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A Verification and Extension of Students' Motivations, Financial Orientation, and Identity Salience as Predictors of Likelihood to Withdraw from a University

Matthew I. Quinn

Otterbein University, matthew.quinn@otterbein.edu

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**A Verification and Extension of Students' Motivations, Financial Orientation, and Identity
Salience as Predictors of Likelihood to Withdraw from a University**

Matthew I. Quinn
Department of Business, Accounting, and Economics
Otterbein University
Westerville, Ohio 43081

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Requirements for Graduating with Distinction

Advisory Committee:

Michael A. Levin, Ph.D.
Distinction Advisor

Advisor's Signature

Kate Lehman
Second Reader

Second Reader's Signature

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ABSTRACT

Broadly, this research examines a student's likelihood to withdraw from a university based on the relationship between motivations, financial orientation, and identity salience. Specifically, this study empirically examines the relationship between extrinsic motivation, intrinsic motivation, and apathetic motivation, perceived opportunity loss and lifestyle activities related to financial orientation, and satisfaction and reciprocity related to identity salience, as predictors of a student's likelihood of withdrawing from a university.

A questionnaire was designed by extending scale items related to the constructs of interest. First-year students at a private university located in the upper Midwest were sampled. A hypothesized model was tested using partial least squares regression. Consistent with theory, four of the eight hypothesized paths are statistically significant.

Four research questions were analyzed using multigroup analysis. Differences in relationships are shown for gender, major, college GPA and ACT score.

Conclusions provide more insight on understanding what drives undergraduate students' likelihood to withdraw. Higher education administrators could create different programs, services, or strategies that accommodate to the needs of students' at various levels of motivation, financial orientation, and identity salience. Limitations of this research include measuring a student's likelihood to withdraw rather than a student actually withdrawing. Additionally, an R^2 value of 50% which means the model is missing variables. With this said, directions for future research should involve tracking who changes in motivations, financials, and identity salience as well as analyzing who actually withdrew versus the likelihood that they would withdraw.

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INTRODUCTION

Public policy makers along with senior administrators at higher education institutions have taken an interest in student retention rates. In some states, state appropriations are now tied to public universities' retention rates (Mitchell, Palacios, & Leachman, 2014). Private universities have also felt pressure to improve retention rates as a means to improve their financial health (Lyken-Segosebe & Shepard, 2013). The retention rate has also taken on import given the President's desire to boost college graduation rates (Nies, 2010). While the emphasis on retention rates is key, little attention has been given towards the predictors of students' likelihood to remain at a university.

Many researchers treat motivations as a key predictor of human behavior because it could provide insight into why a person engages in a particular task or behavior. For example, Hauser (2014) examines how varying levels of motivation influence employees and their roles at their workplace. Miao and Evans (2007) look at the motivation of salespersons in order to better understand what drives cognitive and affective components of intrinsic and extrinsic motivation. Researchers in higher education have also included motivation as a predictor of an individual's behavior.

Cokely, Bernard, Cunningham, & Motoike (2001) examine students' motivation to start, continue, and finish a bachelor's degree. Cokely et al. (2001) find that the intrinsic dimensions related to their model don't coordinate with external factors of academic achievement. Hegarty, Brasco, & Lu (2012) measure graduate students' motivations as a predictor of completion of a master's degree and found that graduate students' are more extrinsically, than intrinsically motivated to complete a graduate degree. This suggests that graduate students are motivated to continue graduate school for the monetary benefit they'll obtain from having a master's degree in

the workforce. Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres developed the Academic Motivation Scale (1992), which purports to assess a student's motivations related to collegiate activities. Specifically, Vallerand et al. consider behaviors such as changing a major, withdrawing from school, discontinuing participation from academic activities, or remaining involved with social clubs (1992).

Levin, Hansen, and Laverie (2012) extend the Academic Motivation Scale by treating motivations as three, separate and distinct, forms of motivation: apathetic, extrinsic, and intrinsic. This approach allows researchers and managers to understand, broadly, how each form of motivation can influence a particular outcome such as completing an online quiz (Hansen and Levin, 2012) or participating on various blogs (Levin et al. 2012). Ernest (2012) applies this approach to predict why certain groups of students are more likely to withdraw from a university compared to others. Hegarty et al. (2012) also treat motivations as three separate forms in order to understand why students pursue graduate degrees.

However, these models consider only the role of motivations in predicting an individual's behavior. Additional explanatory constructs associated with degree completion could provide additional insight.

Although insight on an individual's various levels of motivations have been beneficial in predicting a student's likely to withdraw from a university, other constructs to support this should be considered. Ernest (2012) includes financial orientation to strengthen her model because it takes into consideration the effect increasing costs to earn an undergraduate degree has on a student's behavior. Financial Orientation is defined as a student's ability to afford college and to maintain the cost of a collegiate lifestyle (Wharton, 2007).

While motivations and financial orientation provide a greater insight into a students' likelihood to withdraw from an institution, the addition of the Identity Salience Model could provide further understanding of this phenomenon. While much research relies on this theory to understand relationship marketing (Michaelski, & Helmid, 2008; Spaid, 2010), Arnett, German, and Hunt (2003) apply it in a higher education context by examining the role of various relationship characteristics to predict an alumnus' likelihood to donate to his or her alma mater.

For this research, the Identity Salience Model will be used to examine how students view or identify with their university which, in turn, could affect ones likelihood to withdraw.

By incorporating the Academic Motivation Scale, financial orientation, and the identity salience model, a more complete model of students' motivations associated with degree completion can be presented.

Hence, the overarching goal of this research project is to present a more complete model to predict the likelihood that a student will withdraw from a university. More specifically, this research will treat motivations as three separate constructs: apathetic, extrinsic, and intrinsic while simultaneously utilizing a student's financial orientation, and identity salience as constructs to provide additional insight on the behavior of undergraduate students' for university officials.

The remaining manuscript is organized as follows: a review of relevant literature, an analysis of the model, and conclusions paired with managerial implications and direction for future research.

LITERATURE REVIEW

Research by Vallerand (1992) develops an extremely versatile instrument for the use on the undergraduate population, called the Academic Motivation Scale (AMS). The Academic

Motivation Scale looks predominantly at the internal values of intrinsic and extrinsic motivation paired with apathetic motivation. Studies (Ernest, 2012) use the AMS to measure first-year students' success in terms of their likelihood to withdraw from a university. Ernest's (2012) study, however, adds financial orientation to her model to take a students' financial stress into consideration for a students' likelihood to withdraw. This research will take Ernest's (2012) model of the AMS and financial orientation and add the Identity Salience Model. The Identity Salience Model was developed by Dennis Arnett in 2003 and is found on the Identity Theory that focuses on an individuals' connection among themselves, their personalized roles, society, and role performance. When it comes to undergraduate students, identifying with a university is extremely important when building connections that affect their behavior. Arnett's study (2003), however, uses the Identity Salience Model to examine the role of relationship marketing for nonprofit institutions and alum whereas this research will use the Identity Salience Model related to currently enrolled undergraduate students.

