

EMERGING ADULTS' FINANCIAL RESPONSIBILITY AND SELF-CONFIDENCE AS  
PREDICTORS OF INCOME

by

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## **Abstract**

Many individuals in their teens and twenties believe achieving financial self-sufficiency is an important part of becoming an adult (Arnett, 2000); yet the research on this topic is very limited. The level of general responsibility a young adult obtains is related to their general level of self-confidence (e.g., Shim, Serido, Bosch & Tang, 2013). However, the relationship between financial responsibility and self-confidence is currently unknown. Additionally, the relationship between self-confidence and annual income among young adults is largely unknown. This is the first study to advance current knowledge with a large ( $N = 474$ ) and longitudinal dataset of emerging adults. The goal of this study is to test the underlying process that may explain variation of annual income among emerging adults from the Transition to Adulthood Supplement, a subset of the Panel Study of Income Dynamics (PSID). The study used a structural equation model (SEM) to test three waves of data across four years. Results from the SEM analysis demonstrated that higher levels of financial responsibility were associated with higher levels of self-confidence two years later. Additionally, the findings showed that higher levels of self-confidence were associated with higher levels of annual income after an additional two years. The results suggest the importance of building financial responsibility and self-confidence in emerging young adults.

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## Chapter 1 - Introduction

Independently earning a living and becoming self-sufficient financially is an important part of moving from adolescence to adulthood (Andrew, Eggerling-Boeck, Sandefur, & Smith, 2007). The investments young people make in their early years can help or hinder their future financial well-being. Learning how to be financially responsible is an important part of building skills and behaviors early on that can positively influence a person's future financial life.

However, little research currently exists about the underlying processes associated with more positive financial outcomes for young adults; there are important questions that have not yet been answered in previous studies. How can young adults invest in themselves in their younger lives to find rewards of higher income down the road? Are financial responsibility and self-confidence linked to higher annual income? Young adults report becoming financially responsible as one of the most influential factors in determining if adulthood is reached (Arnett, 2000). Research has shown the importance of financial responsibility in the transitioning of adolescents becoming adults, so why does little research exist on this process?

The purpose of this paper is to explore a developmental process across four years, using three time points, to increase understanding of emerging adults' financial status. Specifically, an indirect effect will be tested from financial responsibility during high school to predict self-confidence two years later, and then to test if self-confidence can predict annual income after an additional two years into the future. The present study will answer the following questions: (a) does financial responsibility predict future self-confidence; (b) does self-confidence predict income; and (c) does self-confidence mediate the relationship between financial responsibility and annual income. These research questions will be tested using longitudinal data from the Transition to Adulthood Supplement, a subset from the larger study, Panel Study of Economic Dynamics (PSID). This is the first study to advance current knowledge with a large and longitudinal dataset of emerging adults. The goal of this study is to test the underlying process that may explain variation of annual income among emerging adults.



## **Chapter 2 - Literature Review**

### **Theoretical Framework**

Human capital may broadly be defined as those characteristics or skills that make up an individual's ability to produce economic value, including education, intelligence, personality, creativity, experience, entrepreneurial spirit, and physical ability. A central argument of human capital theory is that individuals invest in themselves with the goal of improving future well-being (Becker, 1962). Fundamentally, this investment decision is no different than a decision to invest in other market assets (e.g., an equity security), and the decision tends to depend on expected costs of the investment relative to the expected future benefits.

The idea of investing in human capital refers to incorporating new or additional resources into a person's life through education, experience, or on the job training (Becker, 1962). When individuals invest in themselves it can open up more opportunities and choices that may otherwise have been unavailable (Schultz, 1961). Although there may be some costs associated with these investments, human capital is expected to increase overtime (Schultz, 1961). Human capital theory proposes that those investments that are most difficult (costly) should yield greatest future benefits (Becker, 1962).

Earlier economic analyses placed more emphasis on physical assets (i.e., tangible), but human capital theory diverges from this emphasis and incorporates intangible aspects, such as knowledge (Becker, 1962). More recent contributions to human capital theory have included the notion of "psychological capital," which is believed to have an impact on individual productivity based on personality traits (Goldsmith, Veum, & Darity, 1997). Psychological capital emphasizes the role of individual personality traits, such as self-perception or self-confidence, in assessing productivity (Goldsmith et al., 1997). Psychological capital is composed of aspects that are acquired through experience, as well as innate characteristics that may be more deeply rooted.

Human capital theory suggests that investments in certain skills and knowledge may have a positive impact on future productivity and financial wealth. This study has adopted human capital theory as a way to conceptualize the developmental process across time of financial status. It does this by examining the underlying process of financial responsibility in the late-teen

years, predicting self-confidence shortly after high school, to predict annual income in emerging adulthood years. For individuals' transitioning from adolescence to young adulthood, it is a critical time for them to invest in themselves and in their future. Without doing so, they may have a more difficult time making the transition into full adulthood.

Individuals may invest in human capital in a number of ways with education being one of the most obvious methods available (Schultz, 1961). Alternatively, individuals may improve human capital by gaining experience in certain activities. Individuals who develop good financial habits at an early age are investing in human capital via an investment in specific experiences. Financial responsibility skills and knowledge are psychological capital that can be used to increase human capital, which in turn may lead to rewards such as increased self-confidence.

