Financial Literacy of Korean High School Students

Jinsoo Hahn
Department of Social Studies Education, Gyeongin National University of Education

Kyungho Jang
Department of Social Studies Education, Inha University

Hyung Joon Park
Department of Social Studies Education, Sungshin Women's University

Abstract

Understanding the factors that determine financial literacy and their effects can help policymakers and researchers design and implement effective interventions for youth. To this end, this study examines what factors influence the level of financial literacy possessed by Korean high school students. This study further investigates the effects of socioeconomic status, economic attitude and financial attitude on financial literacy and financial behavior using structural equation models, in which endogeneity among latent variables are incorporated. The results of structural models share common and different findings with those of descriptive statistics and simple regression models. First, student's intention to select economics is the most influential factor of both economic attitude and financial attitude, with GPA the second influential one. Second, economic attitude is more influential than financial attitude in determining financial literacy. Third, the effect of financial attitude on financial literacy changes dramatically depending on the assumptions. The descriptive statistics show that financial attitude has positive effects on financial literacy, while its effects become insignificant in the simple regression model and the benchmark model. However, if we incorporate the enodogeneity of financial attitude explicitly among latent variables, the effects become negative and significant. Finally, financial literacy has positive effects on financial behavior in all models. These findings imply that economic or financial education plays an important role in changing students' financial behavior such as saving money for the future.

Keywords *Financial Literacy, Economic Attitude, Financial Attitude, Financial Behavior*
JEL Codes *A21, A22, I21*

I. Introduction

The ability to manage personal finances of youth, in particular, has received increasing attention in Korea since the East Asian economic crisis of 1997 and subsequent credit card crisis of 2003 resulting in credit delinquents of 10.3% of the total population aged 15 and over. In addition, the global financial crisis of 2007-2008 played important roles in forming a social consensus for allocating more effort to teach the value of money, credit management, and investment for young people. The economic downturn caused by the global financial crisis put many Korean savings banks into insolvency, in 2011, which had attracted financially illiterate depositors by offering unreasonably high interest rates. Investors of the failed savings banks, who pursued high yields only while failing to taking underlying risks into consideration, suffered great losses. The savings bank scandal was enough to support more intensified financial education for youth.

A succession of economic shocks has imposed huge costs on the Korean economy as a whole, but provided an opportunity to reflect what we teach for our youth.[1] The school curriculum was revised in 2007 such that credit and asset management should be included in the subject of social studies for the ninth grade. Personal finance was introduced as an independent chapter into a new high school economics textbooks consisting of six chapters. These changes can be regarded as a considerable improvement in a very crowded school curriculum.

As Korean young people begin to be exposed to the financial markets at an earlier age, the ability to manage money has become increasingly important. Actually they are conducting many financial transactions as a consumer. A recent survey by the Financial Supervisory Service (2011) reported that approximately 84% of Korean high school students had at least one bank account in their own names and 44% had installment savings or time deposit accounts. As finance capitalism and on-line transactions become dominant in the Korean economy, it is no longer strange for youth to use a check card or even a credit card. More than half of high school students were surveyed to have experience using a credit or a debit card to purchase online commodities. Many high schools in Korea now allow students to use a prepaid card to make a transaction in a campus.

Examining how well-equipped young people are to make financial decisions has been the most popular field of study. Cho and Park (2008), Kim and Moon (2010), Financial Supervisory Service (2011), Kim and Lee (2011), Hahn (2013), and Jang, Hahn, and Park (2013), among others, measured

[1] Friedman (2010) argued that we should draw lessons, including what we teach our students, from the recent financial crisis. A study by Bernheim and Garrett (2003) showed that individuals who received financial education had a significantly higher savings rate. A report by U.S. Department of the Treasury (2002) recognized that financial education played an important role in preparing Americans to make informed financial decisions every day, and that the best and most obvious starting place for providing financial education to young people was in schools.

the level of financial literacy of Korean students. Although the findings of these studies vary, putting them together leads up a conclusion that the level of Korean students' financial literacy is gradually increasing but their performance is yet unsatisfactory.

Unlike the aforementioned studies which measured and compared the financial literacy, this study focuses on the factors determining the level of financial literacy. Identifying what affects a person's financial literacy has naturally been a worldwide research topic. For example, Chen and Volpe (1998) reported that major, gender, age, and work experience affected U.S. college students' financial literacy. Lusardi, Mitchell, and Curto (2010), using the National Longitudinal Survey of Youth, showed that financial literacy was strongly related to socio-demographic characteristics and family financial sophistication. Samy *et al*. (2008) investigated into Australian data to find that a student's year of study, credit card status, and daily routine significantly affected financial knowledge. Olga (2011) showed that gender, level of education, occupation, region, and wealth were significant in explaining financial literacy of Ukrainian people aged 20-60. Sabri (2011) demonstrated that financial literacy of Malaysian students were related to ethnicity, college type, and discussing finances with parents. Ansong and Gyensare (2012), from the data of university students in Ghana, showed that age and work experience positively contributed to financial literacy. Recently, Bhushan and Medury (2013) identified gender, education, income, nature of employment, and place of work to be factors affecting financial literacy of people in India.

The future of national development and economic welfare of people depends on the financial literacy of young people in an increasingly more complex economy. It is, therefore, important to assess the level of financial literacy and to identify factors determining financial literacy of the young people. This can help policymakers and researchers design and implement effective interventions for youth. To this end, this study, first of all, examines what factors influence the level of financial literacy possessed by Korean high school students.[2] And then, this study uses structural equation models to further identify the effects of socioeconomic status, economic attitude, and financial attitude on financial literacy and financial behavior.

II. Characteristics of the Sample

We measure the financial literacy using the scores on 'Financial Fitness for Life: High School Test (FFFL-HS test hereafter)' (Walstad and Rebeck, 2005), which was developed by the Council on

2 Studies focusing on the financial literacy among high school students are scarce relative to ones among college students or adults. Exceptionally, Mandell (2008) analyzed high school seniors' financial literacy by using five biennial national survey data.

Economic Education (then the National Council on Economic Education). This test includes fifty questions that consist of ten items across each of the five themes, but we selected forty questions in this study because some financial institutions and terms used in the FFFL-HS test items are quite different from those in the Korean market, and therefore, some items cannot be translated on a word-for-word basis. See Jang, Hahn, and Park (2013) for more specific reasons. The FFFL-HS test was implemented in mid-March 2013. Our sample consists of 1,467 students in forty high schools after data cleaning of 11 responses. The characteristics of our sample are reported in Table 1.

Table 1. Characteristics of the Sample

Characteristics		Number of Students	Percentage(%)
Gender	Male	812	55.4
	Female	652	44.4
	No Response	3	0.2
GPA	Above Average	278	19.0
	Average	917	62.5
	Below Average	264	18.0
	No Response	8	0.5
Economics is included in a school curriculum	Yes	971	66.2
	No	496	33.8
Total		1,467	100.0

Note: The GPA indicates the subjective grade reported by students.

The FFFL-HS tests scores by individual characteristics are shown in Table 2. First, the mean score of male students is slightly lower than that of female students, but the difference by gender is not statistically significant at the 5% significance level. Second, the scores tend to be higher for students who believe their GPA is above average.