Higher education has used retention as a key factor when determining student success. The reason for this is because universities pay to recruit and keep students on campus. But when students withdraw, it costs the university, who budgeted for those students for all four years, not one or two. Therefore, this research uses retention as the proxy while examining a students' likelihood to withdraw as an indicator of academic success. Withdrawing from a university is defined as a student discontinuing enrollment in all of his or her courses for that particular term. In other words, withdrawing means that a student does not return to the university for the following academic term. In 2014, the retention rate from year one to year two in higher education was 67.8% with higher retention rates in private universities than in public universities (National Collegiate Retention, 2014).

Research in higher education on retention has primarily focused on first year students. The reason for this is because first-year students are the most likely candidate to withdraw over students of other academic standings (Jamelske, 2009; Gibney, Moore, Murphy, & O'Sullivan, 2011). Jamelske (2009) suggests that the reason for this is because first-year students are the least involved, or have the least invested, in the university they are attending which results in dropping out being easier for them than if they invested as much as students in higher academic standings. With this said, the issue of retaining students is a higher education concern.

Apathetic Motivation

Until recently, research has looked at motivation as consisting of only extrinsic and intrinsic (Yousaf, Haudong, & Sanders, 2015; Vallerand et al, 1992; Epstein, Clinton, Gabrovska, & Petrenko, 2013). However, Hansen and Levin (2010) add a third form of motivation; apathetic motivation. Apathetic motivation is defined here as “a lack of interest or enthusiasm for performing a specific task or activity” (Levin, Hansen, & Laverie, 2012). The reason for an individual to not enjoy activities could be due to a lack of rewards or consequences involving that activity (Yoshida, Tanaka, Mizuno, Ishii, Nozaki, & Ayako, 2008). For example, if an individual sees no reward or consequence for attending college than he or she sees no reason to continue. Vallerand et al, (1992) conclude that students that exhibit higher levels of apathetic motivation tend to end academic activities. Formally,

H₁: Apathetic motivation is positively related to likelihood to withdraw from a university.

Extrinsic Motivation

Ryan and Deci (2000) define extrinsic motivation as engaging in an activity because it will lead to another outcome. In other words, an individual will undertake a task or activity to gain an award or avoid repercussions. Rewards could be tangible or intangible as perceived by

the individual (Levin et al, 2012). For example, a student remaining at a university because he or she is expected to by a guardian could receive a punishment for dropping out or a new car upon degree completion. Thus, as an individual's perceived award or punishment increases their degree of extrinsic motivation will affect their behavior in performing the task (Clarke, Flaherty, & Mottner, 2001; Locke & Latham, 2004). Extrinsic motivation would impact an undergraduate student's likelihood to withdraw because the higher perceived award or punishment for not completing a degree, the more motivated the student will feel to either receive that award or to avoid that punishment. Formally,

H₂: Extrinsic motivation is negatively related to likelihood to withdraw from a university.

Intrinsic Motivation

Intrinsic motivation is defined here as "performing an activity for the inherent enjoyment or satisfaction derived from the activity" (Levin et al, 2012). In other words, individuals are interested in an activity knowing that there are no external rewards or punishments for participating in it. For example, a student who is intrinsically motivated will read a book for the sole sense of gaining satisfaction or pleasure by unraveling something new.

Cokely et al., (2001) finds that intrinsic dimensions of the motivation scale do not relate to external academic achievement. In other words, students undertake academic activities to feel a sense of satisfaction rather than the sense of receiving an A. Levin et al. (2012) conclude that individual's with higher levels of intrinsic motivation develop skills or knowledge through their own desire. Baker (2004) finds that students with greater levels of intrinsic motivation will study more for courses that they enjoy. Thus, students with higher levels of intrinsic motivation are more likely to remain at a university where they feel they are gaining the most satisfaction by discovering something new. Furthermore, intrinsic motivation is expected to correspond

positively with extrinsic motivation. However, rather than looking at intrinsic on a global scale, this research focuses on the cognitive and affective dimensions of intrinsic motivation (Ambile, Tighe, Hill, & Hennessey, 1994). Therefore we define intrinsic motivation as having two separate constructs: intrinsic motivation to accomplish and intrinsic motivation to stimulate.

IM to Accomplish. Miao, Evans, and Zou (2007) state that sales reps internalization of enjoying tasks is what allows them to achieve personal accomplishments or goals due to them understanding what is required on the job. This is why intrinsically motivated to accomplish sales reps perform more job-related tasks. Consistent with Ernest (2012) research, increased enjoyment to accomplish a personal expectation or goal results in students looking to do more. For example, a student could study more for the pleasure of earning an A in a difficult class over studying for a class they do not find challenging. Gillet (2008) looks at intrinsic motivation to accomplish in athletes. His findings suggest that athletes are intrinsically motivated to get better for the sake of mastering a sport, or a skill within a sport such as crossovers in basketball or field goal kicking in football. Gillet (2008) suggests that athletes who have higher levels of intrinsic motivation to accomplish result in them practicing more to master a skill, than those with lower levels.

For this research, intrinsic motivation to accomplish is defined here as an individual's desire to accomplish personal goals and expectations throughout their undergraduate career. Intrinsic motivation to accomplish would impact undergraduate students' likelihood to withdraw because the greater a university impacts a students' desire to accomplish personal goals such as graduate, the more likely the student will remain there. Formally,

H₃: Intrinsic motivation to accomplish is negatively related to likelihood to withdraw from a university.

IM to Stimulate. Intrinsic motivation to stimulate is defined here as engaging “in an activity in order to experience stimulating sensations derived from one’s engagement in the activity” (Pelletier, Fortier, Vallerand, Tuson, & Blais, 1995). Pelletier et al. (1995) examine intrinsic motivation to stimulate in athletes who participate in a sport for the exciting experiences during practices or games. Additionally, Ryan and Deci (2000) examine intrinsic motivation to stimulate in sales reps who experiences a “high” or sensation when closing, or obtaining new knowledge to assist in closing, a sale. Ryan and Deci (2000) find that sales reps with greater forms of intrinsic motivation to stimulate are more eager to achieve specific outcomes related to sensations of engaging in that experience. Thus, as an individual feels more sensation, or joy, throughout an experience then they are more likely to behavior in a way that’s more favorable to that environment or experience. Intrinsic motivation to stimulate could affect a student’s behavior when it comes to withdrawing or remaining at a university because the greater “high” a student feels while engaging in college experiences, or from being in that university’s environment, the more likely they would want to remain where they are obtaining those sensations. Formally,

H₄: Intrinsic motivation to accomplish is negatively related to likelihood to withdraw from a university.

