per cent, whereas 231, out of 562 students, obtained a score between 41 to 60 per cent. From 563, only three female students scored more than 80 per cent. It shows that female students showed a better score as compared to their male counterpart. Meanwhile, as expected, those who have acquired a formal economic lesson had scored more than those who have no formal education on economic knowledge (column 5 to 10 of Table 2).

Table 4 illustrates a detailed comparison of economic knowledge, literacy and policy understanding concerning formal economic education among our sample. ANOVA analysis with Post-hoc Tukey test reveals that the mean of economic knowledge and policy understanding (knowledge, interest and policy explanation) were statistically significant among our sample. For instance, the 'economic term' showed a statistically significant difference between groups as determined by a one-way ANOVA (F (3, 5666) = 115.11, p = 0.000). Having a higher certificate in the economic subject has given a better understanding of economic terms. However, there were no statistically significant differences observed between the upper level secondary and tertiary groups (p = 0.989).

Table 4. One way ANOVA and Post Hoc Test (Tukey HSD): Multiple comparison

Variables	Economic background	Mean difference (I – J) None	Secondary	Upper Secondary	Tertiary
Economic term	None		-17.73* (1.97)	-28.95* (1.89)	33.92* (2.40)
F (3, 566) = 115.11,	Secondary	17.73* (1.97)		-11.22*(2.22)	-16.19*(2.67)
p = 0.00	Upper Secondary	28.96* (1.89)	11.22* (2.22)		-4.97(2.61)
	Tertiary	33.92* (2.40)	16.19* (2.67)	4.97(2.61)	
Economic Literacy	None		-1.17* (0.36)	-2.33*(0.34)	-4.33* (0.44)
F (3, 566) = 38.88,	Secondary	1.17* (0.36)		-1.16* (0.40)	-3.16* (0.49)
p = 0.000	Upper Secondary	2.33* (0.34)	1.16* (0.40)		-2.00*(0.47)
	Tertiary	4.33* (0.44)	3.16* (0.49)	2.00* (0.47)	
Policy knowledge	None		-4.97* (1.32)	-7.99* (1.26)	-9.33* (1.61)
F (3, 566) = 19.54,	Secondary	4.97* (1.32)		-3.02 (1.48)	-4.36 (1.79)
p = 0.000	Upper Secondary	7.99* (1.26)	3.02 (1.48)		-1.34 (1.75)
	Tertiary	9.33* (1.61)	-4.36 (1.79)	-1.34 (1.75)	
Policy interest	None		-4.02* (1.37)	-5.62*(1.31)	-6.59* (1.67)
F (3, 566) = 9.25,	Secondary	4.02* (1.37)		-1.60 (1.55)	-2.58 (1.86)
p = 0.000	Upper Secondary	5.62* (1.31)	1.60 (1.55)		-0.98 (1.81)
	Tertiary	6.59* (1.67)	2.58 (1.86)	0.98 (1.81)	
Policy Explanation	None		-4.93* (1.43)	-6.48* (1.36)	-9.67* (1.74)
F (3, 566) = 14.56,	Secondary	4.93* (1.43)		-1.56 (1.60)	-4.75 (1.93)
p = 0.000	Upper Secondary	6.48* (1.36)	1.56 (1.60)		-3.16 (1.88)
	Tertiary	9.67* (1.73)	4.75 (1.93)	3.19 (1.88)	

Three economic components were measured based on policy understanding (PU), which includes policy knowledge, policy interest and policy explanation. Does economic literacy explain the differences in economic behaviour among our sample? Interestingly, our results showed a similar pattern for all three components against their economic background. There were statistically significant differences in the mean of policy understanding (policy knowledge, policy interest and policy explanation) between those who have experienced a formal economic lesson and their counterpart. On the other hand, there were no statistically significant differences in terms of policy understanding between those who have a different level of economic experience. We continued our investigation based on the relationship between economic literacy and policy understanding. Pearson correlation coefficients (refer to Table 5) showed a weak relationship between economic literacy score and the components of policy understanding.