Table 2. FFFL-HS Test Scores by Gender and GPA

Characteristics		Number	Mean	SD	Test Stat. (p-value)
Gender	Male	812	52.4	17.9	-1.709^{u}
	Female	652	53.9	14.7	(0.088)
GPA	Above Average	278	63.8^{a}	14.4	146.728^{f} (0.000) **
	Average	917	53.2^{b}	15.5	
	Below Average	264	41.6^{c}	14.4	
Total		1,467	53.1	16.5	-

Notes 1) Superscripts 'a', 'b', and 'c' denote sub-groups in descending order according to Scheffe's post-hoc test. If the mean statistics share the same superscript, sub-groups are homogeneous so that mean differences are insignificant. Otherwise, the differences are significant.
2) Superscript 'u' denotes the t-test statistic that compares the mean under the assumption that the variances of two groups are unequal from the Levene's test.
3) Superscript 'f' denotes the F-test statistic that compares the mean of more than two groups.
4) * $p < 0.05$; ** $p < 0.01$

Table 3 shows the FFFL-HS tests scores by students' attitudes toward economics. First, the scores tend to be higher for students who possess a positive or active attitude on economics. The more students are interested in studying economics or the more frequently students read economic materials, the higher their test scores are. It is also shown that students who tend to think studying economics helps solving problems of everyday life or making money score higher on the test. Second, students who show active economic attitudes, such as wanting to participate in experiential activities or desiring to have a professional or white-collar job, score higher on the test.

Table 3. FFFL-HS Test Scores by Economic Attitude

Attitudes		Number	Mean	SD	Test Stat. (p-value)
Economics is interesting to study	Strongly Agree	121	62.9 [a]	15.8	54.115[f] (0.000) [**]
	Agree	332	60.0 [a]	14.9	
	Neutral	560	52.5 [b]	16.2	
	Disagree	326	47.3 [c]	14.9	
	Strongly Disagree	126	42.8 [c]	14.6	
I often read economic materials such as newspapers and books	Strongly Agree	53	64.7 [a]	17.0	26.015[f] (0.000) [**]
	Agree	182	59.6 [ab]	16.1	
	Neutral	449	54.6 [bc]	16.1	
	Disagree	562	51.0 [cd]	15.8	
	Strongly Disagree	217	46.8 [d]	16.0	
Studying economics helps solving problems of everyday life	Strongly Agree	141	60.6 [a]	15.5	34.028[f] (0.000) [**]
	Agree	561	56.8 [a]	15.3	
	Neutral	514	50.6 [b]	16.4	
	Disagree	178	46.5 [bc]	16.2	
	Strongly Disagree	62	41.9 [c]	15.4	
Studying economics helps making money or accumulating assets	Strongly Agree	251	57.5 [a]	16.5	19.139[f] (0.000) [**]
	Agree	696	55.0 [ab]	15.7	
	Neutral	366	49.2 [bc]	16.6	
	Disagree	101	46.5 [c]	17.0	
	Strongly Disagree	39	45.0 [c]	16.1	
I want to participate in economic activity such as an economic camp or an experiential activity	Yes	210	59.3	16.7	5.923[e] (0.000) [**]
	No	1,254	52.0	16.3	
My desired job after graduation is	Professional	595	54.9 [a]	15.9	14.767[f] (0.000) [**]
	White Collar	494	54.9 [a]	16.2	
	Service Sales	96	49.0 [ab]	16.4	
	Blue Collar	27	41.6 [b]	17.4	
	Others	234	47.6 [ab]	17.2	
Total		1,467	53.1	16.5	-

Notes 1) Superscripts 'a', 'b', 'c', and 'd' denote sub-groups in descending order according to Scheffe's post-hoc test. If the mean statistics share the same superscript, sub-groups are homogeneous so that mean differences are insignificant. Otherwise, the differences are significant.

2) Superscript 'e' denotes the t-test statistic that compares the mean under the assumption that the variances of two groups are equal from the Levene's test.

3) Superscript 'f' denotes the F-test statistic that compares the mean of more than two groups.

4) [*] $p < 0.05$; [**] $p < 0.01$

Noteworthy is that strongly active or positive attitudes toward economics such as 'reading' and 'interest', compared to other attitudes, contribute to improving financial literacy more. The mean score of students who answered the survey, 'I often read economic materials such as newspaper and books', with the choice of 'strongly agree' is the highest (64.7), and that of students who answered the survey, 'Economics is interesting to study', with the choice of 'strongly agree' is the next (62.9).

The FFFL-HS tests scores by financial attitudes are given in Table 4. Noteworthy is that the results show similar patterns to those of economic attitudes. As students are more able to manage their expenses within the limit of allowance or have more interest in making money, they tend to achieve higher scores. Second, students who think they have more knowledge about finance score higher. Third, the majority of students acquire financial information from the TV or newspapers, and their mean score is higher than those for other students who acquire such information through class, internet or parents.

Table 4. FFFL-HS Test Scores by Financial Attitude

Attitudes		Number	Mean	SD	Test Stat. (p-value)
I spend more than my allowance	Strongly Disagree	334	56.0 [a]	16.1	7.350[f] (0.000) [**]
	Disagree	465	54.0 [ab]	16.5	
	Neutral	331	52.6 [abc]	16.8	
	Agree	267	49.8 [bc]	15.9	
	Strongly Agree	65	47.9 [c]	17.2	
I am interested in making money	Strongly Agree	86	57.1 [a]	16.3	22.359[f] (0.000) [**]
	Agree	279	58.9 [a]	15.3	
	Neutral	469	54.5 [ab]	16.6	
	Disagree	448	49.5 [bc]	16.0	
	Strongly Disagree	180	47.3 [c]	16.1	
I have enough knowledge about finance	Strongly Agree	19	56.6 [a]	21.8	16.074[f] (0.000) [**]
	Agree	91	59.9 [a]	16.4	
	Neutral	447	56.1 [ab]	16.6	
	Disagree	633	52.1 [ab]	16.1	
	Strongly Disagree	269	47.7 [b]	15.3	
The most important channel for me to get financial information is	TV news or Newspapers	448	54.8 [a]	16.6	4.309[f] (0.000) [**]
	Internet	258	53.2 [a]	16.4	
	Class	254	52.7 [a]	16.8	
	Parents	291	52.0 [a]	16.2	
	Friends	18	40.7 [b]	18.2	
	Experience of Spending	108	49.0 [ab]	15.0	
	Others	32	57.7 [a]	19.7	
Total		1,467	53.1	16.5	-

Notes 1) Superscripts 'a', 'b', and 'c' denote sub-groups in descending order according to Scheffe's post-hoc test. If the mean statistics share the same superscript, sub-groups are homogeneous so that mean differences are insignificant. Otherwise, the differences are significant.
2) Superscript 'f' denotes the F-test statistic that compares the mean of more than two groups.
3) [*] $p < 0.05$; [**] $p < 0.01$

Table 5 reveals that students who are involved in financial transactions, such as saving money for the future or investing money on funds, tend to achieve higher scores than those without such experiences. However, managing a bank account does not make statistically significant difference on financial literacy. As much as it requires more economic or financial knowledge to invest money on stocks or funds than merely to manage bank accounts, the scores of students with investment experiences are generally expected to be higher. It is, however, important to stress that this relation is not a unilateral causation because financial literacy might affect financial decision-making. In other words, the students with low financial literacy would less likely to be involved in investing stocks or funds as shown by van Rooij, Lusardi, and Alessie (2011). In our structural model in the later section, we assume that financial literacy plays a critical role on financial behavior.