Financial Orientation

Financial Orientation is looked at as a factor of academic success due to the effects tuition has on ones behavior to pursue and complete and undergraduate degree in four years, or to take extended time to obtain that degree (Volkwein, 1996). Published tuition for four-year public universities rose 3% in 2014 and 3.6% in the four-year nonprofit sector for full-time students (Trends in College Pricing, 2014). The increase in the cost of higher education causes stress on students, affecting their levels of motivation when it comes to pursuing a degree.

Wharton (2007) finds that students who indicate an urge to graduate and enter the job market are those who have a higher level of financial stress, but register for fewer credit hours each semester. This means that students with higher levels of financial stress take longer to graduate, despite a strong desire to want to graduate and enter the job market.

Ernest (2012) looks at financial orientation as two separate, and distinct categories—affordability and lifestyle—in order to distinguish the differences between financial factors related to university and non-university expectations. For this research, affordability will be redefined as opportunity loss to indicate a students' perceived financial loss when pursuing a college degree. Lifestyle is defined as a students' "ability to pay for college... activities beyond tuition, room and board, and parking tags" (Ernest, 2012).

Opportunity Loss. Hall (1999), and King (2002) define affordability has a student's ability to maintain a high standard of living while paying off debts and loans. The concept of affordability indicates that as the cost of tuition rises, more and more students are looking for work in order to pay off their educational bill. Additionally, with an increased convenience for credit cards, students are obtaining occurring and worrying about debt outside of tuition costs. Both, large debt, and student loans, have been reasons for students to either withdraw or take a longer time to graduate (Wharton, 2007). Wharton (2007) and Ernest (2012) find it necessary to include a student's ability to afford a degree because it takes into consideration how a student's perceived loss affects their motivations in terms of remaining or withdrawing from a university.

For this research, affordability will be redefined as a student's perceived opportunity loss in regards to the amount they owe. Redefining affordability as loss takes into the consideration what students' have to give up in order to remain at that university (e.g. class, time to do

homework). It's suggested that the more opportunity loss students perceived, the more they are going to work and stray away from studies or withdraw altogether. Formally,

H₅: Perceived loss of affording university tuition is positively related to likelihood to withdraw from a university.

Lifestyle Activities. In addition to financial orientation related to opportunity loss, students contend with financial orientation related to affording a lifestyle comparable to their peers. Literature (Volkwein, 1996; King, 2012; Wharton, 2007) also explores a student's ability for lifestyle activities outside of the classroom. Lifestyle activities are defined as a student's ability to afford, or purchase, leisure type activities such as trips over breaks, membership fees for social organizations, or weekend outings (Knight, 2000; Volkwein, 1996). While obtaining a degree is extremely important to an individual, whether or not they feel they can afford a similar lifestyle to their peers could prove to be a concern for some. Individuals looking to maintain a similar lifestyle as their peers are more prone to seek for part-time, work-study, or employment opportunities throughout the year. Formally,

H₆: Perceived lifestyle is negatively related to likelihood to withdraw from a university.

Identity Salience Model

Many researchers have started looking at how companies develop strategies that build long-term relationships with its customers. These long-term relationships enable companies to utilize the concept of relationship marketing, or focus on customer retention and satisfaction, as a form of success (Arnett, German, and Hunt, 2003). With this concept, Arnett et al. (2003) has developed the Identity Salience Model which is defined here as the social benefits an individual may receive for being associated with a relationship. The Identity Salience Model is grounded in the Identity Theory (Burke, 1980; Laverie, Kleine, and Kleine, 2002; McCall and Simons, 1978; Arnett et al., 2003) which discusses the many identities an individual has surrounding the

connections among self, personal roles, society, and performance that effect one's behavior.

Arnett et al. (2003) utilize the Identity Salience Model to understand how higher education institutions become successful. "Success" is defined by Arnett et al. (2003) as an individual, or university alum, who engages in cooperative and supportive behaviors towards the university.

Elements of the Identity Salience Model could be used to predict an undergraduate students' behavior because this model takes into consideration how strongly an individual identifies with a community, group, or organization. This theory could be used to determine the degree that students identify with their current university. As the degree of attachment increases, the less likely an individual would be to dissociate with a group (Arnett et al., 2003). Therefore, the Identity Salience Model could provide additional insight into students' likelihood to withdraw from a university. Specifically, this research project includes reciprocity and satisfaction.

Reciprocity. Arnett et al., (2003) argue for an individual's sense of recognition provides positive feelings towards the donor. This acknowledgement, or an individual's sense of acknowledgement, is called reciprocity. Reciprocity is defined here as the recognition to someone for some sort of gesture on their behalf (Arnett et al., 2003). For example, if a student graduates from a university or does something positive in the campus community, acknowledgement from the donor will create a sense of importance within that individual. This sense of important built within an individual will positively reflect on one's own self-evaluation that, in turn, gives an individual confirmation that they are noticed and appreciated.

Broadly, an individual who feels noticed and appreciated will remain within a community, group, or organization to continue receiving that reciprocity. In this context, an undergraduate student who feels a high sense of reciprocity, or appreciation from their

university, are more likely to remain at that institution. This reciprocity could be formal such as selection to the Dean's list, or informal such as recognition by a faculty member for work well done. Formally,

H₇: Perceived reciprocity is negatively related to likelihood to withdraw from a university.

Satisfaction. Organizations emphasize customer satisfaction to retain current customers as well as obtain new customers (Haumann and Quaiser, 2014; Chow and Shi, 2015). Satisfaction is defined here as the pleasure derived from fulfilling an individual's needs or expectations (Arnett et al., 2003). Satisfaction appears crucial when considering long-term relationships. For example, research links customer satisfaction to the likelihood the customer will remain with that brand or company (Nysveen and Pedersen, 2014; Taylor and Hunter, 2014). In a non-consumption context, research has shown that higher satisfaction in the workplace could result in lower turnover rates among employees (Arogundade and Argoundade, 2015; Dahl and Peltier, 2014).