Self-confidence is a consequence of many factors. One proposed factor relevant to this study is that self-confidence can come from managing money well (i.e., having higher financial responsibility). Therefore, a transitioning young adult's investment in financial responsibility will likely produce an increase in self-confidence in the future. Additionally, the branch of human capital theory referred to as "psychological capital" suggests that self-esteem can be gained from participation in different activities that promote knowledge (Goldsmith, et al., 1997). Thus it is possible that activities which show an increase in financial responsibility (e.g., paying own rent, earning own income, and managing own money) may subsequently influence an individual's level of self-confidence.

Theoretically, growing self-confidence may be related to a willingness to invest in one's self, which in turn impacts future income prospects. This idea is supported by human capital theory, as it suggests if there is a rise in human and psychological capital, there should be a commensurate rise in earnings (Schultz, 1961). Also, human capital theory suggests that productivity is primarily influenced by a person's human capital (Goldsmith, et al., 1997). This amount of productivity is likely to increase an emerging adult's ability to find a job and receive a higher annual income. When looking at this study through the lens of human capital theory there are two primary benefits. First it explores the likelihood that higher knowledge improves financial decisions and leads to better outcomes. Secondly, in line with human capital theory, this study suggests higher confidence improves chances that action will be taken.

## **Development across Emerging Adulthood**

As described by Arnett (2000), emerging adulthood is a transition time between approximately ages 18 to 25. The years from the late teens through the mid-twenties are often of significant transformation for many young people. At this time they may be leaving their childhood home for the first time and may be seeking additional formal education or entering the workforce (Arnett, 2000, Shim, et al., 2013). Despite the direction they take after high school, most young adults will take on more general personal responsibility (Shim, et al., 2013). According to Arnett (2000), many individuals in emerging adulthood feel they are in between adolescence and adulthood, seeing themselves as not fully in one category or the other. For example, individuals have indicated as adolescents they had their parents to take care of the financial responsibility aspects, and as emerging adults, it was then time for them to start taking on a level of this financial responsibility (Andrew, et al., 2007; Shim, Xiao, Barber & Lyons, 2009). Additionally, young adults have reported a need for financial responsibility to feel like they are truly an adult (Arnett, 2001). It can be assumed that those with a higher level of financial responsibility in the late-teen years may have an advantage over others as they enter emerging adulthood years.

Responsibility and independence were two of the top three most important aspects of becoming an adult as reported by emerging adults (Andrew, et al., 2007). More specifically, the participants indicated if a person did not possess a certain level of financial responsibility, they were not considered an adult (Andrew, et al., 2007). Indicators of financial responsibility identified by the participants were: (a) paying their own rent, (b) making car payments, (c) living alone, and (d) keeping track of bills (Andrew, et al., 2007).

Whereas financial responsibility has been shown to be an important aspect in the transition into adulthood, this can be seen as an investment in one's self to produce future assets and rewards such as increased self-confidence and higher levels of income. Bénabou and Tirole (2002) identified self-confidence as a "valuable individual asset" in most societies and a necessary part of becoming an adult. For many young adults, the idea of earning income and making their own living is a desired goal, and viewed favorably as a milestone in moving towards adulthood (Andrew, et al., 2007).

## **Financial Responsibility and Self-Confidence**

When investing in one's self at the present, in hopes that there will be rewards in the near or distant future, it can be difficult to know where to start. This study proposes that more financially responsible behaviors in high school will predict higher scores in self-confidence after high school. Unfortunately, no published research has specifically examined the relationship between financial responsibility and self-confidence. However, a number of studies have identified links that make this proposed relationship plausible.

For the purposes of this study, financial responsibility is defined as a person taking responsibility for (a) paying their own rent, (b) making their own money, and (c) managing their own money. In the current literature, clear distinctions between financial responsibility and financial independence are not well defined. Therefore, because of the limited research on this topic, and the similarity in the underlying constructs of financial responsibility and financial independence, literature from both these areas was reviewed. Similarly, the term "self-confidence" is used interchangeably with other terms (i.e. self-efficacy and self-esteem) throughout the existing literature, yet these terms are not well defined. For the purposes of this study the construct of self-confidence is defined as how much a person is confident in their general abilities compared to other people. Thus, literature using the words self-confidence, self-efficacy, and self-esteem were all reviewed.

A study looking at adulthood attributes found individuals believed financial independence and general responsibility were important parts of becoming an adult (Scheer, Unger, & Brown, 1996). The study also found those who believed they had reached adulthood were more self-confident than those who did not feel they were full adults. Bénabou and Tirole (2002) further identified the motivation to partake in financially responsible behaviors was associated with self-confidence. Higher motivation to have financially responsible behaviors was linked with higher scores of self-confidence.

Lee and Mortimer's (2009) research regarding the association between self-efficacy and financial independence also provided some helpful insights. A longitudinal study was conducted with seniors in high school with follow-up data when participants were 23 to 24 years of age. Self-efficacy measured in high school was found to have a positive relationship with financial independence measured on the same individuals at 23 to 24 years of age (Lee & Mortimer, 2009).

## **Self-Confidence and Annual Income**

When looking at self-confidence and annual income from a human capital perspective, it is plausible that emerging adults with higher psychological capital, including self-confidence, would tend to have higher annual income in the future. Although past research on self-confidence and annual income is sparse, the existing research seems to form a consensus that these two variables are positively and significantly associated (Drago, 2011; Goldsmith, et al., 2001; Waddell, 2006). Many of the previous studies have, however, used data from the 1980's, whereas the present study hopes to find positive and significant associations between the same variables among young adults during the mid and late 2000's.