Table 5 FFFL-HS Test Scores by Financial Behavior

Experiences		Number	Mean	SD	Test Stat. (p-value)
I manage my account such as demand or saving deposit.	Yes	886	53.7	16.3	1.732 [e]
	No	578	52.1	16.9	(0.083)
I save money for the future	Yes	867	54.8	16.3	4.947[e]
	No	596	50.5	16.6	(0.000) **
I have an experience of investing money on stocks or funds	Yes	176	59.1	15.7	5.412[u]
	No	1,287	52.2	16.5	(0.000) **
Total		1,467	53.1	16.5	-

Notes 1) Superscripts 'e' and 'u' denote the t-test statistic that compares the mean under the assumption that the variances of two groups are equal or unequal from the Levene's test, respectively.
2) * $p < 0.05$; ** $p < 0.01$

However, activities related to allowance do not have statistically significant influence on financial literacy of Korean high school students as shown in Table 6. If we ignore the sixteen very few students who receive their allowance as rewards for finishing housework, the scores are almost the same no matter what the method, periodicity, or amount of allowance is or whether students keep records for allowance or not.

It is often interesting to investigate whether financial literacy is associated with household income. It is literally true that financial literacy does not require a certain level of income, but low income can inhibit students from experiencing financial activities. Empirical studies show mixed results. Atkinson and Messy (2012) report that respondents from the higher income households show higher scores in twelve countries among fourteen countries, while Chen and Volpe (1998) admit that those with higher income are likely to show higher scores when other factors are not controlled but show, using the logit regression, that income does not directly affect financial literacy. Our results in Table 7 show that financial literacy of Korean high school students is positively related to household income. In addition,

the test scores tend to be higher if household heads have higher academic careers or more professional occupations.

Table 6. FFFL-HS Test Scores by Allowance-related Characteristics

Allowance		Number	Mean	SD	Test Stat. (p-value)
Do you receive allowance?	Yes	1,193	53.2	16.6	0.512 [e]
	No	268	52.6	16.5	(0.609)
How do you receive allowance?	Whenever necessary	408	53.5 [a]	16.7	4.395[f] (0.013) *
	Periodically	757	53.4 [a]	16.4	
	After finishing housework	16	41.1 [b]	20.0	
How much do you receive for monthly allowance?	More than 80 dollars	208	52.1 [a]	17.3	1.652 [f] (0.192)
	40 - 80 dollars	563	54.0 [a]	16.4	
	Less than 40 dollars	410	52.3 [a]	16.4	
Do you keep records for your allowance?	Yes	129	53.7	16.3	0.404 [e]
	No	1,045	53.1	16.6	(0.686)
Total		1,467	53.1	16.5	-

Notes 1) Superscripts 'a' and 'b' denote sub-groups in descending order according to Scheffe's post-hoc test. If the mean statistics share the same superscript, sub-groups are homogeneous so that mean differences are insignificant. Otherwise, the differences are significant.
2) Superscript 'e' denotes the t-test statistic that compares the mean under the assumption that the variances of two groups are equal from the Levene's test.
3) Superscript 'f' denotes the F-test statistic that compares the mean of more than two groups.
4) * $p < 0.05$; ** $p < 0.01$

Table 7. FFFL-HS Test Scores by Household Characteristics

Household Characteristics		Number	Mean	SD	Test Stat. (p-value)
Household Income	Above Average	116	56.9 [a]	17.3	8.967[f] (0.000) **
	Average	1,176	53.4 [a]	16.3	
	Below Average	159	48.7 [b]	17.0	
Academic Career of Household Head	University or Higher	829	55.7 [a]	16.0	26.037[f] (0.000) **
	High School	559	50.0 [b]	16.5	
	Under High School	68	46.7 [b]	17.4	
Occupation of Household Head	White Collar	617	55.2 [a]	16.4	6.754[f] (0.000) **
	Self-employed	415	52.6 [ab]	16.7	
	Blue Collar	293	51.1 [ab]	15.6	
	Other Jobs	94	49.0 [ab]	16.1	
	No Job	32	45.8 [b]	20.5	
Total		1,467	53.1	16.5	-

Notes 1) Superscripts 'a' and 'b' denote sub-groups in descending order according to Scheffe's post-hoc test. If the mean statistics share the same superscript, sub-groups are homogeneous so that mean differences are insignificant. Otherwise, the differences are significant.
2) Superscript 'f' denotes the F-test statistic that compares the mean of more than two groups.
3) * $p < 0.05$; ** $p < 0.01$

Interestingly, the test scores for students of schools that include economics in their curriculum are higher than the others even though they have not learned economics yet when the test was implemented. We conjecture that the differences arise from the role of teachers. It is well known that economics is one of the most difficult subjects, so teachers are reluctant to be in charge of teaching it as a selective course. This implies that the teachers who feel more confident in teaching economics would more likely to provide economics classes as a separate course. In this regard, students who take class from confident teachers might learn economic contents in social studies textbooks more effectively and as a result show higher scores than others. It is also interesting to note that student's confidence is positively associated with test scores. Students who are confident in economics would select economics as a selective course at school, as well as Korea Scholastic Aptitude Test (KSAT), actually showing higher scores than others. It turns out that student's confidence is more influential to the FFFL-HS test scores because teacher's confidence plays a role only through student's learning process.

Table 8. FFFL-HS Test Scores by School Characteristics

School		Number	Mean	SD	Test Stat. (p-value)
Economics is included in a school curriculum	Yes	971	53.9	16.8	2.519[e] (0.012) [*]
	No	496	51.6	16.0	
I will select 'economics' at school	Yes	721	56.8 [a]	16.3	46.060[f] (0.000) [**]
	No	558	48.1 [b]	15.7	
	Not relevant	147	54.7 [a]	16.4	
I will select 'economics' for KSAT	Yes	364	56.6	16.8	4.780[e] (0.000) [**]
	No	1,091	51.9	16.3	
Total		1,467	53.1	16.5	-

Notes 1) Superscripts 'a' and 'b' denote sub-groups in descending order according to Scheffe's post-hoc test. If the mean statistics share the same superscript, sub-groups are homogeneous so that mean differences are insignificant. Otherwise, the differences are significant.
2) Superscript 'e' denotes the t-test statistic that compares the mean under the assumption that the variances of two groups are equal from the Levene's test.
3) Superscript 'f' denotes the F-test statistic that compares the mean of more than two groups.
4) * $p < 0.05$; ** $p < 0.01$

III. Factors Influencing Financial Literacy

1. Simple Regression Model

As a preliminary analysis, we examine a simple regression model where financial literacy is regressed on several explanatory variables such as socioeconomic status (SES), economic attitude and financial attitude. We measure the financial literacy by the scores on the FFFL-HS test. As the number of items in each theme is different in our study, we use the principal component analysis to measure the financial literacy instead of simple arithmetic sum of scores.[3] Similarly we measure the economic attitude and financial attitude by the principal components of survey responses, where ordered variables are measured on a Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) and binomial variables are treated as dummy variables (1 = yes, 0 = no). Other nominal variables are converted to dummy variables as follows. As for the responses of 'desired job after graduation', we make a dummy variable by setting 1 if the job is 'professional 'or 'white collar' and 0 otherwise. We also make a dummy variable for the responses of 'the most important channel to get financial information' by setting 1 if students get the information actively through 'TV news or newspapers' or 'internet' and 0 otherwise. Even though financial behavior is not included in our simple regression we also conduct a principal component analysis in order to check the adequacy of structural model in the next section. The SES is measure by five dummy variables (Gender: 1 = male, 0 = female; Econ: 1 = economics is included in a school curriculum, 0 = otherwise; Selection: 1 = I will select 'economics' at school, 0 = otherwise; KSAT: 1 = I will select 'economics' for Korea SAT, 0 = otherwise) and four ordinal variables measured on a Likert scale (GPA: 1 = below average, 2 = average, 3 = above average; Household Income: 1 = household income is below average, 2 = average, 3 = above average; Academic Career: 1 = academic career of household head is under high school, 2 = high school, 3 = university or higher; Occupation: 1 = occupation of household head is no job, 2 = other jobs, 3 = blue collar, 4 = self-employed, 5 = white collar). We do not include allowance-related characteristics in the explanatory variables because they do not yield significant difference on the FFFL-HS test scores as shown in Table 6.

