The impact of economic education on economic literacy: A prospective study of a sample of respondents

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Abstract. Conventional finance uses models that assume that all participants are rational, that is, they process appropriate information in an efficient and unbiased manner, as their decisions are consistent with maximizing benefit. Conventional economic theories assume that investors make rational decisions, based on the idea that people act rationally and pay attention to all the information available in the decision-making process. In principle, economic literacy is a tool to achieve these goals, as it facilitates rational decision-making and provides more accurate economic decisions that lead to increased economic efficiency and the well-being of both individuals and society. Accordingly, the study aimed to reveal the existence of a statistically significant relationship between economic education and economic literacy, which could lead to an increase in economic efficiency. To reach this goal, a questionnaire was conducted on 100 people in Karbala governorate. And by using the experimental approach and with the help of many financial and statistical methods and through the use of the SPSS18.00 program, the study reached several conclusions and recommendations, the most important of which are: The absence of a positive relationship with statistical significance between economic education and the level of economic literacy, whether at the micro or total level, and the study recommends the need to raise awareness about basic and advanced economic concepts among respondents in our dear country, Iraq in general, and Karbala governorate in particular, and the need to raise their awareness about the necessity of being familiar with those concepts that leave Positive effects on their overall economic activity.

Keywords. economic literacy, economic education, micro-level, macro-level, morale model

Introduction:

The economy occupies an important place in our daily life, as many economic decisions are made about many issues such as consumption, production, working life and asset valuation, and these decisions are complex decisions due to the scarcity of resources and unlimited needs. The development in economic and financial methods has made the process of making the right decisions a complex matter, because it depends on experience and economic knowledge. Possession of economic knowledge is very important for decision makers.

Economic literacy, like many other areas of literacy, can be considered as a concept that emerged as a result of the twenty-first century change in economics, which is described as one of literacy that should be owned by all just like education for students (literacy). Economic illiteracy is the identification, knowledge and characterization of economic problems, costs,
benefits, missed and alternative opportunities, and the analysis of the drivers operating in economic situations, conditions, and public policies.

**First**: The concept of economic literacy

Economics is the study of the behavior of individuals and society in making choices about scarce resources in an effort to improve the quality of life. The emergence of economics is based on relative scarcity in the sense of finite resources with unlimited wants and needs. It is in principle. Economic literacy is a tool to achieve these goals, and the reality shows that not every person has high economic knowledge and the ability to achieve well-being to himself. Thus, economic literacy is one of the indicators that enable individuals to better manage their economic resources and achieve prosperity (Melina & Sheila, 2017).

Economic literacy is important because it simplifies the understanding of the world and the economic system, helps to make the right decisions, and directs individuals to be more rational, and also economic literacy is part of the economic competence necessary for individuals to continue their lives in a correct manner. With economic literacy, individuals improve their abilities to act as rational economists. One of the main functions of economic literacy is to give people the habit of cooperating with others by providing development in economic knowledge and skills. The role of economics in individual life and the necessity of economic education is very important for individuals (Gerek and Kurt, 2008).

Thus economic literacy "involves the knowledge and application of basic economic ideas to make rational decisions about the use of limited resources" (Banaszak, 1987, p. 3). Economic knowledge can be defined as the ability to interpret economic developments and their effects, evaluate public policies, obtain economic data and analysis, and an examination of profits and costs (Kahya and İmamoğlu, 2015, p.140; Gerek and Kurt, 2011, p.60; Çömlekçi, 2017, 124). Economic literacy includes not only the possession of economic knowledge but also the understanding of economics which would facilitate decision-making processes and instill the necessary courage to take initiative. Economic literacy is defined as the ability to measure the quantitative response to productivity, organization, and compile economic evidence, evaluate the consequences of changes in local policy, analyze promotion in the workplace, describe prices and their benefits, alternatives, and problems arising from the economy. (Shahin et al. 2016, p. 181)

Some define economic literacy as the ability to review alternatives to explain economic problems and find solutions to these problems, to determine cost and profits, and investigate the effects of changes in economic conditions to collect and organize data related to the economy, and balance profits and costs (NCREL, 2006; Gerek and Kurt, 2008). Rivlin (1999) defines economic literacy as "the elementary practical knowledge of the concepts and language of economic activity and economic policy...".

There are two ways to increase economic literacy. The first is economic education, which includes the ordinary population through education in schools and universities. The second focuses on daily life events. In some surveys, employees who attended at least one economics course were found to perform better on an economic literacy test than employees who did not attend economics courses at all. (Şantaş and Demirgil, 2015: 49).

