

Gender Differences in Financial Literacy among Chinese University Students and the Influential Factors*

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Abstract

In the midst of growing worldwide concern over financial consumer protection, OECD member countries have developed efficient national strategies for financial education. China, one of the largest economies in the world, is not an OECD member country yet. Although China needs to evaluate its current status of financial literacy and to improve it, very little research has been done on the financial literacy of Chinese people so far. Hence this article is to examine gender differences in financial literacy among Chinese university students and to ascertain the influential factors. The major findings and their implications are summarized as follows. First, this study measured the overall financial literacy score of Chinese university students. It was 56.59, which is lower than that of Korea and other OECD member countries. Second, this study found that there exist obvious gender differences in financial literacy. The survey results also revealed that in China female students usually have fewer opportunities for financial education or financial transaction experience. Third, this study identified the changing socio-economic background of China, which might exacerbate gender inequality. The Chinese economy is growing, but the gap between the rich and the poor is becoming larger. University students have more opportunities for financial activity than ever. Since such trends will continue, it is necessary to take into consideration the current socio-economic situation. This study has made important contributions to the literature on gender inequality, as well as financial education.

Key words

Gender difference, financial literacy, financial capability, Chinese university students, financial education

* This Research was supported by the Sookmyung Women's University Research Grants 1-1303-0082.

Introduction

The trend towards globalization brought about the advent of global financial markets and induced more financial consumers to participate in the borderless markets. Consequently, while having more opportunities for overseas investment, financial consumers became exposed to a higher risk of being affected by the crises of foreign countries. Furthermore, the convergence trend made it more difficult for financial consumers to search for and to choose a relevant financial instrument from a flood of information. On account of these situations, financial literacy has increasingly become an important issue in relation to the economic success and financial market development of a country (OECD, 2006). OECD member countries, on a cooperative basis, have made an effort to promote the enhancement of financial education and the stability of global financial markets. In particular, the 2011 Meeting of the OECD Council at Ministerial level in Paris dealt with gender equality in education as a key issue on its agenda. At their summit in 2012, G20 leaders endorsed the High-level Principles on National Strategies for Financial Education developed by the OECD and its International Network on Financial Education (INFE). Their declaration acknowledged the importance of addressing the financial literacy of women as a way to improve their financial well-being, based on a comprehensive analysis of the survey results across OECD member countries. In Korea, according to the OECD guidelines, the Financial Supervisory Service (FSS) and the Korea Development Institute (KDI) conducted a financial literacy survey in 2011 and, based on the results, they have been striving for the financial well-being of vulnerable groups such as women by reinforcing financial education (KDI, 2011).

The Chinese economy has been rapidly growing in the midst of globalization in finance, which, in turn, requires its people to have a better understanding of finance and to make informed financial decisions. This is a matter of financial literacy. Chinese university students are the educated group in the population and the generation who will lead the country in the future. Nonetheless, there is growing public concern over the spread of materialism among Chinese university students and their extravagant lifestyle these days (Mandell & Klein, 2009; Yan, 2006). In this regard, an empirical analysis of their financial literacy is a mean-

ingful research issue in order for the country to make an appropriate policy decision for nationwide financial education. So far, however, very little research has been done on this issue. Thus this study will examine how well equipped Chinese university students are to make financial decisions and whether there exist gender differences in financial literacy among them. Finally, this study will examine the effects of socio-economic characteristics, financial education, and financial transaction experience on financial literacy.

Theoretical Background

Financial Education, Financial Capability, and Financial Literacy

A financial consumer is defined as an individual who purchases financial instruments or services in financial markets (Ann & Lee, 2010). Thus financial consumers include a bank's depositors, securities investors, insurance policy owners, credit card holders, and so on. Since a financial instrument usually involves an agreement between the buyer and the seller, a financial consumer has responsibility for the binding agreement and there may be risk of an unexpected financial loss. Nonetheless, financial consumers are in a weaker position with respect to bargaining power and information accessibility than financial institutions. The financial consumer problems mostly lie in the information asymmetry between financial consumers and producers (Bernanke, 2009; Borden et al., 2008). In fact, there are a wide variety of financial instruments produced by financial institutions, but financial consumers' knowledge and information are limited. The variety and complexity of financial instruments exacerbate the problem. This is the reason why financial literacy is important to financial consumers. The information asymmetry problem can be resolved by improving financial literacy. Financial literacy helps financial consumers to make an informed choice, protects their rights and interests, and, finally, enhances the stability of financial markets. Such an emphasis on financial literacy leads to the importance of financial education.