In order to verify the adequacy of extracting factors for each set of variables, we examine the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity as shown in Table 9. The KMO statistic of financial literacy is great, and that of economic attitude is good while those of

[3] We use the principal component analysis as a preliminary step, and will use the confirmatory factor analysis for our structural equation model in the next section. In other words, the financial literacy, economic attitude, financial attitude and financial behavior are measured by factors rather than principal components in our alternative structural models.

financial attitude and financial behavior are mediocre. These results indicate that we may use a principal component analysis for our sample in that the values are all above a bare minimum 0.50.[4] The Bartlett's test statistics are all significant at the 5% significance level, which implies that the variables are correlated each other so that they can be explained by the same factor. [5]

Table 9. Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity

Variables		Economic Attitude	Financial Attitude	Financial Behavior	Financial Literacy
KMO Measure of Sampling Adequacy		0.710	0.513	0.527	0.815
Bartlett's Test of Sphericity	$\chi^2_{(\text{degree of freedom})}$	$1851.0^{**}_{(15)}$	$520.3^{**}_{(3)}$	$131.3^{**}_{(6)}$	$1891.0^{**}_{(10)}$

Note: * $p < 0.05$; ** $p < 0.01$

Table 10 shows the eigenvalues and total variance explained by principal components. We can select 1 as the number of principal components for economic attitude, financial attitude and financial literacy, which can explain 42–54% of the variances. It seems that the first principal component of financial behavior cannot explain most variation of the variables because the second largest eigenvalue is just above the criterion value of 1. However, we decided to consider only one principal component in related to the confirmatory factor analysis in our structural equation model.

Table 10. Eigenvalues and Total Variance Explained by Principal Components

Components	Economic Attitude		Financial Attitude		Financial Behavior		Financial Literacy	
	Eigen-value	% of Variance	Eigen-value	% of Variance	Eigen-value	% of Variance	Eigen-value	% of Variance
1	2.516	41.9	1.585	52.8	1.331	33.3	2.701	54.0
2	0.998	16.6	0.971	32.4	1.001	25.0	0.724	14.5
3	0.930	15.5	0.444	14.8	0.931	23.3	0.634	12.7
4	0.776	12.9			0.736	18.4	0.478	9.6
5	0.435	7.2					0.463	9.3
6	0.345	5.8						

Table 11 shows the results of ordinary least squares. The fraction of sample variance of the financial literacy of Korean high school students explained by the explanatory variables, adjusted R^2, is 0.255 but the overall regression F-statistic is significant at the 5% significance level, which implies that at least one of the explanatory variables has a non-zero slope. It is shown that GPA is the most

[4] KMO statistic compares the magnitudes of the observed correlation and the partial correlation. Large statistics indicate that a factor analysis is adequate for the sample. Kaiser (1974) recommends a bare minimum of 0.5. Hutcheson and Sofroniou (1999) interpret other ranges of value as mediocre (0.5-0.7), good (0.7-0.8), great (0.8-0.9) and superb (above 0.9).

[5] The null hypothesis of Bartlett's test is that the variables are uncorrelated. Large statistics indicate that the variables are correlated each other so that they can be explained by the same factor.

influential factor of financial literacy among SES variables and economic attitude is more responsible for financial literacy than financial attitude. For example, if GPA is one point higher on a Likert scale, the financial literacy is 0.548 points higher, i.e., 9.0 (=0.548 × 16.5) points higher for the FFFL-HS test score on a 100-point scale.[6]

The coefficients of KSAT, household income and occupation are statistically insignificant at the 5% significance level. This result is consistent with the study of Chen and Volpe (1998) who showed that income does not directly affect financial literacy when other factors are controlled. In this regard, we exclude these variables in our structural model in a following section. However, we do not exclude selection and financial attitude from our structural model because the coefficient of the former is statistically significant at the 10% significance level while the latter is one of the main theoretical factors of financial literacy in our study.

Table 11. Estimates of a Simple Regression Model

Explanatory Variables	Coefficient	Standard Error	Standardized Coefficient
Gender	-0.131**	0.049	-0.065
GPA	0.548**	0.043	0.332
Econ	0.148**	0.052	0.071
Selection	0.112	0.060	0.056
KSAT	-0.044	0.065	-0.019
Income of Household Head	-0.099	0.060	-0.043
Academic Career of Household Head	0.124**	0.046	0.073
Occupation of Household Head	0.019	0.053	0.009
Economic Attitude	0.237**	0.034	0.234
Financial Attitude	0.019	0.030	0.020
Constant	-1.302**	0.158	0.000
$F_{(10, 1262)}$		44.435**	
Adjusted R^2		0.255	

Note: * $p < 0.05$; ** $p < 0.01$

2. Confirmatory Factor Analysis

Before analyzing our structural equation model, we verify if 18 measurement variables reflect the 4 unobserved constructs such as economic attitude, financial attitude, financial behavior and financial literacy using a confirmatory factor analysis (CFA) as shown in Figure 1.

[6] The factor scores of financial literacy, economic attitude and financial attitude are standardized by the principal component analysis. The standard deviation of FFFL-HS test score is 16.5 points on a 100-point scale.