Drago (2011) studied the association between self-esteem and earnings. Self-esteem was shown to have an effect on wages among white men, both seven and eight years after self-esteem was initially measured in 1980 (Drago, 2011). Similarly, in a study on low self-esteem impacting labor market outcomes, Waddell (2006) found a relationship between low self-esteem in adolescence and lower income earnings as a young adult.

The association between self-confidence and annual income was furthered studied by Goldsmith and colleagues (2001). In this particular study, they looked at the relationship between self-esteem and income among individuals ages 14-21. A direct effect was found between self-esteem and a person's wages (Goldsmith, et al., 2001). It was shown in this study that the two variables were positively associated, meaning as self-esteem increased, earnings tended to increase. More specifically, when there was a 10% increase in self-esteem scores, this was associated with a 4.8% increase in real wages. Additionally, the study found those with lower wages reported having a significant lower level of self-esteem (Goldsmith, et al., 2001). Taken together, these findings suggest there is a relationship between self-confidence and annual income among young adults.

## **Control Variables**

To account for extraneous variation due to known effects on the outcome variables of young adults' annual income and self-confidence, a number of relevant control variables will be adjusted for in the present study. The study will control for the effects of: (a) gender, (b) age, (c) race, (d) marital status, (e) number of children, (f) education level, (g) average hours worked per week, and (h) whether or not these emerging adults lived at home or elsewhere during the fall, spring, and summer seasons. Self-confidence in emerging adulthood has been shown to differ by

gender, where males tend to report higher self-esteem than females (Goldsmith, et al., 2001). Age has been linked with self-confidence, where self-confidence tends to be higher with age (Drago, 2011). Race has been shown to differ in terms of self-confidence, with White participants' reporting higher levels of self-esteem than Black participants (Goldsmith, et al., 2001). Self-confidence has been shown to differ by marital status, with those who are married describing significantly higher levels of self-confidence than single participants. Additionally, those with young children vary in self-confidence (Goldsmith, et al., 2001). It has been shown that years of education has an impact on self-confidence. Individuals with more years of schooling tend to have higher self-esteem scores (Drago, 2011). A link has been shown between young adults living at home and changes in self-confidence (Galambos, Barker, & Krahn, 2006).

In regards to annual income, gender has been shown to differ; annual earnings for young adult females were lower at every education level in comparison with young adult males (U. S. Department of Education, National Center for Education Statistics, 2012). Studies have shown that as age increases, annual income also tends to increase (Sironi & Furstenberg, 2012). Observable differences by race/ethnicity have been shown significant differences in regards to annual income (U.S. Department of Education, National Center for Education Statistics, 2012). Findings have reported married men earn more income than single men (Pollmann-Schult, 2011). Annual income has been shown to have a relationship with having children (DeNavas-Walt, Proctor, Smith, 2010). Prior research has demonstrated an association between yearly earnings and highest level of education. Higher median earnings were associated with higher levels of educational attainment (U.S. Department of Education, National Center for Education Statistics, 2012). Higher incomes have been reported among those who had a college degree compared to those who did not (Aizcorbe, Kennickell & Moore, 2003). Studies have shown that individuals who return home or did not leave their parents' home after high school tend to have lower income (Settersten & Ray, 2010).

## Chapter 3 - Method

### Present Study

The goal of the present study is to examine whether financial responsibility will predict self-confidence, and whether self-confidence can predict higher income. This will be tested using data from three time points, starting when participants were 17 to 18 years old, as assessed in 2005, with follow up data on these same participants in 2007 and 2009. Financial responsibility was assessed in 2005 (Time 1), as were all the control variables. Self-confidence was assessed two years later in 2007 (Time 2), and annual income was assessed in 2009 (Time 3). These proposed longitudinal relationships were tested while controlling for gender, age, race, marital status, number of children, education level, and whether or not these emerging adults lived at home or elsewhere during the fall, spring, and summer seasons. Based on previously reviewed theory on earlier research findings, it is hypothesized that:

*Hypothesis 1.* Higher scores on reported financial responsibility at Time 1 will be significantly associated with higher scores on self-confidence at Time 2, while holding controls constant.

*Hypothesis 2:* Higher scores on reported self-confidence at Time 2 will be significantly associated with higher reported annual income at Time 3, while holding controls constant.

*Hypothesis 3:* Self-confidence at Time 2 will mediate the relationship between financial responsibility at Time 1 and annual income at Time 3, while holding controls constant.

### Procedure

The Panel Study of Income Dynamics (PSID) was conducted between 1968 and 1997 as a study that represented socioeconomic and health across the nation over lifetimes and generations. One person from each family was interviewed by telephone annually between 1968 and 1997 (Morgan & Smith, 1968). Upon the completion of the 1997 interview, subsequent interviews have taken place every other year. During each interview, information is collected about all family members, such as employment, income, wealth, expenditures, health, education, marriage, childbearing, philanthropy, and numerous other financially relevant topics. In 1997 the Child Development Supplements (CDS) began, using children ages 0-12 from the main PSID families (Hofferth, Davis-Kean, Davis & Finkelstein, 1997). A variety of information was

obtained, such as: physical health, emotional well-being, intellectual and academic achievement, cognitive ability, social relationships with family and peers, and time diaries. In 2002/2003 and 2007/2008, information was again collected for those children under 18 years of age (Institute for Social Research, 2007).