Financial education provides financial consumers with knowledge and skills needed for their financial transactions. Thus it ranges over personal finance, investment, and insurance. Since the global financial crisis, financial education has been more emphasized as a proactive means to

protect financial consumers. In the UK, the Financial Services Act 2010 included a provision for the Financial Services Authority (FSA) to establish the Consumer Financial Education Body (CFEB), which was a dedicated body to promote financial capability. The CFEB was rebranded as the Money Advice Service on April 4, 2011. Proclaiming that the purpose of financial education is to build financial capability, FSA divided financial education into three categories: information (facts, data, and opinion), education (skills and knowledge), and advice (interactive and personalized service) (De Meza et al., 2008). The FSA also introduced a conceptual framework of financial education in which financial knowledge and understanding, financial skills, and financial confidence and attitudes were considered major influential factors on financial capability. Financial knowledge and understanding imply that financial consumers should be able to make reasoned choices among financial instruments based on comprehensive knowledge of everyday financial transactions. Financial skills are related to the ability to apply knowledge and understanding to financial matters and to resolve them. Financial confidence and attitudes suggest that financial consumers should understand and accept the consequences of their choices and accept responsibility for them. Kim and Choe (2011) agree that financial capability is the ability of financial consumers to attain their financial goals and that its components are consumers' attitude, knowledge, and behavior. The essential contents of financial education, which financial consumers should be aware of, include income and expenditure management, credit and debt management, savings and investment, risk management and insurance, retirement planning, and financial market environment and financial decision-making.

Another important concept, financial literacy means the knowledge needed for financial transactions and the ability to exploit it. In addition to a basic understanding of financial and economic principles, financial literacy includes the objective knowledge of a particular financial transaction and the subjective measure of self-confidence in the application of the knowledge. Based on the personal finance standards suggested by the Jump\$tart coalition in the US, the main areas of financial literacy are income, financial management, savings and investment, expenditures and credit. The Jump\$tart coalition also emphasizes the ability to make good use of relevant knowledge of personal finance. In Korea, most re-

search on financial literacy is based on the same classifications, namely, income, financial management, savings and investment, and expenditure and debt (Choe & Cho, 2011; M. J. Kim et al., 2012). The FSS announced the result of measuring the financial literacy of Korean university students. According to FSS (2010), the score in the area of income was an average of 61.9 out of 100 points, 61.7 in financial management, 59 in savings and investment, and 61.5 in expenditure and debt, which indicates a low level of financial literacy as a whole.

Proposing good practices for financial education, OECD (2005) urged the countries to give their nationwide attention to financial education to cope with financial exclusion and financial illiteracy (US Office of Financial Education, 2002; Rutledge, 2010). According to the OECD, the survey results of 30 member countries revealed that the level of financial literacy was low on average and especially, severely low among vulnerable segments of the population. According to Kempson (2009), the OECD recommendation on good practices for financial education consists of four categories: day-to-day money management, financial planning, choosing appropriate products, financial knowledge and understanding. The OECD built the website International Gateway for Financial Education as an online hub of financial education, information, and research. Also, the OECD organized a network, International Network on Financial Education (INFE), to promote international cooperation. Recognizing the importance of financial education, OECD member countries work together and share information to improve financial capability. However, China is not a member country and the OECD database has no available data about the financial literacy of Chinese people.