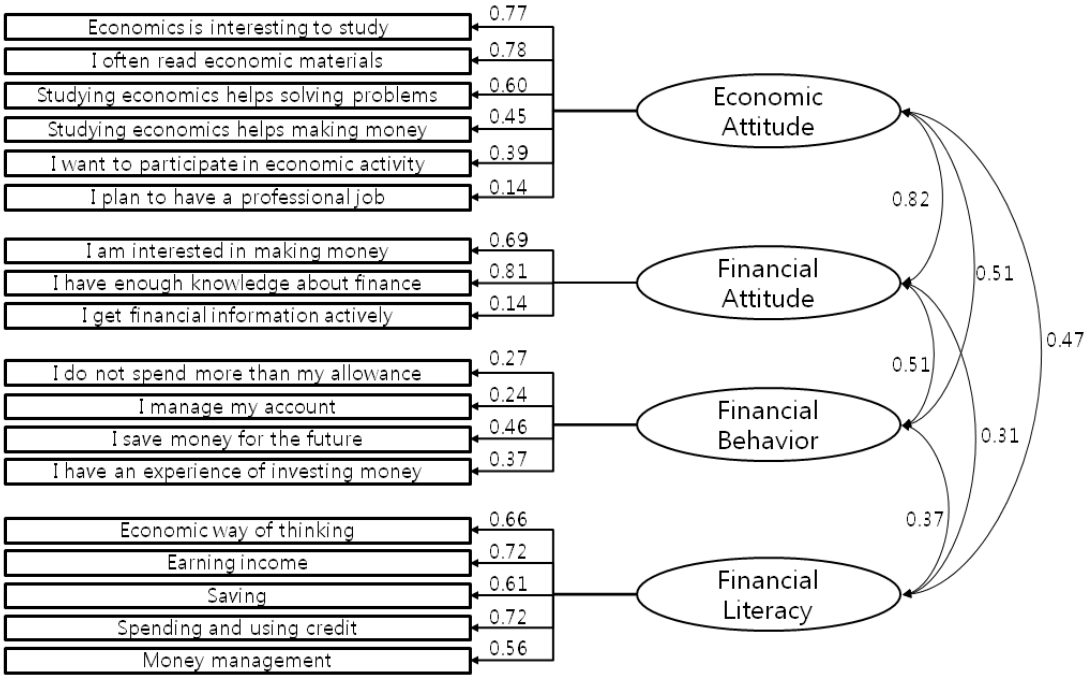


Figure 1. A Confirmatory Factor Analysis for the Measurement Model

The chi-square test and CFI for goodness of fit indicates that the measurement model does not fit the data while RMSEA for badness of fit presents admissible ranges as shown in Table 12.[7]

Table 12. Goodness of Fit for a CFA Model

Model	NPAR	CMIN ($\chi 2$)	DF	p-value	CMIN/DF	CFI	RMSEA
CFA Model	60	717.0	129	0.000	5.558	0.897	0.056

Table 13 shows that the regression coefficients for the measurement model are all significant at the 5% significance level. However, the standardized coefficients of 'I desire a professional job', 'I get information actively' and 'I manage my account' are considered to be very small for the measurement model. It implies that dropping these variables from our structural model might improve the goodness of fit. There are other variables whose coefficients are less than 0.5 but we decided to include these

[7] CFI is a Bentler comparative fit index that measures the relative improvement over the independent model. A threshold value of CFI ≥ 0.90 was initially advanced (Bentler, 1992), but higher value of CFI ≥ 0.95 is recently recognized for acceptable fit. RMSEA is the root mean square error of approximation, which is scaled as a badness-of-fit index. The threshold value is 0.10 according to Browne and Cudeck (1993), i.e., RMSEA ≥ 0.10 may indicate poor fit while RMSEA ≤ 0.05 may indicate good fit. Recently, higher cut-off value (0.6 or 0.7) becomes the general consensus among researchers (Hooper, Coughlan, and Mullen, 2008: 54-55; Kline, 2011: 206 - 208).

variables in our structural model according to our theoretical framework that these variables reflect latent variables such as economic attitude, financial attitude and financial behavior.

The correlation coefficients among latent variables in Figure 1 show that financial literacy is more related with economic attitude than financial attitude. In particular, economic attitude and financial attitude are so closely related that we consider endogeneity of these variables in our structural model in the next section.

Table 13. Estimates of a CFA Model

Explanatory Variables		Coefficient	Standard Error	Standardized Coefficient
Economic Attitude	Economics is interesting	1.000	-	0.770
	Read economic materials	0.963**	0.034	0.781
	Helps solving problems	0.707**	0.034	0.599
	Helps making money	0.514**	0.033	0.453
	Want to participate	0.168**	0.012	0.390
	Desire a professional job	0.076**	0.015	0.144
Financial Attitude	Interested in making money	1.000	-	0.687
	Have a enough knowledge	0.956**	0.043	0.805
	Get information actively	0.092**	0.021	0.137
Financial Behavior	Spending within allowance	1.000	-	0.265
	Managing accounts	0.387**	0.085	0.242
	Saving money	0.742**	0.121	0.462
	Experience of investing	0.396**	0.080	0.373
Financial Literacy	Economic Way of Thinking	1.000	-	0.660
	Earning Income	1.292**	0.059	0.715
	Saving	0.824**	0.044	0.607
	Spending and Using Credit	1.304**	0.062	0.722
	Money Management	1.325**	0.077	0.555

Note: * $p < 0.05$; ** $p < 0.01$

3. Structural Models

Financial literacy has been defined in two ways: conceptual definition and operational definition. There has been no consensus about the conceptual definition but financial literacy can be defined by either of five categories: (1) knowledge of financial concepts, (2) ability to communicate about financial concepts, (3) aptitude in managing personal finances, (4) skill in making appropriate financial decisions and (5) confidence in planning effectively for future financial needs (Remund, 2010: 279). However, many elements such as knowledge, ability and aptitude are entangled in a conceptual definition so that it is hard to measure financial literacy explicitly. In this regard, we use an operational definition of financial literacy that is measured by the FFFL-HS test scores. Our

operational definition is similar to the first category of conceptual definition as it measures the financial literacy by knowledge in a tangible way. However, this definition enables us to analyze the causal effects among financial knowledge, attitude and behavior.

Atkinson and Messy (2012) addressed that behavior was the most essential element of financial literacy because certain behavior could enhance or reduce financial wellbeing. For example, they argued, over-using credit could reduce financial wellbeing. Chinen and Endo (2012) investigated the effects of age, gender, parents' educational background and attitude toward financial education on financial literacy. These studies showed that economic or financial attitudes as well as the socioeconomic status affected financial literacy, which in turn influenced financial behavior. However, a potential endogeneity among these variables are not deeply studied yet.

We consider alternative structural models based on our theoretical framework as shown Figure 2. We assume that the socioeconomic status such as gender, GPA and parents' academic career affects financial literacy via economic attitude and financial attitude, and financial literacy is an influential factor of financial behavior. Taking the endogeneity of economic attitude and financial attitude into consideration, we set three alternative models. The first one is a benchmark model, where economic attitude and financial attitude are assumed to be uncorrelated. The other two models are structural models in which endogeneity between two latent variables is considered. We assume that the disturbances of these variables are correlated in Model 1 reflecting high correlations between these variables in Figure 1, whereas economic attitude affects financial attitude in Model 2. Among these models, the benchmark one is similar to the simple regression model in the previous section as long as both models do not incorporate the endogeneity of latent variables.