In 2005, the Transition into Adulthood Supplement (TA) was first administered. Information was obtained from interviewing older individuals from the CDS cohort (Institute for Social Research, 2005). The TA interview collected information, such as: (a) measures of time use, (b) psychological functioning, (c) marriage, (d) family, (e) responsibilities, (f) employment and income, (g) education and career goals, (h) health, (i) social environment, (j) religiosity, and (k) outlook on life.

The present study used longitudinal data from the Transition to Adulthood Supplement conducted in four waves in 2005, 2007, 2009, and 2011. The Transition into Adulthood Supplement sample consisted of ( $N = 1,703$ ) emerging adults. Data were obtained through telephone interviews conducted at four times: in 2005, 2007, 2009, and 2011. This study examined the transition into adulthood among individuals who were married, never married, widowed, divorced, or separated. The primary study also included individuals who had children, or those that did not have children across the three waves. From the main sample (i.e.,  $N = 2,155$ ), the cases in the current study were restricted to only individuals ages 17 to 18 ( $n = 474$ ) as assessed at Wave 1.

Demographic information and descriptives for all study variables are summarized in Table 1. Just over half of the sample was female (53.8%), whereas 46.2% were male. The mean age at Time 1 was 17.55 ( $SD = .489$ ). Both men and women completed an average of 10.60 years of schooling (i.e., the 11<sup>h</sup> grade) at Time 1. The majority of the sample identified as White (54.9%) and roughly 45.1% indicated being of another race.

Missing data were handled using full information maximum likelihood (FIML) to test predicted relationships among theoretical constructs. Parameter estimates from FIML provide less biased parameter estimates than ad hoc procedures such as listwise deletion, pairwise deletion, or means imputation (Acock, 2005).



## **Measures**

### ***Financial Responsibility***

Financial responsibility was assessed as a latent variable with three indicators that were each single question items. The three indicators included: (a) “How much responsibility do you currently take for earning your own living?”; (b) “How much responsibility do you currently take for paying your own bills?”; and (c) “How much responsibility do you currently take for managing your own money?”. The responses from each single item consisted of: 1 = *somebody else does this for me all of the time*; 2 = *somebody else does this for me most of the time*; 3 = *I do this half of the time*; 4 = *I do this most of the time*; or 5 = *I am completely responsible for this all of the time*.

### ***Self-Confidence***

To assess for self-confidence, a single item was used. The item asked participants “Compared to other people, how would you rate your self-confidence?” The responses for this item ranged from 1 = *a lot worse than other people* to 7 = *a lot better than other people*.

### ***Annual Income***

Annual income was assessed by looking at yearly earnings at Time 3 from each job the participant held in 2009. The participants were asked a single question to identify the total dollar amount of yearly earnings from all jobs in 2009.

## **Analytic Plan**

Data was first explored through descriptive statistics. All assumptions of SEM were tested and verified prior to running analyses. Bivariate correlation analyses were conducted among all model and control variables across the three time points. These preliminary analyses were completed in SPSS Version 19 (IBM Corporation, 2010). AMOS was used to conduct the longitudinal SEM. To fit the predictive relations among these constructs, a model was tested in which 17 to 18 year old participants’ financial responsibility at Time 1 would predict self-confidence at Time 2, and self-confidence at Time 2 would predict annual income at Time 3, among the emerging adults in this study. Time-invariant control variables used in this analysis were: age, gender, and race, all measured at Time 1. Time-varying control variables included:

marital status, number of children, highest education level, fall/winter residence, summer residence, and average weekly work hours; all measured at Time 1 and Time 2.

Results from the SEM included direct effects and indirect effects (see Figure 1). Good model fit was interpreted when the chi-square for model fit was non-significant, the Bentler comparative fit index (CFI) was greater than .95, and the root mean square error of approximation (RMSEA) was less than .05 (Hu & Bentler, 1999). A Sobel (1982) test was used to test the significance of the indirect effect in the model. A Sobel test is a z test that is obtained by assessing the strength of the indirect effect, relative to the size of the standard error of the indirect effect.

## Chapter 4 - Results

### Descriptive Results

Table 1 shows the mean, standard deviation, and range for sample variables. The sample seemed be fairly financial responsible, as evidenced by their average indicator scores on responsibility for earning their own living ( $M = 3.33$ ), paying their own bills ( $M = 3.16$ ), and managing their own money ( $M = 4.28$ ) on a scale from 1 to 5. This sample tended to have high self-confidence, as displayed by their average confidence score of 5.83 on a scale of 1 to 7. The average income of a 21-22 year olds in 2009 was a relatively low \$11,589.39, but varied widely among participants.

Table 2 shows the correlations among the latent variable financial responsibility, and the measured variables of confidence and annual income. Zero-order correlations between the primary variables of interest follow two of the three hypothesized patterns of association. Financial responsibility at Time 1 was significantly associated with self-confidence at Time 2 ( $r = .17, p < .05$ ), where higher scores on financial responsibility were associated with higher scores of self-confidence. The relationship between self-confidence at Time 2 with annual income at Time 3 was significant ( $r = .26, p < .01$ ), indicating higher scores of self-confidence were associated with higher levels of annual income. Financial responsibility at Time 1 and annual income at Time 3, however, were not significantly associated.