Broadly, satisfaction is an important factor that leads to individual's remaining with that organization (Arnett et al., 2003). Thus, for this research, satisfaction will assist in determining whether or not an individual's met expectations are met or wishes fulfilled effect their behavior to withdraw from a university. It can be implied that the more satisfied an individual is with their college experience, the more likely they are to remain at that institution. Formally,

H₈: Perceived satisfaction is negatively related to likelihood to withdraw from a university.

RESEARCH QUESTIONS

A multigroup analysis is used to compare the relationships of each construct between each group. A multigroup analysis is appropriate because it allows us to examine the relationship each construct has on the different groups. For this research project, the groups include gender,

major, GPA, and ACT scores Using this analysis, differences between groups for the hypothesized model can be tested.

Gender Differences

Gender has drawn the interest of researchers. For example, Ernest (2012) finds that female students perceptions related to apathetic motivation, extrinsic motivation, and financial orientation about to lifestyle are predictors of their likelihood to withdraw. Conversely, Ernest also finds that a male first-year students' perceptions of financial orientation related to loss is a predictor for their likelihood to remain at a university. This difference could be due to male students feeling more pressure to earn income than female students (Bisese and Fabian, 2006).

Research indicates that women are more motivated entering college than men (Kahn, Brett, and Holmes, 2011) while also having higher levels of intrinsic motivation and extrinsic motivation (Cokely et al., 2001). Vallerand et al., (1992) state that these findings suggest that female students are overall, more motivated than male students because they display a "more self-determined motivational profile than male students (52)." Formally,

RQ₁: Do male and female students differ in their likelihood to withdraw based on their levels of motivation, financial orientation, and identity salience?

Majors

Students pursuing different majors could hold varying degrees of motivations, financial orientation, and/or self-identity salience. Arum and Roksa (2011) note that students seeking a professional degree appear more likely (a) to read and write less in the classroom , (b) to spend less time interacting with faculty, and (c) to allocate fewer hours for studying.

Ernest (2012) finds that students pursuing a liberal arts degree are more likely to withdraw depending on their levels of extrinsic motivation, intrinsic motivation, and financial

orientation related to affordability. Conversely, there were no predictors on a student's likelihood to withdraw for those seeking a degree in the professional studies field (Ernest). Formally,

RQ₂: Do professional degree seeking and liberal arts degree seeking students differ in their likelihood to withdraw based on their levels of motivation, financial orientation, and identity salience?

GPA

A student's GPA, could reflect a student's effort in completing a course. Hansen and Levin (2010) treat GPA as a proxy for academic success in order to determine whether or not student's with a higher GPA put more effort towards courses than those with a lower GPA. Additionally, GPA could serve as an indicator of future performance and assist in understanding the connection it has regarding a student's motivation to complete a college degree. Students with a higher GPA (3.5 or greater on a 4.0 scale) would be more motivated compared to students with a lower GPA (below a 3.5 on a 4.0 scale).

Ernest (2012) finds that students with a higher GPA are more likely to consider withdrawing from a university as their levels of apathetic and extrinsic motivation increase. In contrast, those with a lower GPA have a higher likelihood of withdrawing as their level of financial orientation related to affordability increased. Formally,

RQ₃: Do students with a high or low GPA differ in their likelihood to withdraw based on their levels of motivation, financial orientation, and identity salience?

ACT Score

Standardized tests, specifically the ACT, could indicate an individual's motivations. Arum and Roska (2011) discuss how undergraduate students who scored in the top quintile spent more time preparing for the test than students in the bottom quintile. This finding suggests that students who study more, report higher scores on the ACT. Conversely, students who study less,

report lower scores. That is, students with higher ACT scores could be more motivated than students with lower ACT scores.

Other studies find that students with a higher ACT score are more likely to withdraw based on their levels of apathetic, extrinsic, and intrinsic motivation (Ernest, 2012). Ernest concludes that students with higher ACT scores are more motivated than those with lower ACT scores. Ernest's findings suggest that students with higher ACT scores invest more in their studies and the more motivated they become, the more less likely they are to consider withdrawing. Conversely, students with lower ACT scores were more likely to withdraw based on their levels of financial orientation related to affordability and lifestyle. Formally,

RQ₄: Do students with a high or low ACT score differ in their likelihood to withdraw based on their levels of motivation, financial orientation, and identity salience?

RESEARCH METHOD

Sample

First-year students from a private university in the Upper Midwest were sampled from five first-year seminar (FYS) courses. Students completed the paper survey in class with 71 out of 77 surveys returned. Two incomplete surveys were rejected. Hence, this research project has an 89% completion rate.

The sample consisted of more than twice as many female respondents ($n = 50$) as male respondents ($n = 19$). Approximately two-thirds of the sample consisted of students who declared a major in a professional studies degree program (e.g., education, nursing, finance, etc.). The sample was also divided based on ACT scores, and, separately GPA scores using a median split as shown in Table 1.

Data Collection Form

The questionnaire consisted of 62 items related to the Academic Motivation Scale, financial orientation, Identity Salience Model, and demographic information. Items regarding the Academic Motivation Scale include twenty-eight items about apathetic, extrinsic, and intrinsic motivation as an extension from Vallerand et al. (1992) measured on a seven-point likert scale (1 = “Does not correspond” and 7 = “Corresponds exactly”). Items related to financial orientation, as an extension from Volkwein (1996), makeup seven questions measured on a seven-point likert scale (1 = “Does not correspond” and 7 = “Corresponds exactly”). Additionally, there are twenty-one items from the Identity Salience Model (Arnett et al., 2003) measured on a seven-point likert scale (1 = “Does not correspond” and 7 = “Corresponds exactly”).

Demographic questions made up five of the items on the questionnaire and the nature of those range from categorical to open-ended questions. A continuous item was placed on the questionnaire to capture students' thoughts of withdrawing on a scale of 0-100 with 0 defined as “You don't think about it” and 100 defined as “You always think about it” (See Appendix).

Coding

Missing data related to motivations, financial orientation, and identity salience were corrected through an imputation by entering the average response for that respondent, relating to those constructs. The missing data imputation method used is appropriate because it allows the data to remain as accurate as possible in addition to preserving the nature of how the respondent would answer if he or she had (Jelicic, Phelps, & Lerner, 2009). If the dependent variable was missing data, then the survey was removed from the dataset. ACT scores and GPA were converted from metric to nonmetric data using a median split. Respondents were coded as either 1 (low) or 2 (high) where for GPA respondents with a 3.4 GPA or lower are labeled as a 1 and

those with a 3.5 GPA or higher are labeled with a 2. The median split for ACT scores have respondents with a score of 23 or lower labeled as a 1 and those with a 24 or higher are labeled with a 2.