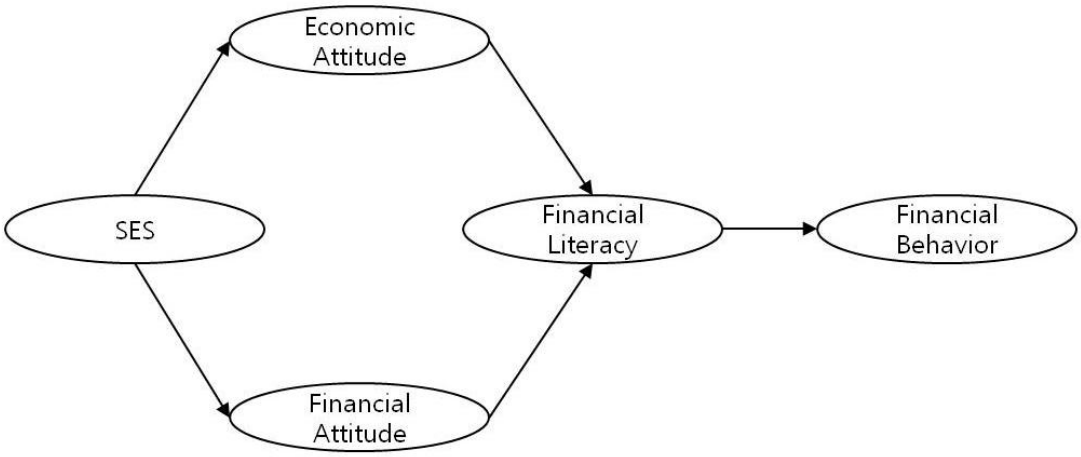


Figure 2. A Structural Equation Model

Table 14 shows that the chi-square test and CFI for goodness of fit still indicates that the measurement model does not fit the data for three alternative models, but RMSEA for badness of fit fall into admissible ranges. As Model 1 and 2 are nested with the benchmark model, their goodness of fit can be directly compared by looking at the difference of chi-squares. It shows that the chi-square difference between the benchmark model and Model 1 is 494.0 (=1608.5-1114.5) with 1 (=159-158) degree of freedom. This difference is statistically significant at the 5% significance level, which implies that Model 1 fits the data better than the benchmark model. Similarly, Model 2 fits data better than the benchmark model but does not yield a significant difference compared to Model 1.

Table 14. Goodness of Fit for Structural Models

Model	NPAR	CMIN (χ^2)	DF	p-value	CMIN/DF	CFI	RMSEA
Benchmark (Uncorrelated)	71	1608.5	159	0.000	10.116	0.782	0.079
Model 1 (Correlated)	72	1114.5	158	0.000	7.054	0.856	0.064
Model 2 (Unidirectional)	72	1114.5	158	0.000	7.054	0.856	0.064

The estimates of our structural models are presented in Figure 3, where measurement models for latent variables are not drawn for simplicity. See Table A.1 in the Appendix for the estimates of alternative structural models in detail. From the results of the simple regression model in Table 11, we consider 5 exogenous variables and 4 endogenous variables, which are statistically significant or theoretically justified. The exogenous variables consist of gender, GPA, inclusion of economics in a school curriculum (Econ), student's intention to select economics (Selection), and academic career of household head (Parents). We allow GPA to be correlated with gender and academic career of household head. We also consider student's intention to select economics is correlated with inclusion of economics in a school curriculum.

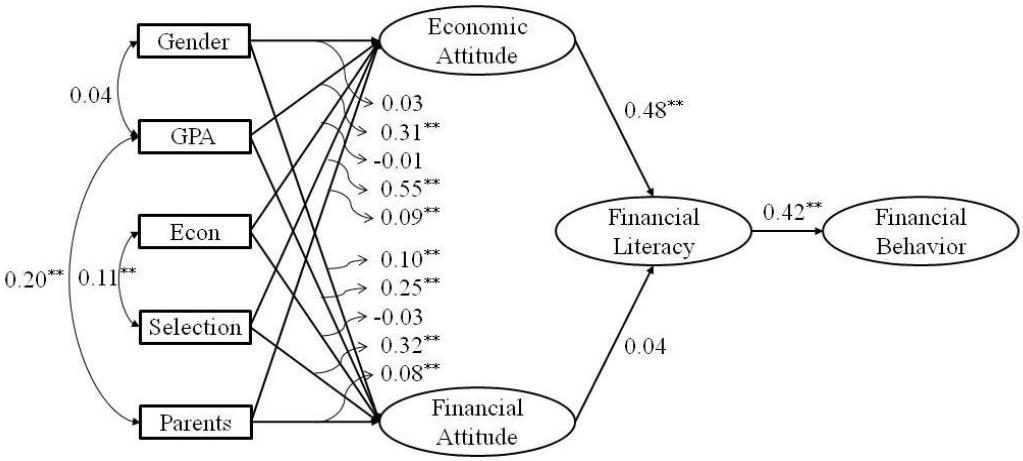
The effects of SES variables on economic attitude and financial attitude are similar in three alternative models. First, student's intention to select economics is the most influential factor of both economic attitude and financial attitude while GPA is the second influential factor. It is also worthy to note that the effects of these influential variables on financial attitude become negative in Model 2, where the unidirectional cause from economic attitude to financial attitude dominates. However, the total effect of student's intention to select economics on the financial attitude is positive because it is dominated by the indirect effect via economic attitude. In fact, the total effect is the same, i.e., 0.340, in Model 1 and Model 2, which is larger than 0.316 in the benchmark model. See Table A.2 in the Appendix for decomposition for effects of causal variables and endogenous variables.

Second, the effect of academic career of household head is statistically significant but small while those of gender and inclusion of economics in a school curriculum are insignificant at the 5% significance level. These results are consistent with the descriptive statistics previously shown in Tables 2, 7 and 8.

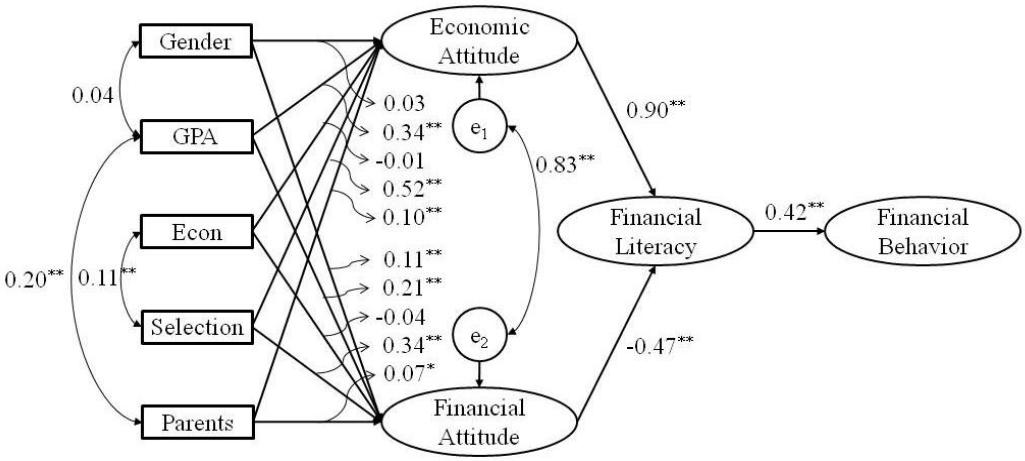
Economic attitude is more influential factor of financial literacy than financial attitude. The path coefficient from economic attitude to financial literacy is 0.48 in the benchmark model and 0.90 in Model 1 and Model 2, while that from financial attitude to financial literacy is 0.04 in the benchmark model and -0.47 in Model 1 and Model 2. It is interesting to see that the path coefficient from financial attitude to financial literacy changes dramatically when we consider endogeneity among latent variables. The effect of financial attitude on financial literacy is insignificant in the benchmark model, which is similar to results of the simple regression model in the previous section. When we incorporate the enodogeneity of financial attitude explicitly among latent variables in Model 1 and Model 2, the effect becomes significant but negative. We conjecture that the negative effect indicates overconfidence that refers to an individual's propensity to overestimate his/her financial literacy. This conclusion is confirmed by the fact that financial attitude is a latent variable that consists of two survey questions: 'I am interested in making money' and 'I have enough knowledge about finance', in which the latter has larger factor weight (0.69 vs. 0.81) as shown in Figure 1.