Financial Education in China

Chinese people had regarded thrift as the primary virtue for a long time. After the 1990's, however, the Chinese economy began to grow rapidly and the level of consumption continued to increase. Ashamed of poverty, Chinese people came to enjoy a high income and luxurious life-style. Rising consumer materialism in society made Chinese people spend more money on consumption. In the midst of such a changing economic environment, Chinese researchers on economic education em-

phasized the importance of an early and well-organized financial education system from elementary school to high school (Moon et al., 2013). Referring to financial management education as a process of disseminating the wisdom of producing wealth, Sheng & He (2012) suggested the following: First, financial education is to help students realize that producing wealth is an efficient way to lead a fulfilled life. Second, financial education is to help students realize that wealth can make people happy. Third, financial education is to help students realize that the rich can achieve moral responsibility more easily and contribute more to society. Fourth, financial education is to help students realize that accumulating personal wealth extends to accumulating social wealth and thus everyone's wealth lays the foundation for China's economic prosperity. Fifth, financial education is to help students realize that wealth should be produced and accumulated only through legitimate means. Sixth, financial education is to help students realize that both mental labor and physical labor should be esteemed and young people should acquire relevant knowledge and experience in accumulating wealth through physical labor. Seventh, financial education is to help students realize that they should look for a way to accumulate wealth with great ambition. Eighth, financial education is to help students realize that financial management skill is the basic requirement for living in the modern society, and it leads to the efficient allocation of social financial resources. Nonetheless, the scope and contents of financial education provided by regular schools in China are not sufficient. The major topics covered at the primary and secondary education levels are savings and insurance, consumption, and national wealth and taxes, which are related to the very simple and basic principles of an economic life. Even though more advanced economic principles are dealt with in high schools than in middle schools, finance subjects are not required but elective, so not all the students have an opportunity to learn finance. The government agency and other public financial institutions provide only irregular financial education programs, most of which are temporary and lack careful preparation. For instance, although the People's Bank of China provides financial consumers with information and knowledge concerning financial decision-making, risk management, and money laundering, the educational contents do not interrelate with each other. Commercial banks in China usually provide financial education for financial consumers for

business purposes. These facts imply that financial education in China is not sufficient, whether it is regular or not. At a higher education level, university students should have the financial literacy to make informed choices in their future economic lives. Therefore, thorough research on the financial literacy of Chinese university students is needed in the literature.

Recently, however, it is observed that Chinese university students tend to consume excessively. It is because the Chinese economy has rapidly developed since the 1990's and the average consumption level has also continued to increase. Also, it is the result of rising materialism in the society. This situation could be a financial burden on the students as well as their parents. Worrying about the prevalence of unreasonable consumption behaviors and their possible consequences, Chinese researchers insisted that a sound economic and financial consumption life should start from the school and there should be a system of preventing excessive consumption and managing consumption efficiently. They also emphasized the importance of financial education (Moon et al., 2013).

Yan (2006) suggested various ideas concerning financial education at universities, such as face-to-face counseling to make students realize the consequences of bad consumption habits and behaviors. Yan (2006) regarded a lack of financial management skills, such as excessive consumption, and proposed a systematic curriculum of financial management education. Considering financial management skill to include attitudes towards money, values, and success in life, Yan (2006) emphasized that university students should attain financial management skills during their university years. Zhang (2010) considered financial management skill to be the ability to survive in modern economic society, and to include attitudes towards money and awareness of how to create wealth. In other words, one's personal attitude towards money and finance affects one's view of life and view of the world, and thus knowledge of financial management is essential for economic well-being. Zhang (2010) surveyed students at the universities in Chansha and found that both their financial education and financial transaction experience were not satisfactory. As to financial education, more than 50% of students were not aware of financial management and 90% of students did not have a chance to participate in a financial education program. As to financial transaction experience, 85% of students did not invest extra money in

any financial instrument and 92% of students were not aware of the interest rates of bank loans or credit cards. In this regard, it is important to provide financial management education in a systematic way at home, school, and work. Especially, university is the final stage of education, and therefore it is the best time for financial education (Zhang, 2010).

Research Objectives and Methodology

Research Objectives

Focusing on gender differences in the financial literacy of Chinese university students, this article addresses the following research objectives.