ANALYSIS

Analysis

Descriptive statistics of the samples demographics are provided in order to identify the makeup of our data as shown in Table 2. Following a descriptive analysis, the data was then analyzed using exploratory factor analysis (EFA). Exploratory factor analysis is a correlational technique that reduces a large set of variables into clusters or factors (Rahn, 2014). Consistent with theory, items were removed if the item returned a factor loading of .4 or higher on two or more factors as shown in Table 3.

To test the hypothesized model as shown in Figure 1, partial least squares (PLS) regression was selected. PLS regression attempts to maximize the variance for an entire model simultaneously, rather than for each path individually. Given that sample size is less than 200 and includes both, formative and reflective measures, PLS is sufficient to test this model (Jackson, 2003).

Jackson (2003) recommends minimum sample size of at least ten times the sum of the endogenous variable containing the most predictor paths. For this model, as shown in Figure 2, the likelihood to withdraw construct has eight predictor paths. Thus, the minimum sample needed is 90. The 69 completed responses indicate that the model falls short of the minimum sample size needed. For this reason, the model was reduced from nine constructs to five as shown in Figure 3 in order to achieve power.

Model

PLS regression is a distribution-free technique that relies on a re-sampling technique known as bootstrapping. T-values were computed, and their significance levels determined using a two-tailed distribution. For each path not statistically significant, that construct was removed from the model. Consistent with theory, a revised hypothesized model was tested as shown in Figure 3. The constructs removed were decided by their interitem correlation items compared to other constructs as shown in Table 4.

Face Validity

Face validity indicates that the test, assessment, or procedure used in research is effective to the “degree of correspondence between the items selected” (Hair, Black, Babin, Anderson, and Tatham, 2006, p. 102). Given the model and scales used are already established in published research, face validity is achieved.

Convergent Validity

Convergent validity indicates “the degree to which two measures of the same concept are correlated” (Hair et al, 2006, p. 137). To assess convergent validity a construct’s average variance extracted (hereafter AVE) should exceed 0.5 (Chin, W., 1998). Since the constructs AVE range from 0.67 to 0.86 as shown in Table 3 we can conclude that convergent validity is achieved.

Discriminant Validity

Discriminant validity indicates “the degree to which two conceptually similar concepts are distinct” (Hair et al, 2006, p. 137) and are not measuring overlapping constructs. To assess discriminant validity the square root of a constructs’ AVE should exceed the interitem correlations (MacMillan, Money, K., Money, A., and Downing, 2005). Since the square root of

each constructs' AVE is greater than each interitem correlation as shown in Table 4, we can conclude that discriminant validity is achieved.

Reliability

Reliability indicates “the degree to which the observed variable measures the ‘true’ value and is ‘error free’” (Hair et al., 2006, p.8) as well as the data meets the purpose of the tests utilized through research. To assess reliability the Cronbach's alpha for each construct should be at least 0.7. Since the constructs' Cronbach's alpha range from 0.75 to 0.91 as shown in Table 3, we can conclude that reliability is achieved.

Results

Hypothesized Results

As shown in Figure 3, all four hypotheses in the reduced model appear supported. The R^2 , or variance of the dependent variable explained by the four independent variables, is 50%. A 50% R^2 is considered good based on the four variables that explain the dependent variables variance (Chin, 1988).

H₁. The first hypothesis in the reduced model inferred that intrinsic motivation to stimulate negatively relates to a students' likelihood to withdraw from a university. This hypothesis was formed on the grounds that intrinsic motivation to stimulate refers to the “sensations derived from one's engagement in the activity” (Pelletier et al., 1995) and when applied to a higher education context, students with lower levels of intrinsic motivation to stimulate are more likely to consider withdrawing from a university. We observe that this hypothesis is significant to the model. Therefore, we fail to reject hypothesis one. These findings suggest that first-year students are looking for a college experience that give them a “rush” or an

internal “high.” Higher education administrators could offer more clubs, organizations, or activities where students can obtain sensational feelings when they overcome various challenges.

H₂. Hypothesis two infers that perceived income for activities negatively relate to a students' likelihood to consider withdrawing. Hypothesis two was formed on notion that students are concerned with the costs outside of tuition and room and board such as vacations, membership fees, and weekend outings (Knight, 2000; Volkwein, 1996). Our findings observe that hypothesis two is significant to our model. Therefore, we fail to reject hypothesis two. These findings suggest that first-year students are looking for a college experience where they can afford to pay for fees associated with social activities such as Greek Life, or experiences where they can afford to go out with their friends on the weekend at an affordable cost. Higher education administrators could offer opportunities that allow students to earn stipends or weekly allowances outside of making non-work study, work study, and off campus jobs available to these students.

H₃. The third hypothesis states that higher levels of opportunity loss positively relate to a students' likelihood to consider withdrawing from a university. Hypothesis three was formed for this research as a student's consideration to what they have to give up in order to remain at that university (e.g. class, time to do homework, a new car, work). Our findings observed that this is significant to the model. Therefore, we fail to reject hypothesis three. These findings suggest that first-year students are weighing in on the value of paying for the cost of education versus the taking purchasing something else. Higher education administrators could stress the value of obtaining a degree from that institution as well as offer more opportunities for financial aid, grants, or scholarships. With this, administrators could also offer more opportunities throughout a students' four years to earn more financial aid, grants, or scholarships.

H₄. The fourth hypothesis infers that reciprocity is negatively related to a students' likelihood to consider withdrawing. Hypothesis four is based on the grounds of reciprocity which is defined by Arnett et al. (2003) as an individual's sense of recognition received from the donor. Our findings observed that reciprocity is significant to the model. Therefore, we fail to reject hypothesis four. Our findings suggest that first-year students are looking for a collegiate experience where they can get some sort of recognition within the various activities they participate in. Higher education administrators could offer award ceremonies after each semester that acknowledge and recognize first-year students for accomplishments such as making it another semester or for various achievements throughout their first year.

Research Question Results

For the multigroup analysis each model, as shown in Tables 5-8, tests the significance for each independent group by comparing the relationship between constructs. If a path in one group appears statistically significant and the path in the other does not, then a difference between the groups exist for that path. If a path appears statistically significant for both groups, then the beta coefficient for that path is compared between groups to determine if the groups differ based on a statistical significance in the beta.