### Structural Equation Model Results

A structural equation model (SEM) was used to test the primary research questions regarding relationships among financial responsibility measured as a latent variable (Time 1), self-confidence (Time 2), and annual income (Time 3), while holding time-invariant and time-varying controls constant. The SEM was specified where financial responsibility predicted self-confidence, self-confidence predicted annual income, and financial responsibility indirectly predicted annual income (See Figure 1). This predictive model was tested with the time-invariant controls of gender, race, and age assessed at Time 1, while also including the time-invariant control variables of marital status, number of children, highest education level, fall/winter residence, summer residence, and work hours assessed at Time 1 and Time 2. Inclusion of these

control variables increased confidence that these proposed relationships are not simply artifacts of these third variables, but rather that these proposed associations exist above and beyond the effects of the controls. Both endogenous or outcome variables (i.e., confidence and annual income) were regressed onto each of these control variables. Model fit to the data was acceptable according to the standards set by Hu and Bentler (1999):  $\chi^2(40) = 52.92, p = .08$ ; CFI = .99; and RMSEA = .03 (CI = .00, .04).

Table 3 provides the summary of parameter estimates from the SEM. First, financial responsibility at Time 1 significantly predicted self-confidence at Time 2, while controlling for all covariates ( $\beta = .15, p < .05$ ). Second, the path from self-confidence at Time 2 to annual income at Time 3 was significant ( $\beta = .21, b = 1985.60, p < .05$ ). In other words, a one unit increase in self-confidence predicted an annual income increase of \$1,985.60 two years later. Third, the direct effect from financial responsibility at Time 1 to annual income at Time 3 was not significant.

In addition to the hypothesized predicted paths of interest, several control variables significantly predicted self-confidence and annual income. A dummy coded race variable at Time 1 significantly predicted self-confidence at Time 2 ( $\beta = -.34, p < .001$ ), indicating White participants had significantly lower scores on self-confidence than all other races. Also, having at least one child at Time 1 significantly predicted higher scores on self-confidence at Time 2 ( $\beta = .10, p < .05$ ). Next, there was a significant direct pathway from having at least one child at Time 2 to annual income at Time 3 ( $\beta = .53, p < .001$ ). Lastly, summer residence at Time 2 significantly predicted annual income at Time 3 ( $\beta = .32, p < .01$ ). Those who did not live with their parents during the summer were more likely to make a higher annual income than those who lived with their parents over the summer. All other specified direct effects from control variables to self-confidence or annual income were not significant.

In addition to the direct effects in this model, the indirect effect was also tested to determine if self-confidence mediated the relationship between financial responsibility and annual income. Self-confidence at Time 2 did not significantly mediate the effect from financial responsibility at Time 1 to annual income at Time 3. The Sobel (1982) test was non-significant for the indirect effect from financial responsibility to self-confidence to annual income ( $z = 1.46, p > .05$ ). Financial responsibility and the control variables accounted for 18% of the variance in

self-confidence. Financial responsibility, self-confidence and the control variables accounted for 50% of the variance in annual income.

## Chapter 5 - Discussion

This study examined the relationships between emerging adults' financial responsibility, self-confidence, and annual income across four years. Past literature has shown that many emerging adults strive to earn their own income and make their own living because they view these as positive landmarks on their journey towards adulthood (Andrew et al., 2007). The present study focused on identifying predictors and mechanisms associated with higher income in early adulthood. These findings provide important insight into what drives self-confidence and level of income among emerging young adults. Thus, what an individual does to invest in themselves in their early life can have significant effects on their future financial life.

The findings from the present study support *Hypothesis 1*: higher scores on reported financial responsibility at Time 1 will be significantly associated with higher scores on self-confidence at Time 2, while holding controls constant. The findings in the present study, in regards to a direct effect between financial responsibility and self-confidence, were similar to previous literature. For example, others have found that more motivation to have financially responsible behaviors was linked with higher scores of self-confidence (Bénabou & Tirole, 2002). Additionally, it has been reported that self-efficacy measured in high school had a positive relationship with financial independence when the individuals were 23 to 24 years of age (Lee & Mortimer, 2009). Although previous literature has shown a positive association between the two constructs, the present study builds on previous literature by identifying a specific longitudinal relationship between financial responsibility and self-confidence in a large, national sample.

When taking into account the present study and previous literature, the importance of helping young people become financially responsible comes to the forefront. When adolescents are still under the supervision of a primary caregiver, it can be helpful for them to begin to invest in their future by taking on more financial responsibility. They can learn from their primary caregiver important information about becoming successful in their future financial lives. The opposite may also be true; there is the possibility that these adolescents could learn negative financial behaviors. Additionally, according to the branch of human capital theory referred to as “psychological capital,” self-confidence can be gained from participation in different activities

promoting knowledge, such as knowledge of financial responsible activities and behaviors (Goldsmith et al., 1997). Results from the present study seems to suggest that taking on financial responsibility in adolescence may help these individuals gain knowledge about positive financial behaviors, which can be seen as investing in their financial future.