Table 5. Correlations

Variables	Economic literacy	Policy knowledge	Policy interest	Policy Explanation
Policy knowledge	.293**			
Policy interest	.214**	.656**		
Policy Explanation	.201**	.665**	.728**	
Economic term	.497**	.520**	.388**	.457**

**. Correlation is significant at the 0.01 level (2-tailed).

Interestingly, among the parameters of policy understanding, policy interest was highly correlated with policy explanation while the rests were moderate.

5. Discussions and Conclusion

Some scholars and policymakers agreed that economic knowledge and economic literacy have contributed to the economic success of their nation. Hence, economic and financial subjects blended in their schooling system. Baker (2011) argued that wealth literacy has contributed to economic development. In daily life, economic knowledge is probably contributing more than a test score in the consumption decision, but fail to apply in the real world (Sadler and Sonnert, 2016). Therefore, offering the economic course as a compulsory subject in secondary schools may be a good suggestion from the economist's point of view. On the other hand, if the educationist or policymakers preferred a higher test score than the economic knowledge, then obviously the economic subject will not be prioritized. In this study, where an economic subject offered as an elective subject in secondary schools, we found quite a satisfying result. Overall, economic knowledge among our sample is moderate; with a mean score of 3.49.

However, this figure should be interpreted carefully due to the method of measurement. This scale shows how people think or understand based on their perception about the economic term (or phrase), for example, a basic understanding of the type of goods, demand and supply. In our case, economic knowledge among the students' teacher was moderate. Our results suggested that both policy knowledge and policy interest are also moderate but are somewhat low for an economic policy explanation variable. Therefore, in general, economic policy understanding was moderate. Nevertheless, our results also suggested that those who studied economics at school or college significantly believed that they obtained better economic policy understanding as opposed to those without any formal economic class.

It was reflective based on the perception and belief that the students with an economics background scored higher in economic knowledge and economic literacy. The mean score for economic literacy was 9 (46%) out of 21 questions, which were considerably low for university students. Both the mean score for economic knowledge and economic literacy showed a significant difference in terms of the level of economic experience. The higher level of economic experience is associated with a higher score of economic knowledge and literacy. Previous findings by Butter and Asarta (2011) showed that students in the advanced class performed better than the regular class. It serves as an indicator where economic provides a vital learning curve in a formal class. Even the score was significantly low at a secondary school, but it was statistically significantly different from those who never studied at all. The economics course at Malaysian secondary school lasts typically for two years. Therefore, learning the economics subject, as an elective subject, will make a huge difference in terms of economic knowledge. Indeed, it was not only for knowledge of economic phrase, term or literacy but their perception and thinking about economic policy also differed. It is providing little evidence that early exposure to elementary economics would help provide a better understanding of economic policy. However, the correlation between economic literacy and the elements of policy understanding is not strong enough. Instead, what observed was that between economic literacy and policy interest, the latter has a higher likelihood in becoming an essential factor in determining policy understanding. Initially, the result was expected to show a positive correlation between economic literacy and policy understanding. However, this has proven otherwise which is similar to what suggested previous study. Learning economics in classroom is not guarantee for student to understand economics in the real world (Tang, 2019).

There is a constant challenge among economists to encourage young people to learn and understand economic literacy. If we consider this finding as a little evidence of how minuscule economic and economic policy understanding among university students, then, we should start to worry about the rest of society. Without a formal economic subject or a simple introductory course at secondary or tertiary education, household decision-making can be at risk because they are more exposed to financial and policy shift. A decision about how much to spend, borrow and invest requires a basic economic understanding in economics. A low level of economic literacy has contributed to debt building-up and an

increase in the number of insolvencies (Jappeli, 2010). On the other hand, well-equipped citizens with an economic literacy background can build confidence in the market economy and employability (Lopus, Amidjono, & Grimes, 2019). People must have the capacity to understand basic economics and financial literacy before they could provide support and participate in fiscal and monetary policies. Improvement in our human capital via a compulsory economic or financial subject is a must in our education system. However, extensive evidence through empirical research needs to be done to provide more evidence.

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