RQ₁. The first research question considers gender group differences among the sample population. Table 5 shows that female students with lower levels of intrinsic motivation to stimulate are more likely to withdraw than those with higher levels. These findings suggest that first-year female students are looking for a college experience that gives them a sense of joy, or an internal "high." Additionally, female students with higher levels of perceived financial loss have a greater likelihood of withdrawing than students who do not. Similarly, male students with

higher levels of perceived financial loss are more likely to withdraw than those with lower levels. These findings suggest that first-year students are having more challenges to finding sources of income to pay for school. While perceived levels of financial loss are significant to both, female and male students' likelihood to withdraw, the beta shows that the pathway is more significant in terms of male students. These findings support the suggestions of Bisese and Fabian (2006) which state that male students are more pressured to earn income than female students. Hence, female and male students differ on predictors of withdrawing from a university.

RQ₂. The second research question, regarding major group differences as shown in Table 6, shows that students pursuing a liberal arts degree are more likely to withdraw from a university with higher levels of perceived financial loss. This finding suggests that the perceived financial loss compared to what liberal arts seeking students will make upon graduation, is not worth remaining at that university. Therefore, financial loss is a predictor of students seeking a liberal arts degree on the likelihood to withdraw. Table 6 also shows that liberal arts degree seeking students are more likely to remain at a university if they have higher levels of perceived reciprocity. This suggest that students seeking a liberal arts degree feel more confident with the route they are taking due to the acknowledgement and recognition they receive in doing so. Conversely, students pursuing a professional studies degree are more likely to withdraw from a university with lower levels of perceived financials related to activities. This suggests that students pursuing a degree in professional studies are seeking part-time jobs or work experiences in order to partake in social activities with their peers. Additionally, perceived lower levels of intrinsic motivation to stimulate are also found to increase the likelihood a professional studies seeking student will withdraw from a university. This suggest that students seeking a degree in professional studies are looking for majors, or courses within their majors, that constantly

provide learning challenges. Hence, liberal arts and professional studies degree seeking students differ on predictors of withdrawing from a university.

RQ₃. The third research questions, regarding GPA group differences as shown in Table 7, indicate that students in the low GPA quartile are more likely to withdraw based on their levels of intrinsic motivation to stimulate and reciprocity. These findings suggest that students with a low GPA need more classroom experiences that challenge them, and create a sense of satisfaction, when completing work for that class or they'll have no desire to complete that work. Additional findings suggest that students with a lower GPA need to feel recognized or appreciated if they are to have a lower likelihood of withdrawing. Conversely, students in the higher GPA quartile are more likely to withdraw if they have higher levels of perceived financial loss. This suggests that students with a higher GPA are motivated to get good grades because the higher GPA one has, the more financial aid they receive or retain. Furthermore, with higher levels of perceived financial loss, one could argue that students with a higher GPA are more likely to withdraw because they view that university as having no continued financial benefit for them maintaining a higher GPA. Hence, students in the low and high GPA quartile differ on predictors of withdrawing form a university.

RQ₄. The final research question considers ACT group differences as shown in Table 8. Students with lower ACT scores are more likely to withdraw with lower levels of perceived reciprocity. This suggests that students with lower ACT scores need to receive acknowledgement from faculty and staff members whether direct or indirect inside and outside of the classroom. In terms of students in the low ACT quartile and high ACT quartile, both are more likely to withdraw at higher levels of perceived financial loss. This could be due to students in both groups not fully seeing the financial benefit of obtaining higher scores on the ACT. However, the

unstandardized beta as shown in Table 7 shows that perceived financial loss is more statistically significant to students with higher ACT scores than students with lower ACT scores. This finding suggests the same point previously stated that students with higher ACT scores don't perceive that having a higher school benefits their financial orientation related to loss. Hence, students in the low and high ACT quartile differ on predictors of withdrawing from a university.

DISCUSSION AND MANAGERIAL IMPLICATIONS

This study's findings reveal important implications for administrators and faculty members. One, reliable and valid constructs—financial orientation related to activities and opportunity loss, intrinsic motivation to accomplish, and reciprocity—are used within this study to predict the likelihood an undergraduate student will withdraw. Two, statistical evidence shows that there are differences in the independent groups—gender, major, GPA, and ACT scores—that will allow higher education officials to better understand the needs of students within each group. Although we cannot claim that these findings apply to every university, this study provides potential insights for administrators and faculty members to gain additional understanding of the predictors that cause first-year students to withdraw.

Future Research

This study presents findings from the first-year students in the 2014-2015 year. Hence, the data is cross sectional in nature, not longitudinal. This sample should be resurveyed each year to detect changes in motivations, financial orientation, and identity salience over time. These results would allow higher education administrators the opportunity to allocate resources needed for students to remain with the university.

Another area for future research is to survey first-year students from multiple universities of a different nature. For example, a survey from a four-year liberal arts university, a four-year public university, a two-year institution, and a trade school would provide more generalizable conclusions. Also, a sample selected from various universities with different missions and scopes, would allow researchers to test for differences in students' likelihood to withdraw between institution types.

Managerial Implications

To assist effectively with students who are more likely to withdraw due to the changes in significant constructs, higher education administrators should formulate and implement programs that specifically address the differences between each group. For example, a university could create an allowance to accommodate students where perceived financial orientation for activities is a factor in the likelihood to withdraw. The more students perceive a university as supporting them, or aiding with financial activities outside of the university, the more likely they are to remain at that university.

To address groups (e.g., female students, students with a low GPA, students with a high GPA, and students seeking a professional studies degree) with lower degrees of intrinsic motivation to stimulate, higher education administrators could offer more clubs or organizations so these students could obtain a "high" or sensational feeling. The more opportunities students impacted by intrinsic motivation to stimulate have, the higher perceived levels they will obtain and the more likely they'll remain at that university.

For groups (e.g., males, high GPA, Low ACT, liberal arts seeking degrees) where opportunity loss was a predictor of the likelihood to withdraw, higher education administrators could emphasize the value provide a degree from that institution. Correspondingly, the university

could offer more scholarships or grants. By either emphasizing the value and/or reducing the cost, these groups could be more likely to remain at the institution

Finally, for groups (e.g., low GPA, ACT scores) feeling underappreciated or under recognized (i.e., reciprocity), higher education administrators could extend external and indirect, or internal and direct rewards. Administrators would do well to remember that this group of students came of age when everyone regardless of contribution received a medal when participating in a youth recreation activity. These students are more likely expecting a participation medal. To retain these students at the university, administrators should develop such a medal or program for this group.