It seems that learning how to be financially responsible during the late teen years can help individuals gain understanding of the kind of decisions and behaviors they will need when they are beginning to live on their own. Not only will this enhance their financial responsibility and independence, but also higher level of financial responsibility predicts higher levels of self-confidence. Perhaps those who are more financially responsible early on do not get into financial messes, and this may lead to higher confidence. Additionally, it may be true that those with higher financial responsibility save more money and then have higher confidence because they are more independent, have less debt, and a larger savings account. It seems to be important for adolescents' future self-confidence that they had learned a certain level of positive financial behaviors when they were still living with their parents or guardians. Regardless of the reasons financial responsibility promote higher levels of self-confidence; this study supports the importance of adolescents taking on financial responsibility before they begin the transition into adulthood. Not only will self-confidence increase with higher levels of financial responsibility, these financial behaviors learned in adolescence can be carried on when the emerging adults have left home and are living on their own.

Support was also garnered for *Hypothesis 2* which stated; higher scores on reported self-confidence at Time 2 will be significantly associated with higher reported annual income at Time 3, while holding controls constant. Previous literature on self-confidence and annual income is consistent with the present study's findings. Self-esteem has been shown to have an effect on wages among white men, both seven and eight years after self-esteem was initially measured (Drago, 2011). However, this data is over 30 years old and needs to be replicated. As described in previous literature, there has been relationship found between low self-esteem in adolescence and lower income earnings as a young adult has emerged into adulthood (Waddell, 2006). More specifically, Goldsmith and colleagues (2001) found a direct effect between self-esteem and a person's wages among individuals ages 14-21.

The findings of the present study can be further explained by human capital theory. The level of self-confidence a person has is associated with their level of psychological capital, which

is an integral part in developing human capital (Goldsmith et al., 1997). According to Schultz (1961), the rise of human and psychological capital should correspond with the rise in an individual's earnings. Additionally, human capital theory suggests that a person's productivity will likely increase an emerging adult's abilities to find employment that is satisfactory to their desires and likely give them the opportunity to produce higher amounts of annual income (Goldsmith et al., 1997).

Based on the current study's findings, past literature, and theory, it seems the development of self-confidence is directly related to the likelihood that action will be taken, such as how a person will handle the process of looking for and accepting employment that will lead to a desired level of income. As individuals increase their self-confidence they may be more motivated and able to seek out employment opportunities that fit with their education and prior experiences. Additionally, this increased level of self-confidence may help the emerging adult perform better during an interview process and present related experiences and education that they had sought to invest in their future. This motivation and level of human and psychological capital can then provide a level of opportunity for the young adult to accept employment that yield in higher annual income returns.

The present study failed to produce findings consistent with *Hypothesis 3*: self-confidence at Time 2 will mediate the relationship between financial responsibility at Time 1 and annual income at Time 3, while holding controls constant. While direct effects were found between financial responsibility and self-confidence as well as between self-confidence and annual income, the indirect relationship between financial responsibility and annual income, with self-confidence as a mediator, did not produce significant results. One explanation is that the sample size was not large enough to detect this relatively small effect size of the indirect effect.

### **Limitations**

Several limitations of the present study should be noted. The first limitation is in regards to age of the individuals. Age of the participants at Time 1 does not include information on participants' development of financial responsibility throughout all of high school; only information from those who were 17-18 years old was used. This age group was used to access those in their last years at home, prior to moving away. Another limitation associated with age was the time at which Time 3 data was obtained. Although three waves of data collection over



four years are informative, more waves of data during later time periods would be beneficial. For example, Time 3 information was gathered from individuals who were 21-22 years of age. It may be helpful to follow-up when these individuals are 30 years old and more established in their careers as opposed to still being in college or just starting out in their careers. The exclusion of college majors and current employment types are additional limitations to this study. Also, the SEM that was used in this study has a limitation of being correlationally based, thus assumptions about causality cannot be made. In terms of measurement precision, one-item measures are a weakness of this study. Single-items were used to assess both self-confidence and annual income.

### **Implications**

Notwithstanding the limitations outlined, the present study has important implications for intervention as well as future research of emerging adults' financial status. First, this study demonstrates a positive relationship between financial responsibility in late adolescence and self-confidence in emerging adulthood. The results suggest that an individual who exhibits a higher level of financial responsibility when they are at the age most adolescents are still living in their parents' home, that they may have higher levels of self-confidence when they have reached the age where they are likely living on their own. Thus, this indicates the importance of providing adolescents the opportunities to begin taking financial responsibility before they launch instead of waiting to learn these skills and behaviors once they are on their own. Second, the findings of the present study suggest that higher levels of self-confidence in emerging adulthood are associated with higher levels of income. While these individuals may not be at the point in their lives where they hold jobs that they would consider part of their career (i.e., part-time or temporary jobs), this association can reasonably be interpreted as high levels of self-confidence influencing how well emerging adults perform on applications, job interviews, trainings, and on the job. Thus, if emerging adults with lower levels of self-confidence seek help in gaining an overall level of confidence in themselves, it may result in better income potential.

This study advances the knowledge of the process emerging adults go through in improving their financial lives. There are implications from this study that can directly relate to the work of therapists, financial therapists, educators, researchers, parents, and others who may be working with or studying the emerging adult population. The information obtained by the

current study can help practitioners working with individuals and families see the value of creating space for adolescents to gain experiences of financial responsibility while they are still under the care of their parents. Similarly, the results of this study can be used to promote self-confidence by both sharing it may be influenced by financial responsibility and it can influence annual income.