First, this study examines gender differences in financial literacy among Chinese university students with respect to socio-economic characteristics. This study will measure their levels of financial literacy and see if there exists a significant gender gap between male and female students in socio-economic factors. Second, this study examines gender differences in financial literacy among Chinese university students with respect to whether or not they have financial education and financial transaction experience. For this, the financial literacy scores will be used. Third, this study examines the effects of socio-economic characteristics, financial education, and financial transaction experience on financial literacy by gender.

Data

To analyze gender differences in financial literacy, this study used data from surveys of male and female students at Wuhan University, Fudan University, and Tongji University, which are located in large cities in China. The survey was carefully planned. A preliminary survey was conducted from April 29 to May 5 in 2013 and, based on the results, the questionnaire was modified. Then two main surveys were conducted from May 7 to May 12, and from October 10 to October 20 in the same year. A total of 620 questionnaires were distributed and collected. Finally, 601 responses were finally accepted, excluding unreliable ones.

Variables

Financial literacy is the dependent variable in this study. According to Choe & Cho (2011), financial literacy can be measured through 35 questions. Based on the personal finance standards of Jump\$tart, the questions are divided into four categories, which are income (7 questions), financial management (5 questions), savings and investment (11 questions), expenditure and debt (12 questions). However, there were two questions which are not relevant to the financial environment of China. Thus, excluding these two, only 33 questions were used to measure financial literacy.

The independent variables include socio-economic characteristics, financial education experience, financial transaction experience, and so on. The socio-economic characteristics are gender, monthly pocket money, monthly household income, and parents' educational level. The financial education experience is measured in terms of whether or not a student has experienced financial education from regular or irregular education institutions (1=yes, 0=no). Similarly, financial transaction experience is measured in terms of whether or not a student has experienced the financial transactions of a checking account, time deposit, fund, stock, or credit card, respectively (1=yes, 0=no).

Analytical Methods

For the first research objective, financial literacy scores are computed and compared between male and female students by socio-economic characteristics using descriptive statistics, t-test, and one-way ANOVA. For the second research objective, t-test and one-way ANOVA are applied to testing for gender differences in financial literacy according to financial education experience and financial transaction experiences. Finally, for the third research objective, a hierarchical multiple regression model is proposed to investigate the effects of socio-economic characteristics, financial education experience, and financial transaction experience on financial literacy. All the analyses of this study are done using SPSS 20.0 version.

Results

Differences in Financial Literacy by Gender

The average financial literacy score of Chinese university students was 56.59. Among the four categories, they achieved the highest score, 58.9, on the understanding of financial management measure, 56.6 on the understanding of income, 56.53 on the understanding of savings and investment, and 54.46 on the understanding of expenditure and debt.

As shown in Table 1, gender differences in financial literacy of Chinese university students are significant in all the areas. Male students gained higher scores in all the areas than women students. The understanding of income showed the largest gender gap of 23.83, the understanding of financial management 19.64, the understanding of expenditure and debt 17.44, and the understanding of savings and investment 13.68. The smallest gender gap in the area of savings and investment reflects the fact that Chinese people have carried on the tradition of emphasizing saving and the saving rate is higher than that of other countries. Therefore, Chinese university students would have been exposed to information concerning savings and investment.

Table 1
Gender Differences in Financial Literacy of Chinese University Students

Variable (n=601)	Classification	Frequency	Score	t-value
Financial Literacy	Male	295	66.05	21.89***
	Female	306	47.47	
Income	Male	295	68.74	17.65***
	Female	306	44.91	
Financial management	Male	295	68.9	11.32***
	Female	306	49.26	
Savings and investment	Male	295	63.5	11.87***
	Female	306	49.82	
Expenditure and debt	Male	295	63.34	16.52***
	Female	306	45.9	

* $p < .05$, ** $p < .01$, *** $p < .001$

Gender differences in financial literacy of Chinese university students by socio-economic characteristics

The socio-economic characteristics of Chinese university students are summarized in Table 2. The entire sample consists of 295 male students (49.1%) and 306 female students (50.9%). The largest proportion (46.4%) of students have monthly pocket money between 500 and 1500 Chinese yuan. 175 students (29.1%) have a monthly household income between 4000 and 5000 Chinese yuan. 262 students (43.6%) have a monthly household income below 3000. As for the distribution of parents' educational level, two groups have a similar size: high school graduate (284, 47.2%) and the others (317, 52.8%).