References

- Academic Success* (Unpublished dissertation). Otterbein University, Westerville, OH.
- Amabile, T.M., Tighe, E.M., Hill, K.G., and Hennessey, B.A. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality & Social Psychology*, 66(5), 950-967.
- Arnett, D., German, S., and Hunt, S. (April, 2003). *The Identity Salience Model of Relationship Marketing Success: The Case of Nonprofit Marketing*. *Journal of Marketing*.
- Arogundade, A. B. and Arogundade, O. T. (2015). *Psychological Empowerment in the Workplace: Implications for Employees' Career Satisfaction*. *North American Journal of Psychology*.
- Arum, R. and Roska, J. (2011). *Academically adrift: Limited learning on college campuses*. Chicago: University of Chicago Press.
- Bisese, S. D. and Fabian, D. J. (2006). Sophomore men: the forgotten class, the forgotten gender. *Recruitment & Retention in Higher Education*, 20(3), 1-3.
- Burke, Peter J. (1980), "The Self: Measurement Requirements from an Interactionist Perspective," *Societal Psychology Quarterly*, 43 (March), 18-29.
- Cokely, K. O., Bernard, N., Cunningham, D., and Motoike, J. (2001). A psychometric investigation of the academic motivation scale using a united states sample. *Measurement & Evaluation in Counseling & Development (American Counseling Association)*, 34(2), 109.
- Clarke, Irvine, III, Theresa B. Flaherty, and Sandra Mottner (2001). "Student Perceptions of Educational Technology Tools," *Journal of Marketing Education*, 23 (3), 169-177.
- Dahl, A. and Peltier, J. (2014). *Internal Marketing and Employee Satisfaction and Loyalty: Cross-Cultural Scale Validation in Context of U.S. and German Nurses*. *Journal of Consumer Satisfaction, Dissatisfaction & Complaining Behavior*.
- Epstein, R. H., Clinton, M. S., Gabrovska, K., & Petrenko, O. (2013). "CHANGES IN MOTIVATION DURING AN MBA PROGRAM: GENDER MAKES A DIFFERENCE FROM FIRST-YEAR TO GRADUATION." *Academy Of Educational Leadership Journal*, 17(2), 103-120.
- Ernest, A. (2013). *Students' Motivations and Financial Orientation as Predictors of Academic Success* (Unpublished dissertation). Otterbein University, Westerville, OH.
- Gibney, A., Moore, N., Murphy, F., and O'Sullivan, S. (2011). The first semester of university life; will I be able to manage it all?. *Higher Education*, 62, 351-366.

- Gillet, N., & Rosnet, E. (2008). Basic Need Satisfaction and Motivation in Sport. *Athletic Insight: The Online Journal of Sport Psychology*
<http://www.athleticinsight.com/Vol10Iss3/BasicNeed.htm>.
- Hansen, J.M., Levin, M.A., and Allen, J. (2010). The contribution of firm market orientation vs. meeting orientation on sales managers' intrinsic motivation toward training the sales team. *Journal of Personal Selling and Sales*. Forthcoming.
- Hall, M. (1999). Why Students Take More Than Four Years to Graduate. Paper presented at the Annual Association for Institutional Research Forum. Seattle, WA 1999.
- Haumann, T. and Quaiser, B. (2014). Footprints in the Sands of Time : A Comparative Analysis of the Effectiveness of Customer Satisfaction and Customer-Company Identification over Time. *The Journal of Marketing*.
- Hauser, L. (2014). Work Motivation in Organizational Behavior. *Economics, Management, and Financial Markets*. Vol 9, 239-246.
- Hegarty, N. and Brasco, R., Lu, F. (2012). What Motivates Students in Graduate School? An Empirical Study. *Business Education and Accreditation* Vol 4 39-48.
- Jackson, D. (2003). Revisiting sample size and number of parameter estimates: Some support for the n:hypothesis. *Structural Equation Modeling*, 10(1). 128-41.
- Jamelske, E. (2009). Measuring the impact of a university first-year experience program on student GPA and retention. *Higher Education*, 57, 373-391.
- Jeličić, Helena; Phelps, Erin; Lerner, Richard M. (2008) Use of missing data methods in longitudinal studies: The persistence of bad practices in developmental psychology. *Developmental Psychology*, Vol 45(4), Jul 2009, 1195-1199. <http://dx.doi.org/10.1037/a0015665>.
- Kahn, J. S., Brett, B. L., and Holmes, J. R. (2011). Concerns with men's academic motivations in higher education: An exploratory investigation of the role of masculinity. *The Journal of Men's Studies*, 19(1), 65-82.
- King, Jacqueline E. (2002). *Crucial Choices: How Students' Financial Decisions Affect Their Academic Success*. Washington, DC: American Council on Education.
- Laverie, Debra A. and Dennis B. Arnett (2000), "Factors Affecting Fan Attendance: The Influence of Identity Salience and Satisfaction," *Journal of Leisure Research*, 32 (2), 18-27
- Levin, M., Hansen, J., and Laverie, D. (2012). *Toward understanding new sales employees*.
- Locke, Edwin A., and Gary P. Latham (2004), "What Should We Do About Motivation Theory? Six Recommendations for the Twenty-First Century," *Academy of Management Review*,

29 (3), 388–403.

- Lyken-Segosebe, D., & Shepard, J. (2013). Learning from Closed Institutions: Indicators of Risk for Small Private Colleges and Universities. *Higher Education Leadership and Policy Studies*, 14-14.
- Miao, F. C., Evans, K. R., and Zou, S. (2007). The role of salesperson motivation in sales control systems - Intrinsic and extrinsic motivation revisited. *Journal of Business Research*.
- Mitchell, M., Palacios, V., & Leachman, M. (2014, May 1). States are Still Funding Higher Education Below Pre-Recession Levels. Retrieved April 11, 2015, from <http://www.cbpp.org/cms/?fa=view&id=4135>
- National Collegiate Retention and Persistence to Degree Rates. (2014). ACT.
- Nies, Y. (2010, August 9). President Obama Outlines Goal to Improve College Graduation Rate in U.S. Retrieved April 7, 2015, from <http://abcnews.go.com/WN/president-barack-obama-outlines-college-education-goal-university/story?id=11359759>
- Nysveen, H. and Pedersen, P. E. (2014). Influences of Co-Creation on Brand Experience. *International Journal of Market Research* Vol 56 (6) 807-832.
- Pelletier, G., Fortier, S., Vallerand, R., Tuson, K., & Blais, R. (1995). "Toward a New Measure of Intrinsic Motivation, Extrinsic Motivation, and Amotivation in Sports: The Sport Motivation Scale (SMS)." *Journal of Sport & Exercise Psychology*. 17, 35-53.
- Rahn, M. (2014, January 1). Factor Analysis: A Short Introduction, Part 1. Retrieved October 21, 2014, from <http://www.theanalysisfactor.com/factor-analysis-1-introduction/>.
- Robert E. Kleine III, and Susan Schultz Kleine (2002), "Re-examination and Extension of Kleine, Kleine. and Kernan's Social Identity Model of Mundane Consumption: The Mediating Role of the Appraisal Process," *Journal of Consumer Research*, 28 (4), 659-69.
- Ryan, R. M., and Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Education Psychology*, 25, 54-67.
- Taylor, S. A. and Hunger, G. (2014). Value, Satisfaction, and Loyalty: An Evolving Conceptualization. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*.
- Trends in College Pricing. (2014). *Trends in Higher Education Series*. College Board Undergraduate Catalog 2011-2013. (2015, January 1). Retrieved February 26, 2015, from http://pubs.wisc.edu/ug/ls_geninfo.htm.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C., and Vallieres, E. F.