- Economically educated individuals can successfully achieve several goals, which are (Gerek, Kurt, 2011, p. 61).
  a) As producers, consumers, and investors, they can make more informed preferences by evaluating their finite resources to satisfy their unlimited needs.
  b) They can evaluate all methods by considering profits and costs.
  c) They can identify the motives that make up individual behaviors.
d) They can understand how competition, trade barriers, scarcity, and the interaction between firms and consumers affect prices.

e) They can define the economic roles of public and private companies.

f) Understand risks, investment, unemployment, inflation, and interest rates.

g) They can determine the benefits and costs of public policies by evaluating them.

h) They can understand the importance of entrepreneurship and corporate roles.

Economic literacy is an important necessity because it is useful for understanding the economic world, directs people to be more rational in decision-making, and is useful for understanding the limits and possibilities of fiscal policy. In this regard, it can be emphasized that economic literacy has both individual and social effects. From an individual's perspective, a person, as an economic actor, has to solve a range of economic problems ranging from the simplest business activity to more complex investment decisions. Thus, decision-making in the economic world requires a proper assessment of causation in the relationships within economic activities. Looking at this point, we see that there is a direct relationship between the level of economic literacy and economic efficiency. In other words, the existence of economic rationality depends on the existence of economic literacy. As for the social effects of literacy, the low level of economic knowledge may lead the individual to take wrong decisions and reduce economic efficiency. Thus, a problem that begins with the individual may affect an entire country and even the world. Moreover, the economic policies of the government may influence the economic decisions of an individual or vice versa. So we are not expected to see the full impact of economic policies on societies where the level of economic literacy is low. Seeing the results of these policies as an increase in the level of economic well-being depends on the level of acceptance and understanding of these policies, and this depends mainly on the level of economic culture in society (Cakmak, Benk, Budak, 2015, 1)

Funham (2008, 34-35) suggested the following questions assess the role of the education system at the level of economic literacy:

a) What is the role of schools in economic education?

b) What is taught explicitly in classes devoted to economic issues (accounting, economics, and business administration)?

c) How are economic behaviors such as entrepreneurship and volunteerism modeled in schools? Or did the schools find any opportunity to teach economic issues in an actually applied manner?

d) How are the different behaviors formulated in the school?

e) What is the level of economic attitudes, experience, and knowledge of student teachers of all disciplines?

Second: The practical aspect: testing and analyzing the results of the relationship between economic education and the level of economic literacy

- Preliminary analysis of the questionnaire form

In order to achieve the objectives of the study, the data was unloaded through the (SPSS) program to carry out the analysis process, and to achieve this Objectives: It was assumed that the level of morale is (5%), and it corresponds to the level of confidence (95%) to explain the results of the study that was conducted on the respondents. The following statistical methods were used:

The validity and reliability of the questionnaire: The degree of reliability was tested through the alpha-Crumpach coefficient for the purpose of testing and measuring the degree of credibility (reliability) in the responses received from the questionnaire questions, as this test
depends on the extent of internal reliability and the degree of reliability of the questionnaire questions. The result of the reliability coefficient was (0.73).

The demographic characteristics of the respondents show that the majority of the respondents are males (67%). While females constituted (33%) of the respondents, as is clear from Figure (1).

![Figure (1) Gender](image1.png)

While figure (2) presents the academic achievement of the respondents, as follows:

![Figure (2) Academic achievement](image2.png)

The above figure shows that the highest percentage of respondents were holders of a bachelor's degree (60%), followed by secondary school and below (28%). They are followed by diploma holders with a rate of (10%), followed by masters and doctoral holders with a percentage of (1%) for each of them.

Figure (3) shows the age of the respondents, and the highest age group for respondents was those whose ages ranged between 26-35, as they constituted (41%), followed by those whose ages ranged between 18-25 who constituted (41%), and then followed by the percentage of those ranging from Their ages ranged between 36-45, and their percentage reached (9%), followed by the percentage of those aged 46-55, which reached (8%), and finally, the percentage of those aged 55 and over, which amounted to (1%), was my agency.
Figure (3) Age

Figure (4) shows that the level of family income was the highest in the middle class, reaching (44%), followed by the ordinary (28%), followed by the weak (26%), followed by the strong (2%), and my agencies.

Figure (4) Income Level

As for work, Figure No. (5) shows the current work, as it is clear that the highest percentage was in the employee class, which amounted to (43%), followed by the student class, which amounted to (36%), followed by the earner layer (21%). My agencies.