In future studies, researchers might also consider obtaining information from the parents of the adolescents and emerging adults such as data about their own and their child's financial behaviors in order to better study how financial responsibility is formed in adolescence. Additionally, it could be helpful to know about credit card debt, student loan debt, and other areas of debt the emerging adults hold and their behaviors associated with debt. Also, as mentioned previously, it could be beneficial for future research to add later time points to examine the status of emerging adults when they have reached full adulthood and are more established in their careers and family life.

## **Conclusion**

The present study advances knowledge about emerging adults' income earnings by providing empirical support for the view that one's financial responsibility is associated with their self-confidence earlier on in their lives, which is then associated with future earning outcomes. While an indirect path way connecting financial responsibility to self-confidence to annual income was not found to be statically significant, direct pathways between financial responsibility and self-confidence as well as between self-confidence and annual income were identified. Many individuals believe when moving from adolescence to adulthood, independently earning a living and becoming self-sufficient financially are priorities in a successful transition (Andrew, Eggerling-Boeck, Sandefur, & Smith, 2007). The findings of the present study support previous research and enhance current research in the area of emerging adults' financial status. Thus, financial responsibility gained at home may pay meaningful dividends in self-confidence when emerging adults move out of the home. As emerging adults feel more confident in themselves, they are more likely to provide a higher standard of living financially for themselves and perhaps a future family.

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## Appendix A - Tables

**Table A.1 Study of Income Dynamics (PSID) Subset, Transition to Adulthood Supplement  
Descriptive Statistics (N =474)**

Variables	<i>M/%</i>	<i>SD</i>	Range
Make Own Living	3.33	1.12	1 – 5
Pay Own Bills	3.16	1.68	1 – 5
Manage Own Money	4.28	0.98	1 – 5
Self-Confidence	5.83	1.14	1 – 7
Annual Income	\$11,589.39	\$9,595.77	\$350 – 48,500
Controls (all at Time 1)			
Age	17.55	0.50	16 – 18
Gender			
Male	46.2%		
Female	53.8%		
Marital Status			
Single	97.9%		
Married	2.1%		
Children			
No Children	90.0%		
Children	10.0%		
Highest Education	11.10	0.972	8 – 15
Race			
White	54.9%		
Other	45.1%		
Fall/winter residence			
In parent home	76.1%		
Not in parent home	23.9%		
Summer residence			
In parent home	83.2%		
Not in parent home	16.8%		
Weekly work hours	30.44	15.52	1-100

**Table A.2 Panel Study of Income Dynamics (PSID) subset, Transition to Adulthood  
Supplement: Correlation Statistics (N = 474)**

Variables	1	2	3
1. Financial Responsibility	–		
2. Self-Confidence	.17*	–	
3. Annual Income	.05	.26**	–

\* $p < .05$ . \*\* $p < .01$  (two-tailed)

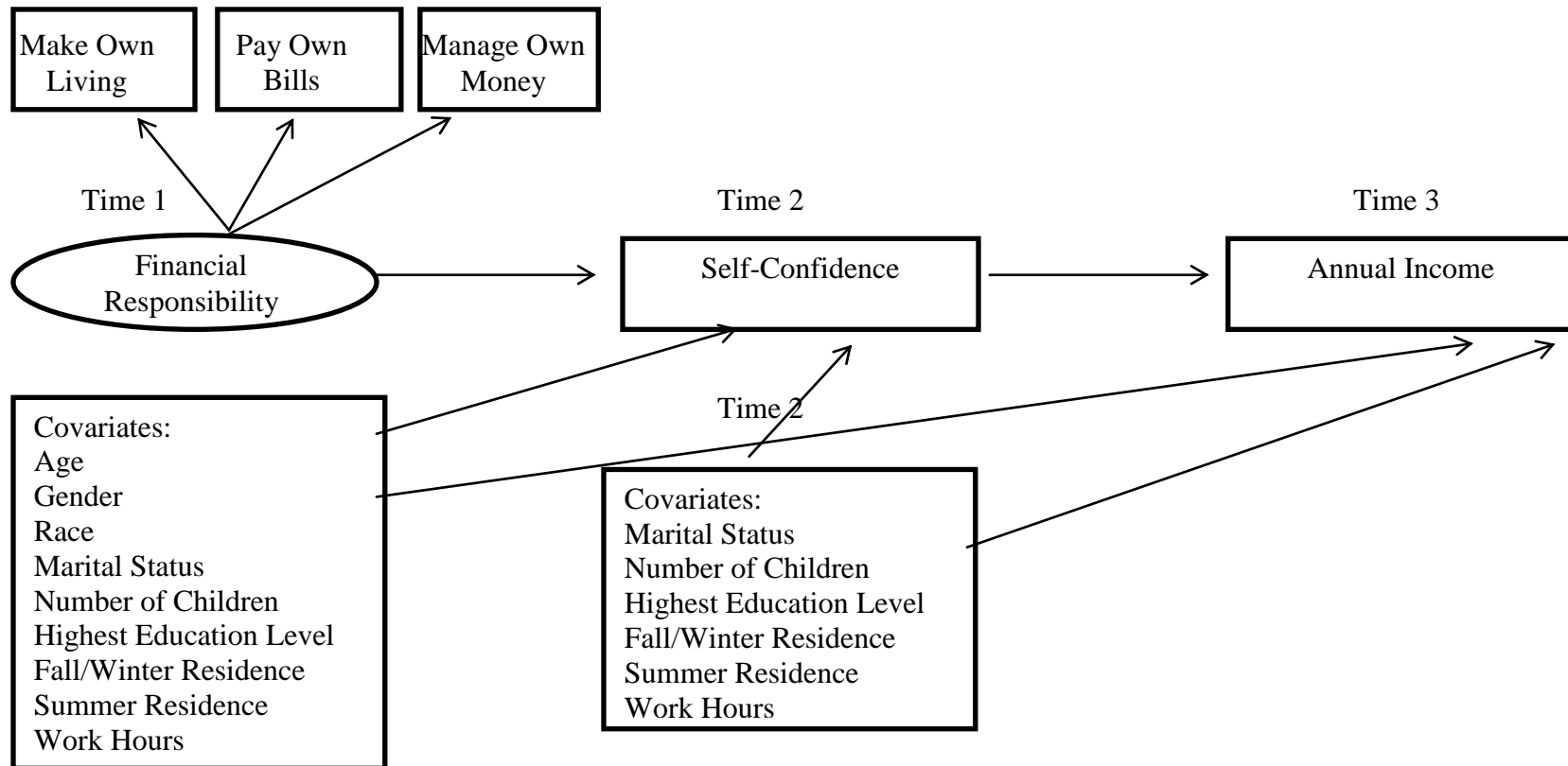
**Table A.3 Summary of SEM for Variables Predicting Young Adults' Self-Confidence and Annual Income (N = 474)**