To examine gender differences by socio-economic characteristics, each socio-economic variable was divided into two subgroups. That is, if a particular value of the variable is greater than its median, it corresponds to 'high.' If it is less than the median, it corresponds to 'low.' The medians of monthly pocket money, household income, and parents' educational level were 1500 yuan, 3000 yuan, and university graduate, respectively. Male students gained a higher score on financial literacy than female students by 18.58 points. Students with a high level of monthly pocket money gained a higher score on financial literacy by 8.95 points than those with a low level of monthly pocket money. Students with a high level of household income gained a higher score on financial literacy than those with a low level of household income by 15.54 points. Lastly, students whose parents had a high level of education gained a higher score on financial literacy than those whose parents had a low level of education by 13.54 points.

Table 2
Socio-economic Characteristics of Chinese University Students

Variable (n=601)	Classification	Frequency (%)
Gender	Male	295 (49.1%)
	Female	306 (50.9%)
Pocket money (yuan)	Less than 500	158 (26.3%)
	501~1500	279 (46.4%)
	1501~2500	145 (24.1%)
	2501~3500	17 (2.8%)
	3501~5000	2 (0.3%)

Variable (n=601)	Classification	Frequency (%)
Household income (yuan)	Less than 2000	128 (21.3%)
	2001~3000	134 (22.3%)
	3001~4000	90 (15.0%)
	4001~5000	175 (29.1%)
	5001~6000	32 (5.3%)
	6000 or more	42 (7.0%)
Parents' education	High school graduate	284 (47.2%)
	University withdrawal	143 (23.8%)
	University graduate	158 (26.3%)
	Graduate school	16 (2.7%)

It should not be surprising that there exist significant gender differences in the financial literacy of Chinese university students related to socio-economic characteristics. In terms of monthly pocket money, for example, male students with a high level of pocket money gained 68.41 and male students with a low level of pocket money gained 64.79, while female students with a high level of pocket money gained 52.18 and female students with a low level of pocket money gained 46.29. Male students with a high level of pocket money gained a higher score by 16.22 than female students with a high level of pocket money. The difference between the two male groups is 3.62, whereas the difference between the two female groups is 5.89. The results of household income and parents' educational level showed the same situation. It can be considered critical evidence of gender difference that gender itself makes a larger difference in financial literacy than other socio-economic variables. Thus it can be concluded that female students have much lower levels of financial literacy than male students. Since a high level of pocket money, household income, and parents' education are expected to provide a student with more chances of financial activities, they are regarded as positive influential factors on financial literacy.

Table 3
Gender Differences in Financial Literacy by Socio-economic Characteristics

Variable (n=601)	Classification	Frequency	Score	F-value
Pocket money	High & Male	103	68.41c	173.94***
	High & Female	61	52.18b	
	Low & Male	192	64.79c	
	Low & Female	245	46.29a	
Household income	High & Male	212	68.56d	246.29***
	High & Female	127	53.53b	
	Low & Male	83	59.66c	
	Low & Female	179	43.17a	
Parents' education	High & Male	210	68.14d	209.43***
	High & Female	107	52.88b	
	Low & Male	85	60.91c	
	Low & Female	199	44.56a	

* $p < .05$, ** $p < .01$, *** $p < .001$

Gender Differences in Financial Literacy by Financial Education and Transaction Experience

Concerning the effect of financial education experience on financial literacy, it turned out that financial education experience, wherever the education was given, made a significant difference in financial literacy. First, the students with financial education experience at primary and secondary schools gained 65.93, which was greater than the score of the students with no experience by 18.52. Second, the students with financial education experience at home gained 61.01, which was greater than the score of the students with no experience by 9.65. Third, the students with financial education experience at public or private institution gained 60.71, which was greater than the score of the students with no experience by 8.2. Lastly, the students with financial education experience at university gained 60.21, which was greater than the score of the students with no experience by 8.77. In brief, it was proved that the financial education experience at primary and secondary schools had the most powerful impact on financial literacy and it emphasizes the importance of an earlier and systematic financial education program.