Figure (5) current work

And in terms of the type of housing area, Figure No. (6) shows the type of housing area for the respondents, as it was found that the highest percentage was in the neighborhood in the city, reaching (78%), followed by the rural area with a percentage of (22%). My agencies.
2 - Analysis of levels of economic literacy

To test the respondents' economic literacy level, ten questions were asked to assess the respondents' knowledge of the different concepts of economics, and then four options were given to the respondents for each question. And then evaluate the answers provided by the respondents to each of the questions, and the questions will be classified into two groups. The first group consists of questions related to microeconomics, such as the concept of economics and its branches, and supply and demand, and it consists of five questions. The second group aims to identify the concepts of macroeconomics, and it consists of five questions as well, and it includes general questions about inflation, GDP, foreign trade and investment. Terms of correct and incorrect answers are shown in Table (1) and my agencies:

Table (1) The average of correct and incorrect answers to the basic questions related to the level of economic literacy

<table>
<thead>
<tr>
<th>Average</th>
<th>10</th>
<th>9</th>
<th>8</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>58%</td>
<td>0.52</td>
<td>0.55</td>
<td>0.43</td>
<td>0.38</td>
<td>0.78</td>
<td>0.31</td>
<td>0.66</td>
<td>0.66</td>
<td>0.82</td>
<td>0.66</td>
<td>correct</td>
</tr>
<tr>
<td>42%</td>
<td>0.48</td>
<td>0.45</td>
<td>0.57</td>
<td>0.62</td>
<td>0.22</td>
<td>0.69</td>
<td>0.34</td>
<td>0.34</td>
<td>0.18</td>
<td>0.34</td>
<td>wrong</td>
</tr>
</tbody>
</table>

When examining the above table, it is noticed that most of the respondents, at the partial level, had fairly good behavior towards the concepts of economics, as their answers to the questions in the above-mentioned concepts were good, as they obtained (82%) for the second question and (66%) for three questions while there was a question Only one, the correct answer was weak as it reached (31%) only. As for the overall level, it is noticed that the respondents were less familiar with the concepts of economics, and the correct answer was somewhat acceptable, as the respondents got a high degree of (78%) for the correct answer compared to (22%) for the wrong answer on the concept of inflation, followed by respondents who got a score of 55 percent (55%) compared to the wrong answer, which was represented by (45%) for the ninth question, which is related to foreign trade. Then followed by the tenth question (52%) with correct answers related to investment, while the correct answers were weak for the seventh and eighth questions, which amounted to (38%) and (43%), respectively, related to the concepts of the financial crisis and the domestic product.

3.9- There is a statistically significant effect relationship between economic education and the level of economic literacy (micro level).

The equation for economic education variables can be formulated as follows

\[ y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 \]

Since \( y \): means economic literacy, which is the dependent variable.
A: - fixed limit
B: - means inclination
X1: I have received enough economics lessons
X2: My economics grades were high
X3: - Participated in conferences, conferences and symposia on the economy
X4: I read books about economics
X5: - I read or follow the economic newspapers
X6: - I follow economics on TV, radio, or the Internet

Table (2) presents the results of the factors of economic education and the level of economic literacy at the micro level, throughout the study period to test the main hypothesis, and based on these data, the regression between the two variables was analyzed as follows:

Table (2) results of analyzing the relationship between the factors of economic education and the level of economic literacy (micro level)

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th>Regression ANOVA</th>
<th>Coefficients</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.286275281</td>
<td>Intercept</td>
<td>0.76672</td>
</tr>
<tr>
<td>R Square</td>
<td>0.081953537</td>
<td>X1</td>
<td>0.01876-</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.022724733</td>
<td>X2</td>
<td>0.003925</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.203530405</td>
<td>X3</td>
<td>0.002952</td>
</tr>
<tr>
<td>Observations</td>
<td>100</td>
<td>X4</td>
<td>0.03042-</td>
</tr>
<tr>
<td>Significance F</td>
<td>0.229388094</td>
<td>X5</td>
<td>0.003702</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X6</td>
<td>-0.01534</td>
</tr>
</tbody>
</table>

Table (2) shows the significant effect of each factor of economic education and the level of economic literacy (the partial level), as it is clear from the results of the statistical analysis that there is no significant effect, and it can be represented in the following equation:

Y1= 0.76672 - 0.01876X1+ 0.003925X2+ 0.002952X3- 0.03042X4+0.003702X5-0.01534X6

It is clear from the above table and the regression equation that the fixed limit coefficient amounted to (0.76672), so if the independent variable is equal to zero, that is, in the absence of knowledge of the economic education of the study sample, the value of the dependent variable (economic literacy for the partial level) equals (0.76672).

It is also noted from the above table that there is a weak correlation between the influencing factors and the level of economic literacy at the micro level, as the correlation coefficient reached (0.286275281), and it is also clear that the above equation explains (0.0819%) of the effects on economic literacy, and these effects are the result of Regarding the effect of the independent variables, the other effects (0.99%) are due to other variables that were not included in this model.