Variable	Self-Confidence Time 2			Annual Income Time 3		
	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
Financial Responsibility Time 1	0.18	0.10	.15*	-806.52	1870.48	-.07
Age	-0.09	0.13	-.04	2763.73	2125.27	.13
Gender	-0.03	0.	-.01	-472.19	2573.67	-.02
Race	-0.78	0.14	-.34***	4849.59	2569.05	.22
Marital Status Time 1	0.57	0.45	.07	-17758.82	12025.68	-.24
Children Time 1	0.39	0.24	.10*	-6673.34	4566.26	-.19
Highest education Time 1	0.03	0.07	.03	265.49	1393.34	.20**
Fall/winter residence Time 1	-0.16	0.17	-.06	2863.18	2936.62	.12
Summer residence Time 1	0.01	0.24	.01	-1157.61	4961.94	-.04
Work Hours Time 1	0.00	0.01	.01	-96.42	203.07	-.14
Marital Status Time 2				5243.70	5824.45	.14
Children Time 2				11764.28	2451.44	.53***
Highest education Time 2				-257.76	1310.23	-.03
Fall/winter residence Time 2				657.50	898.55	.09
Summer residence Time 2				3790.26	1414.56	.32**
Work Hours Time 2				115.70	84.79	.14
Self-Confidence Time 2				1985.60	834.97	.21*
$R^2$		0.18			0.50	

\* $p < .05$ . \*\* $p < .01$  (one-tailed)

## Appendix B - Figure

**Figure B.1 Structural equation model for financial responsibility, self-confidence, and annual income in 2005, 2007, 2009, respectively. Each of the control variables were measured in 2005 at Wave 1, and self-confidence and annual income were both regressed onto each of the control variables**





## **Appendix C - Measures**

### **How Much Responsibility Earning Own Living**

B5a. As people get older they begin to take more responsibility for themselves. How much responsibility do you currently take for earning your own living? (Would you say: somebody else does this for me all of the time, somebody else does this for me most of the time, I do this half of the time, I do this most of the time, or I am completely responsible for this all of the time?)

- 1 Somebody else does this for me all of the time
- 2 Somebody else does this for me most of the time
- 3 I do this half of the time
- 4 I do this most of the time
- 5 I am completely responsible for this all of the time
- 8 DK
- 9 NA; refused

### **How Much Responsibility For Own Bills**

B5c. How much responsibility do you currently take for paying your bills? (Would you say: somebody else does this for me all of the time, somebody else does this for me most of the time, I do this half of the time, I do this most of the time, or I am completely responsible for this all of the time?)

- 1 Somebody else does this for me all of the time
- 2 Somebody else does this for me most of the time
- 3 I do this half of the time
- 4 I do this most of the time
- 5 I am completely responsible for this all of the time
- 6 IF VOL: No bills
- 8 DK
- 9 NA; refused

### **How Much Responsibility Managing Money**

B5d. How much responsibility do you currently take for managing your own money? (Would you say: somebody else does this for me all of the time, somebody else does this for me most of the time, I do this half of the time, I do this most of the time, or I am completely responsible for this all of the time?)

- 1 Somebody else does this for me all of the time
- 2 Somebody else does this for me most of the time
- 3 I do this half of the time
- 4 I do this most of the time
- 5 I am completely responsible for this all of the time
- 8 DK
- 9 NA; refused

## How Confident Compared With Others

C1g. Compared to other people, how would you rate your self-confidence? (On a scale of 1 to 7, where 1 means “A lot worse than other people” and 7 means “A lot better than other people”)

- 1 “a lot worse than others”
- ...
- 7 “a lot better than others”
- 8 DK
- 9 NA; Refused

## Earnings from Work Year Before Last

This Variable represents the total annualized earnings in 2011 from question E46 for all jobs reported in Section E that occurred two years ago year. No imputations were done for missing data. Therefore, if any of the earnings were reported as “don’t know” or refused, then this variable contains a value of 999999999.

- 1 – 9,999,997 Actual Amount
- 9,999,999 NA; DK; refused
- 0 Inap: no labor earnings for 2009