Table 4
Differences in Financial Literacy by Financial Education Experience

Variable (n=601)	Classification	Frequency	Score	t-value
Home	Yes	326	61.01	8.99***
	No	275	51.36	
Public and private institutions	Yes	299	60.71	7.53***
	No	302	52.51	
Primary and secondary schools	Yes	298	65.93	21.75***
	No	303	47.41	
University	Yes	353	60.21	7.98***
	No	248	51.44	

* $p < .05$, ** $p < .01$, *** $p < .001$

Turning to gender differences in financial education experience, it also turned out that financial education experience, wherever the education was done, made a significant gender difference in financial literacy. First, in the case of financial education experience at home, the male students with experience gained 67.13 and the male students with no experience gained 63.3, while the female students with experience gained 49.61 and the female students with no experience gained 46.19. Moreover, the difference between the male student groups was 3.83 and the difference between the female student groups was 3.42, whereas the difference between the male and female student groups with experience was 17.52 and the difference between the male and female student groups with no experience was 17.11. Thus the comparison between gender groups shows a considerable difference. This situation is the same for the other cases, which gives strong evidence that there exist gender differences in financial literacy.

Table 5
Gender Differences in Financial Literacy by Financial Education Experience

Variable (n=601)	Classification	Frequency	Score	F-value
Home	Yes & Male	212	67.13	168.89***
	Yes & Female	114	49.61	
	No & Male	83	63.3	
	No & Female	192	46.19	

Variable (n=601)	Classification	Frequency	Score	F-value
Public and private institutions	Yes & Male	189	66	176.30***
	Yes & Female	110	51.62	
	No & Male	106	66.15	
	No & Female	196	45.14	
Primary and secondary schools	Yes & Male	244	68.01	230.40***
	Yes & Female	54	56.5	
	No & Male	51	56.69	
	No & Female	252	45.53	
University	Yes & Male	226	67.59	172.46***
	Yes & Female	127	47.08	
	No & Male	69	61.01	
	No & Female	179	47.74	

* $p < .05$, ** $p < .01$, *** $p < .001$

Concerning the effect of financial transaction experience on financial literacy, it turned out that only financial transaction experiences with time deposit and credit card made a significant difference in financial literacy. This result can be interpreted as the influence of Chinese financial tradition and environment. That is, Chinese households traditionally have a strong propensity to save and thus household members are accustomed to saving transactions. Furthermore, most Chinese university students use a credit card. The students with time deposit transaction experience gained 62.68 and the students with no such experience gained 54.67. Especially, the students with credit card transaction experience gained a lower score by 9.39 than those with no such experience. A possible interpretation of it is that using credit cards might promote excessive consumption and therefore students with financial literacy would not use credit cards.

Table 6

Differences in Financial Literacy by Financial Transaction Experience

Variable (n=601)	Classification	Frequency	Score	t-value (P)
Checking account	Yes	420	56.14	1.21 (.226)
	No	181	57.64	

Variable (n=601)	Classification	Frequency	Score	t-value (P)
Time deposit	Yes	144	62.68	6.19***
	No	457	54.67	
Fund	Yes	140	58.24	1.60 (.111)
	No	451	56.09	
Stock	Yes	102	57.63	.824 (.411)
	No	499	56.38	
Credit card	Yes	480	54.7	6.87***
	No	121	64.09	

* $p < .05$, ** $p < .01$, *** $p < .001$

According to the results of analyzing gender differences by financial transaction experience, it is concluded that there exist significant gender differences in financial literacy in all the types of financial transactions. In the case of checking accounts, for instance, the two male student groups achieved very similar performances regardless of checking account transaction experience, and the difference between the two female student groups was only 4.55 points. However, the differences between male and female student groups were very large. This situation is the same for the other cases, which is additional supporting evidence that there exist gender differences in financial literacy in financial transaction experience.