The table above shows the significant effect of each factor of economic education affecting economic literacy at the partial level between its direct and inverse effects, which is a non-significant effect and greater than the level of morale (5%) that the researcher assumed. Thus, we reject the main hypothesis of the study.

The Significance F test measures the significance of the model as a whole, as it is noted that the estimated model is not significant at the level of significance of 5%, and regarding the value of alpha, which is the probability of error of the first type, to reject the linear regression model that
links the economic literacy of individuals with the factors of economic education, which is (0.229388094).

All of this confirms the rejection of the first main hypothesis of the study, which means that there is no effect of economic education factors on economic literacy (micro-level), and this is evidenced by their impact within a confidence level of 95%.

3.10- There is a statistically significant effect relationship between economic education and the level of economic literacy (Macro level).

Table (3) presents the results of the factors of economic education and the level of economic literacy at the total level, throughout the study period to test the main hypothesis, and based on these data, the regression between the two variables was analyzed as follows:

Table (3) results of analyzing the relationship between economic education and the level of economic literacy (Macro level)

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th>Regression ANOVA</th>
<th>Coefficients</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.231324</td>
<td>Intercept</td>
<td>0.659714</td>
</tr>
<tr>
<td>R Square</td>
<td>0.053511</td>
<td>X1</td>
<td>0.005388</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>-0.00755</td>
<td>X2</td>
<td>-0.02916</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.224776</td>
<td>X3</td>
<td>-0.01314</td>
</tr>
<tr>
<td>Observations</td>
<td>100</td>
<td>X4</td>
<td>-0.0171</td>
</tr>
<tr>
<td>Significance F</td>
<td>0.51550544</td>
<td>X5</td>
<td>0.016075</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X6</td>
<td>-0.00564</td>
</tr>
</tbody>
</table>

Table (3) shows the significant effect of each factor of economic education on economic literacy (Macro level), as it is clear from the results of the statistical analysis that there is no significant effect, and it can be represented in the following equation:

\[ Y2 = 0.659714 + 0.005388X1 - 0.02916X2 - 0.01314X3 - 0.0171X4 + 0.016075X5 - 0.00564X6 \]

It is clear from the above table and the regression equation that the fixed limit coefficient amounted to (0.659714). If the independent variable is equal to zero, that is, in the absence of knowledge of the economic education of the study sample, the value of the dependent variable (economic literacy for the total level) equals (0.659714). It is also noted from the above table that there is a weak correlation between the influencing factors and the level of economic literacy at the overall level, as the correlation coefficient was (0.231324), and it is also clear that the above equation explains (0.053%) of the effects on economic literacy, and these effects are the result of Regarding the effect of the independent variables, the other effects (99%) are due to other variables that were not included in this model. The above table shows the significant effect of each factor of economic education on economic literacy (total level) between its direct and inverse effects, which is not significant and greater than the level of morale (5%) that the researcher assumed. Thus, we reject the second main hypothesis of the study.

The Significance F test measures the significance of the model as a whole, as it is noted that the estimated model is not significant at the level of significance of 5%, and regarding the value of alpha, which is the probability of error of the first type, to reject the linear regression model that links the economic literacy of individuals with the influencing factors, which are (0.51550544).
All of this confirms the rejection of the main hypothesis of the study, which means that there is no effect of economic education factors on economic literacy (Macro level), and this is evidenced by their impact within a confidence level of 95%.

**Conclusions**

1- The study proved that the interest in economic education was low among the general public, which was reflected in the level of economic literacy

2- The study proved that there is no effect of economic education factors on the level of economic literacy (Micro level), which confirms the validity of the first basic hypothesis of the study.

3- The study proved that there is no effect of economic education factors on the level of economic literacy (Macro level), which confirms the validity of the second basic hypothesis of the study.

4- Weakness of the link between economic education and the level of economic literacy, whether at the Micro or Macro level, and this is what is shown by the correlation coefficient

5- Weakness of the moral relationship between economic education and the level of economic literacy, whether at the Micro or Macro level, and this is what was shown by the F-test

**Recommendations**

1. The need to raise awareness about basic and advanced economic concepts among respondents in our dear country, Iraq, and the need to make them aware of the necessity of being familiar with those concepts that have a positive impact on their overall economic activity.

2. Attention should be paid to conducting future studies on the impact of these factors on the level of economic literacy in the behavior of strategic investment decision-making because of their significant effects on raising awareness in various financial activities.

3. The necessity of cultivating the spirit of economic culture through holding conferences and workshops aimed at diagnosing and addressing the gaps in the economic culture for the behavior of respondents as well as specialists and the public.

4. The necessity of conducting more behavioral economic studies and benefiting from all kinds of basic and technical information and analyses when deciding without considering its results in absolute terms and without considering the results in a short time period.

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