Financial literacy has positive effects on financial behavior in all models, which is consistent with the findings of Atkinson and Messy (2012). The path coefficient from financial literacy to financial behavior is 0.42, which does not vary in three alternative models. The magnitude of effect can be measured by multiplying the standard deviation of the FFFL-HS test scores and survey responses to financial attitude questionnaires. For example, raising 33 points (= 16.5 x 2) of the FFFL-HS test scores via economic or financial education may change students' financial behavior such as saving money for the future.[8]

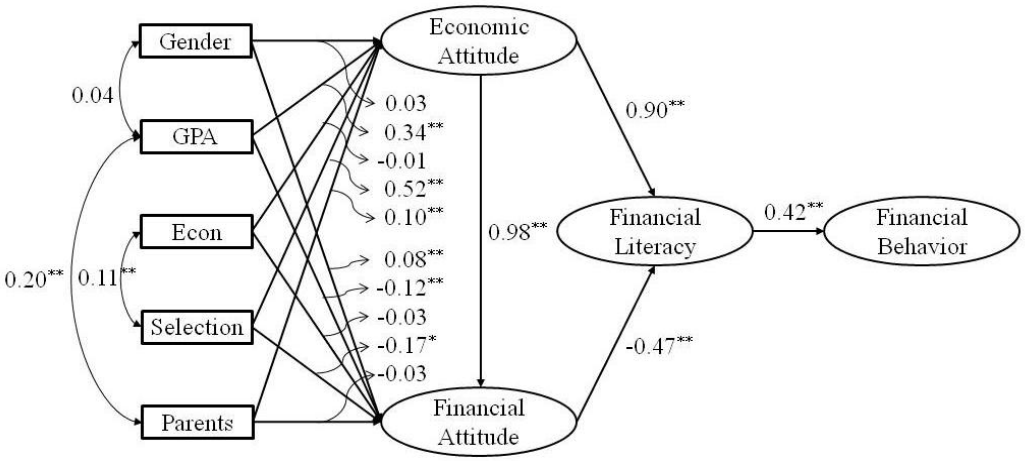
[8] As the factor scores of financial literacy, economic attitude and financial attitude are standardized, we need to multiply the standard deviation of responses to survey questionnaires. However, this computation yields only an approximation of the effects because the financial literacy and financial behavior are measured by the confirmatory factors rather than simple arithmetic sum. The standard deviation of the FFFL-HS test score is 16.5 points on a 100-point scale while the standard deviations of responses to financial behavior questionnaires are 1.16, 0.49 and 0.33 for three elements. The computation in the text use 0.5 as the approximate standard deviation of financial behavior.



Benchmark: Uncorrelated Model



Model 1: Correlated Model



Model 2: Unidirectional Model

Note: * $p < 0.05$; ** $p < 0.01$

Figure 3. Path Analysis for Alternative Structural Equation Models

IV. Conclusion

This study investigates the effects of socioeconomic status, economic attitude and financial attitude on financial literacy and the financial behavior using structural equation models, in which endogeneity among latent variables are incorporated. The results of structural models share common and different findings with those of descriptive statistics and simple regression models.

First, student's intention to select economics is the most influential factor of both economic attitude and financial attitude, with GPA the second influential one. Second, economic attitude is more influential factor of financial literacy than financial attitude. Third, the effect of financial attitude on financial literacy changes dramatically depending on the assumptions. The descriptive statistics show that financial attitude has positive effects on financial literacy, while its effects become insignificant in the simple regression model and the benchmark model. However, if we incorporate the enodogeneity of financial attitude explicitly among latent variables, the effects become negative and significant, which may reflect students' overconfidence about financial literacy. Finally, financial literacy has positive effects on financial behavior in all models, which implies an important role of economic or financial education to change students' financial behavior such as saving money for the future.

References

Ansong, Abraham and Michael Asiedu Gyensare (2012). "Determinants of University Working-Students' Financial Literacy at the University of Cape Coast, Ghana," *International Journal of Business and Management*, Vol. 7, No. 9, pp. 126-133.

Atkinson, Adele and Flore-Anne Messy (2012). "Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study," *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 15, OECD Publishing.

Bentler, Peter M. (1992). "On the Fit of Models to Covariances and Methodology to the Bulletin," *Psychological Bulletin*, Vol. 112, pp. 400–404.

Bernheim, B. Douglas and Daniel M. Garrett (2003). "The Effects of Financial Education in the Workplace: Evidence from a Survey of Households," *Journal of Public Economics*, Vol. 87, Issues 7-8, pp. 1487-1519.

Bhushan, Puneet and Yajulu Medury (2013). "Financial Literacy and Its Determinants," *International Journal of Engineering, Business and Enterprise Applications*, Vol. 4, No. 2, pp. 155-160.

Browne, Michael W. and Robert Cudeck (1993). "Alternative Ways of Assessing Model Fit." In K. A. Bollen & J. S. Long (Ed.), *Testing Structural Equation Models* (pp. 136–162), Newbury Park, CA: Sage.

Chen, Haiyang and Ronald P. Volpe (1998). "An Analysis of Personal Financial Literacy among College Students," *Financial Services Review*, Vol. 7, No. 2, pp. 107-128.

Chinen, Kenichiro and Hideki Endo (2012). "Effects of Attitude and Background on Personal Financial Ability: A Student Survey in the United States," *International Journal of Management*, Vol. 29, No. 2, pp. 778-791.

Cho, Yeong-Suk and Song-Choon Park (2008). "A Study on the Regional Gap in High School Students' Financial and Economic Knowledge," *Korean Journal of Economic Education*, Vol. 15, No. 2, pp. 121-143.

Financial Supervisory Service (2011). *2011 Report on Financial Quotient of High School Students*, Seoul, Korea.

Friedman, Benjamin M. (2010). "Reconstructing Economics in Light of the 2007-? Financial Crisis," *Journal of Economic Education*, Vol. 41, No. 4, pp. 391-397.

Hahn, Jinsoo (2013). "Financial Literacy of Korean Elementary School Students: Levels and Determinants," *Korean Journal of Economic Education*, Vol. 20, No. 2, pp. 39-63.

Hooper, Daire, Joseph Coughlan, and Michael Mullen (2008). "Structural Equation Modelling: Guidelines for Determining Model Fit," *The Electronic Journal of Business Research Methods*, Vol. 6, No. 1, pp. 53 – 60.

Hutcheson, Graeme D. and Nick Sofroniou (1999). *The Multivariate Social Scientist: Introductory Statistics Using Generalized Linear Models*, London: Sage.

Jang, Kyungho, Jinsoo Hahn, and Hyung-Joon Park (2013). "Comparison of Financial Literacy

between Korean and U.S. High School Students," submitted to *International Review of Economics Education*.

Kaiser, Henry F. (1974). "An Index of Factorial Simplicity," *Psychometrika*, Vol. 39, pp. 31-36.

Kim, Min-Jeung and Hee-Sook Lee (2011). "The Financial Quotient according to Financial Experience and Financial Management Behavior of Chungbuk National University Students in Korea," *Journal of Human Ecology*, Vol. 15, No. 1, pp. 149-167.

Kim, Eun-jung and Chung-Sook Moon (2010). "A Study on the Developing Financial Literacy in Middle School," *Consumer Policy and Education Review*, Vol. 6, No. 1, pp. 67-77.

Kline, Rex B. (2011). *Principles and Practice of Structural Equation Modeling*, 3rd edition, New York: The Guilford Press.

