Social and economic well-being through debt management competency reinforcement: Implications for social justice and equality

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Many people have argued that lowering *household debt* – the combined debt of all the people in one household including mortgage and student loans – is an essential component of growing the economy. Unfortunately, this debt has been steadily increasing over the years, even in some of the wealthiest nations. For instance, the total household debts in both South Korea and the United States have peaked at $1.22 trillion (Bank of Korea, 2017) and $12.7 trillion (Federal Reserve Bank of New York, 2017), respectively, triggering a potential threat to their financial well-being (e.g., credit delinquencies and private bankruptcies). This presentation addresses this critical issue by focusing on the psychological biases that may play a part in one's debt repayment decisions. Specifically, the current research addresses the mechanisms that lead to *debt account aversion* (DAA), a bias describing an individual with an irrational tendency to repay small debts more quickly than larger debts, even when the latter is connected with higher interest rates (Amar et al., 2011).

How an individual manages her or his debt repayment plans has been investigated in only a handful of studies. In 2006, Leung found that mathematical competence, which is presumed to underlie an understanding of how interest compounds over time, differed across countries. An earlier study suggested potential differences across gender, given that males were found to be higher in mathematical problem solving than females (Hyde, Fennema, & Lamon, 1990). Most recently, financial literacy and numeracy were found to be reliably correlated with debt management competency -- participants higher on financial knowledge and numerical skill were more likely to be free from DAA and were left with relatively lower overall debts when playing a debt management game (Kim et al., 2017; Park et al., 2017).

A series of studies will be presented with empirical evidences, which examined (a) debt management competencies, by asking whether South Korean and U.S. college students can make financially optimal or *non*-optimal decisions on debt repayment (e.g., debt account aversive behavior) and (b) the effects of interventions on debt management competency.

Study 1 recruited 198 Korean and 168 U.S. undergraduates and asked them to play a debt management game where participants were given a fixed-income and occasional bonuses that could be used to pay off six debts differing in interest rates and amounts across 25 rounds. Results showed that regardless of country, participants tended to close small debts more quickly than those with higher interest rates (i.e., debt account aversion). This strategy led to mean total debts of both S. Korean ($37,362) and U.S. ($41,516) groups that were significantly greater than the mean total debt of a normatively defined financially optimal player (FOP, $29,428) who would instead prioritize the repayment of debt with the highest interest first. The observed differences are attributed to a lack of financial knowledge that was found to be negatively correlated with total debt among college students in both countries. Also, U.S. participants performed better in total debt when they scored higher on financial literacy as well as its metacognitive sensitivity. The results imply that improved financial literacy would help prevent individuals from making non-optimal decisions related to cognitive biases such as DAA on financial matters.

Study 2 testified debt management competencies of those who are trained as financial specialists vs. those majoring in business among South Korean undergraduates: business-major and financial engineering-major (FE-major) students. A hypothetically defined financially optimal player (FOP) would finish the debt repayment task with $29,428 in total debt. The results showed (a) mean total debts of both business-major ($38,103) and FE-major ($33,029) groups were greater than the total debt of FOP (i.e., $29,428) and (b) the business-major group was reliably less optimal than FE-major in total debt.

Study 3 explored how to improve debt management competency by presenting two different types of information (Prospective and Retrospective interest amount accumulated over time) to the participants. The results showed that neither business-major nor FE-major students' total debts in the experimental conditions were improved when compared with those in the control conditions. Although providing financial information of how much interest would be accumulated/occur may alert people to behave with some caution, the two strategies did not fundamentally and sufficiently help college students improve their debt management competency (DMC). The results suggest that it is very imperative for college students to learn and acquire specific knowledge of how to make a decision under debt situation with multiple debts and what would be proper behaviors under debt situation.

Study 4 examined the effect of a newly developed Debt Management Competency Reinforcement (DMCR) Education platform (Kim & Kim, 2018) on the debt management competency of South Korean college students. The results noted that (a) when not educated, DMCs of Control (88.37% out of a maximum 100% FOP performance level) and Education (experimental, 87.51%) groups showed the same pattern as *Non*-FOP, (b) after the DMCR education was applied though, Education group's DMC showed a significant increase close to FOP (99.34% of 100%), and (c) the DMCR Education effect has lasted for one week, maintaining Education group's DMC level (99.68%) close to FOP (100%) even with different debt scenario, which demonstrates the stability and effectiveness of the DMCR education in improving the DMCs of the South Korean college students.

Social and economic implications from the present results will be discussed in light of social justice and equality.