Table 7
Gender Differences in Financial Literacy by Financial Transaction Experience

Variable (n=601)	Classification	Frequency	Score	F-value
Checking account	Yes & Male	213	66	167.01***
	Yes & Female	207	46	
	No & Male	82	66.21	
	No & Female	99	50.55	
Time deposit	Yes & Male	93	70.16	173.18***
	Yes & Female	51	49.04	
	No & Male	202	64.16	
	No & Female	255	47.15	

Variable (n=601)	Classification	Frequency	Score	F-value
Fund	Yes & Male	77	67.08	159.78***
	Yes & Female	63	47.43	
	No & Male	218	65.69	
	No & Female	243	47.48	
Stock	Yes & Male	55	65.62	159.45***
	Yes & Female	47	48.28	
	No & Male	240	66.15	
	No & Female	259	47.32	
Credit card	Yes & Male	213	64.56	173.83***
	Yes & Female	267	46.84	
	No & Male	82	69.94	
	No & Female	39	51.79	

* $p < .05$, ** $p < .01$, *** $p < .001$

The Effects of Socio-economic Characteristics, Financial Education and Financial Transaction Experiences on the Financial Literacy by Gender

In this study, a hierarchical multiple regression analysis was conducted to examine the effects of socio-economic characteristics, financial education and financial transaction experiences on the financial literacy by gender. Thus, Model 1 includes socio-economic variables, Model 2 includes socio-economic variables and financial education variables, and Model 3 includes socio-economic variables, financial education variables, and financial transaction experience variables. The results for male students are presented in Table 8 and the results for female students are presented in Table 9.

In the case of male students, the estimation results of Model 1 show that monthly pocket money and household income have a significant effect on financial literacy. In other words, the male students with a high level of monthly pocket money have better financial literacy than those with a low level of monthly pocket money. Likewise, male students with a high level of household income have better financial literacy than those with a low level of household income.

According to the estimation results of Model 2, the variables with a significant coefficient were monthly pocket money, household income,

financial education experience at home, and financial education experience at primary and secondary schools. Therefore, financial literacy can be positively affected by a high level of monthly pocket money, household income, and financial education experience at home and at primary and secondary schools.

Finally, the estimation results of Model 3 show that the effective variables on financial literacy are monthly pocket money, household income, financial education experience at home and at primary and secondary schools, and transaction experiences of checking account, time deposit, and credit card. In addition to the results of Model 2, male students without checking account transaction experience, with time deposit transaction experience, and without credit card transaction experience have better financial literacy.

Table 8
The Effects of Socio-economic Characteristics, Financial Education, and Financial Transaction Experience on the Financial Literacy of Male Students

Variable		Model 1		Model 2		Model 3	
		b	beta	b	beta	b	beta
Socio-economic	Pocket money (High=1)	0.64***	0.03	0.31***	0.02	2.17*	0.11
	Household income (High=1)	6.97***	0.32	7.37*	0.34	6.53***	0.3
	Parents' education (High=1)	4.43	0.21	2.5	0.12	1.38	0.06
Financial education	Home (yes=1)			2.2*	0.1	2.98**	0.14
	Public & Private (yes=1)			-1.63	-0.08	-0.75	-0.04
	Primary & Secondary (yes=1)			9.47***	0.37	8.57***	0.33
	University (yes=1)			1.31	0.06	0.97	0.04
Financial transaction	Checking account (yes=1)					-2.53**	-0.12
	Time deposit (yes=1)					4.35***	0.21
	Fund (yes=1)					-0.8	-0.76
	Stock (yes=1)					0.36	0.31
	Credit card (yes=1)					-4.52***	-4.25
Statistic	constant		45.64		39.33		43.93
	R ²		0.21		0.38		0.46
	Adj. R ²		0.2		0.36		0.43

* $p < .05$, ** $p < .01$, *** $p < .001$

As shown in Table 8, the beta coefficients account for the relative

magnitudes of effects on financial literacy. Particularly in Model 3, financial education experience at primary and secondary schools has the greatest effect on financial literacy and then follow household income, time deposit transaction experience, and financial education experience at home.