Lusardi, Annamaria, Olivia S. Mitchell, and Vilsa Curto (2010). "Financial Literacy among the Young," *Journal of Consumer Affairs*, Vol. 44, No. 2, pp. 358-380.

Mandell, Lewis (2008). "Financial Literacy of High School Students." In Jing Jian Xiao (Ed.), *Handbook of Consumer Finance Research* (pp. 163-183), New York: Springer.

Olga, Kharchenko (2011). *Financial Literacy in Ukraine: Determinants and Implications for Saving Behavior*. Unpublished Master's Thesis, Kyiv School of Economics.

Remund, David L. (2010). "Financial Literacy Explicated: The Case for a Clear Definition in an Increasingly Complex Economy," *Journal of Consumer Affairs*, Vol. 44. No. 2, pp. 276-295.

Sabri, Mohamad F. F. (2011). *Pathways to Financial Success: Determinants of Financial Literacy and Financial Well-being among Young Adults*. Doctoral Dissertation, Iowa State University.

Samy, Martin, H. Tawfik, R. Huang, and A. K. Nagar (2008). "Financial Literacy of Youth: A Sensitivity Analysis of the Determinants," *International Journal of Economic Sciences and Applied Research*, Vol. 1, No. 1, pp. 55-70.

U.S. Department of the Treasury (2002). *Integrating Financial Education into School Curricula*, Washington, D.C.

van Rooij, Maarten., Annamaria Lusardi, and Rob Alessie (2011). "Financial Literacy and Stock Market Participation," *Journal of Financial Economics*, Vol. 101, No. 2, pp. 449-472.

Walstad, William B. and Ken Rebeck (2005). *Financial Fitness for Life: High School Test Examiner's Manual, Grades 9-12*, New York: National Council on Economic Education.

Appendix

Table A.1. Estimates of Alternative Structural Models

	Causal Variables					Endogenous Variables		
	Gender	GPA	Econ	Selection	Parents	EA	FA	FL
Benchmark model								
			Coefficients					
Economic Attitude	0.044	0.432**	-0.018	0.947**	0.130**			
Financial Attitude	0.149**	0.313**	-0.049	0.477**	0.102**			
Financial Literacy						7.379**	0.632	
Financial Behavior								0.012**
			Standardized Coefficients					
Economic Attitude	0.026	0.308	-0.010	0.554	0.089			
Financial Attitude	0.098	0.253	-0.030	0.316	0.079			
Financial Literacy						0.482	0.036	
Financial Behavior								0.418
Model 1								
			Coefficients					
Economic Attitude	0.046	0.449**	-0.016	0.853**	0.136**			
Financial Attitude	0.160**	0.246**	-0.063	0.499**	0.086*			
Financial Literacy						14.504**	-8.427**	
Financial Behavior								0.012**
			Standardized Coefficients					
Economic Attitude	0.028	0.336	-0.009	0.523	0.098			
Financial Attitude	0.109	0.205	-0.041	0.340	0.069			
Financial Literacy						0.900	-0.469	
Financial Behavior								0.418
Model 2								
			Coefficients					
Economic Attitude	0.046	0.449**	-0.016	0.853**	0.136**			
Financial Attitude	0.119**	-0.148**	-0.049	-0.249*	-0.033	0.876**		
Financial Literacy						14.504**	-8.427**	
Financial Behavior								0.012**
			Standardized Coefficients					
Economic Attitude	0.028	0.336	-0.009	0.523	0.098			
Financial Attitude	0.081	-0.123	-0.032	-0.170	-0.026	0.976		
Financial Literacy						0.900	-0.469	
Financial Behavior								0.418

Notes 1) EA=economic attitude, FA=financial attitude, FL=financial literacy.
2) * $p < 0.05$; ** $p < 0.01$

Table A.2. Decomposition for Effects of Causal Variables and Endogenous Variables

	Causal Variables					Endogenous Variables		
	Gender	GPA	Econ	Selection	Parents	EA	FA	FL
Benchmark model								
			Total Effects					
Economic Attitude	0.026	0.308	-0.010	0.554	0.089	0.000	0.000	0.000
Financial Attitude	0.098	0.253	-0.030	0.316	0.079	0.000	0.000	0.000
Financial Literacy	0.016	0.157	-0.006	0.279	0.046	0.482	0.036	0.000
Financial Behavior	0.007	0.066	-0.003	0.116	0.019	0.201	0.015	0.418
			Direct Effects					
Economic Attitude	0.026	0.308	-0.010	0.554	0.089	0.000	0.000	0.000
Financial Attitude	0.098	0.253	-0.030	0.316	0.079	0.000	0.000	0.000
Financial Literacy	0.000	0.000	0.000	0.000	0.000	0.482	0.036	0.000
Financial Behavior	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.418
			Indirect Effects					
Economic Attitude	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Financial Attitude	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Financial Literacy	0.016	0.157	-0.006	0.279	0.046	0.000	0.000	0.000
Financial Behavior	0.007	0.066	-0.003	0.116	0.019	0.201	0.015	0.000
Model 1								
			Total Effects					
Economic Attitude	0.028	0.336	-0.009	0.523	0.098	0.000	0.000	0.000
Financial Attitude	0.109	0.205	-0.041	0.340	0.069	0.000	0.000	0.000
Financial Literacy	-0.026	0.206	0.011	0.311	0.055	0.900	-0.469	0.000
Financial Behavior	-0.011	0.086	0.005	0.130	0.023	0.376	-0.196	0.418
			Direct Effects					
Economic Attitude	0.028	0.336	-0.009	0.523	0.098	0.000	0.000	0.000
Financial Attitude	0.109	0.205	-0.041	0.340	0.069	0.000	0.000	0.000
Financial Literacy	0.000	0.000	0.000	0.000	0.000	0.900	-0.469	0.000
Financial Behavior	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.418
			Indirect Effects					
Economic Attitude	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Financial Attitude	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Financial Literacy	-0.026	0.206	0.011	0.311	0.055	0.000	0.000	0.000
Financial Behavior	-0.011	0.086	0.005	0.130	0.023	0.376	-0.196	0.000
Model 2								
			Total Effects					
Economic Attitude	0.028	0.336	-0.009	0.523	0.098	0.000	0.000	0.000
Financial Attitude	0.109	0.205	-0.041	0.340	0.069	0.976	0.000	0.000
Financial Literacy	-0.026	0.206	0.011	0.311	0.055	0.442	-0.469	0.000
Financial Behavior	-0.011	0.086	0.005	0.130	0.023	0.185	-0.196	0.418
			Direct Effects					
Economic Attitude	0.028	0.336	-0.009	0.523	0.098	0.000	0.000	0.000
Financial Attitude	0.081	-0.123	-0.032	-0.170	-0.026	0.976	0.000	0.000
Financial Literacy	0.000	0.000	0.000	0.000	0.000	0.900	-0.469	0.000
Financial Behavior	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.418
			Indirect Effects					
Economic Attitude	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Financial Attitude	0.028	0.327	-0.009	0.511	0.095	0.000	0.000	0.000
Financial Literacy	-0.026	0.206	0.011	0.311	0.055	-0.458	0.000	0.000
Financial Behavior	-0.011	0.086	0.005	0.130	0.023	0.185	-0.196	0.000

Notes 1) EA=economic attitude, FA=financial attitude, FL=financial literacy.

2) * $p < 0.05$; ** $p < 0.01$