In the case of female students, the estimation results of Model 1 in Table 9 show that monthly household income has a significant effect on financial literacy. In other words, the female students with a high level of monthly household income have better financial literacy than those with a low level of monthly household income.

According to the estimation results of Model 2, the variables with a significant coefficient were monthly household income and financial education experience at primary and secondary schools. Therefore, financial literacy can be positively affected by a high level of monthly household income and financial education experience at primary and secondary schools.

Table 9
The Effects of Socio-economic Characteristics, Financial Education, and Financial Transaction Experience on the Financial Literacy of Female Students

Variable		Model 1		Model 2		Model 3	
		b	beta	b	beta	b	beta
Socio-economic	Pocket money (High=1)	-0.68	-0.03	-0.3	-0.01	-0.33	-0.01
	Household income (High=1)	9.78***	0.44	9.92*	0.45	9.52***	6.4
	Parents' education (High=1)	0.96	0.07	5.82	0.04	0.38	0.49
Financial education	Home (yes=1)			1.97	0.09	2.14*	2.01
	Public & Private (yes=1)			0.33	0.02	0.26	0.22
	Primary & Secondary (yes=1)			10.43***	0.37	10.31***	7.55
	University (yes=1)			0.1	0.01	0.44	0.41
Financial transaction	Checking account (yes=1)					-1.73	-1.51
	Time deposit (yes=1)					1.68	1.22
	Fund (yes=1)					0.42	0.33
	Stock (yes=1)					1.25	0.82
	Credit card (yes=1)					-3.12*	-1.99
Statistic	constant		32.98		30.17		34.24
	R ²		0.22		0.37		0.39
	Adj. R ²		0.21		0.36		0.37

* $p < .05$, ** $p < .01$, *** $p < .001$

Finally, the estimation results of Model 3 show that the effective variables of financial literacy are monthly household income, financial education experience at home and at primary and secondary schools, and transaction experiences with a credit card. The female students with a high level of household income and financial education experience, without credit card transaction experience have better financial literacy.

According to the beta coefficients of Model 3 in Table 9, financial education experience at primary and secondary schools has the greatest effect on financial literacy and then follow household income, and financial education experience at home. It is noteworthy that in the case of female students financial transaction experience has little effect on financial literacy.

Conclusions

This article examines gender differences in financial literacy among Chinese university students and ascertains the influential factors. Since there has been very little research on the financial literacy of Chinese people, this empirical study has made important contributions to the literature on gender inequality as well as financial education. University students are individually at the most important stage of life with respect to financial education, preparing to attain the financial literacy necessary for them to make informed choices in the rapidly changing financial environment. Thus financial knowledge and experience accumulated during this time will play a part in developing their country in the future (Zhang, 2010). The major findings and implications of this study are summarized as follows.

First, this study measured the overall financial literacy score of Chinese university students and it was 56.59. In fact, this score is lower than those of Korea and other OECD member countries. Emphasizing the importance of financial education, the OECD member countries have developed efficient national strategies for financial education. Evaluating the current status of financial literacy should always be the first step to improve it.

Second, this study found that there exist obvious gender differences in financial literacy among Chinese university students and also identified the effects of major influential factors on financial literacy. The sur-

vey result reveals that in China female students usually have relatively few opportunities for financial education and financial transaction experiences. Most advanced countries are now trying to introduce nationwide and appropriate financial education programs. Thus the results of this study provide evidence from which China can identify its need to develop financial education strategies especially in careful consideration of gender inequality.

Third, this study identified the changing socio-economic background of China which might exacerbate gender inequality. The Chinese economy is rapidly growing but the gap between the rich and the poor is becoming larger. University students have increasing opportunities for financial activities. Since such a trend will continue, it is necessary to take into consideration the current socio-economic situation and to make an appropriate policy on financial education.

Lastly, China is a large country and the survey was conducted in two specific local areas in China, Wuhan and Shanghai. Although the two regions are recognized as economic, financial, and educational centers of China, the survey results may have limitations on their generalizations due to geographic and ethnic diversity. Thus, further complementary research using a larger sample from representative divisions of China will be able to provide more extensive and generalized policy implications.

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