- (1992, 52). The academic motivation scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 1003-1017.
- Volkwein, J.F. and Lorang, W.G. (1996). Characteristics of Extenders: Full-Time Students Who Take Light Credit Loads and Graduate in More Than Four Years. *Research in Higher Education*, 37 (1), pp 43-68.
- Wharton, B. (2007). First-year student financial behavior and academic success. Columbus: The Ohio State University.
- Wing, S. C. and Si, S. (2015). Investigating Customers' Satisfaction with Brand Pages in Social Networking Sites. *Journal of Computer Information Systems*. Vol. 55, 48-58.
- Yoshida, M., Tanaka, M., Mizuno, K., Ishii, A., Nozaki, K., Ayako, U. and Watanabe, Y. (2008). Factors influencing the academic motivation of individual college students. *International Journal of Neuroscience*, 118, 1400-1411.
- Yousaf, A., Huadong, Y., & Sanders, K. (2015). Effects of intrinsic and extrinsic motivation on task and contextual performance of Pakistani professionals. *Journal Of Managerial Psychology*, 30(2), 133-150. doi:10.1108/JMP-09-2012-0

Table 1
Multi-Group Frequency Analysis

	Group	Frequency	Percentage
Gender			
	Female	50	73%
	Male	19	27%
	N	69	100%
Program			
	CPA	46	67%
	CLA	17	24%
	N	69	100%
GPA			
	Low GPA	33	48%
	High GPA	36	52%
	N	69	100%
ACT Score			
	Low ACT	32	46%
	High ACT	37	54%
	N	69	100%

Table 2
Demographic Descriptive Statistics

	n	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Std. Error
Gender	69	1.00	2.00	1.72	0.05	0.45	-1.03	0.29
Live	69	1.00	3.00	1.33	0.08	0.68	1.80	0.29
Year	69	1.00	4.00	1.29	0.09	0.73	2.29	0.29
Program	69	1.00	3.00	1.42	0.08	0.65	1.29	0.29
ACT	69	1.00	2.00	1.52	0.06	0.50	-0.09	0.29
GPA	69	1.00	2.00	1.54	0.06	0.50	-0.15	0.29

Table 3
Exploratory Factor Analysis

Constructs/Indicators	Factor Loadings	Mean	SD	Reliability	AVE
Intrinsic Motivation - Stimulate				0.84	0.86
Q15: For the pleasure that I experience when I read interesting authors.	0.91	3.29	1.83		
Q17: For the pleasure that I experience when I feel completely absorbed by what certain authors have written.	0.88	3.04	1.83		
Q21: For the "high" feeling that I experience while reading about various interesting subjects.	0.75	3.75	2.00		
Reciprocity				0.91	0.85
Q43: Otterbein values my contribution to its well-being.	0.73	5.19	1.55		
Q44: Otterbein shows concern for me.	0.84	5.50	1.59		
Q45: Otterbein takes pride in my accomplishments.	0.84	5.25	1.59		
Loss				0.75	0.67
Q53: I have thought about transferring from Otterbein because of the amount I owe.	0.69	2.43	2.03		
Q54: I have reduced my course load (i.e., dropped a class) because of the amount I owe.	0.81	1.25	0.86		
Q55: I have neglected my coursework because of the amount I owe.	0.82	2.13	1.77		
Activities				0.79	0.82
Q51: I have enough money to participate in the activities that I enjoy.	0.90	4.99	1.87		
Q56: I can afford a lifestyle similar to that of my closest friends at Otterbein.	0.77	4.28	1.99		

Table 4
Interitem Correlation Table

	Activities	IM Stimulate	Likelihood	Loss	Reciprocity
Activities	0.91				
IM Stimulate	0.16	0.92			
Likelihood	-0.46*	-0.24**	1.00		
Loss	-0.36*	-0.07	0.60*	0.82	
Reciprocity	0.37*	-0.02	-0.42*	-0.27**	0.92

Note: *p < 0.01; **p < 0.05; ***p < 0.1

Note: Bold figures indicate the square root of each constructs average variance extracted.

Table 5
Gender Group Differences

Unstandardized Beta Coefficients	Female	Male
Activities	-0.11	-0.29
Intrinsic Motivation – Stimulate	-0.28**	-0.04
Loss	0.47**	0.69*
Reciprocity	-0.35	-0.07
N	50	19
R ²	46%	82%

Note: *p < 0.01; **p < 0.05; ***p < 0.1

Table 6
Major Group Differences

Unstandardized Beta Coefficients	CLA	CPS
Activities	-0.01	-0.26**
Intrinsic Motivation – Stimulate	-0.04	-0.26*
Loss	0.53*	0.40**
Reciprocity	-0.39**	-0.22
N	46	17
R ²	50%	52%

Note: *p < 0.01; **p < 0.05; ***p < 0.1

Table 7
GPA Group Differences

Unstandardized Beta Coefficients	Low GPA	High GPA
Activities	-0.22	-0.02
Intrinsic Motivation – Stimulate	-0.31**	-0.08
Loss	0.25	0.87*
Reciprocity	-0.46*	-0.11
N	32	37
R ²	62%	84%

Note: *p < 0.01; **p < 0.05; ***p < 0.1

Table 8
ACT Group Differences

Unstandardized Beta Coefficients	Low ACT	High ACT
Activities	-0.09	-0.11
Intrinsic Motivation – Stimulate	-0.12	-0.15
Loss	0.38***	0.62**
Reciprocity	-0.48**	-0.22
N	33	36
R ²	63%	64%

Note: *p < 0.01; **p < 0.05; ***p < 0.1

Figure 1
Hypothesized Model

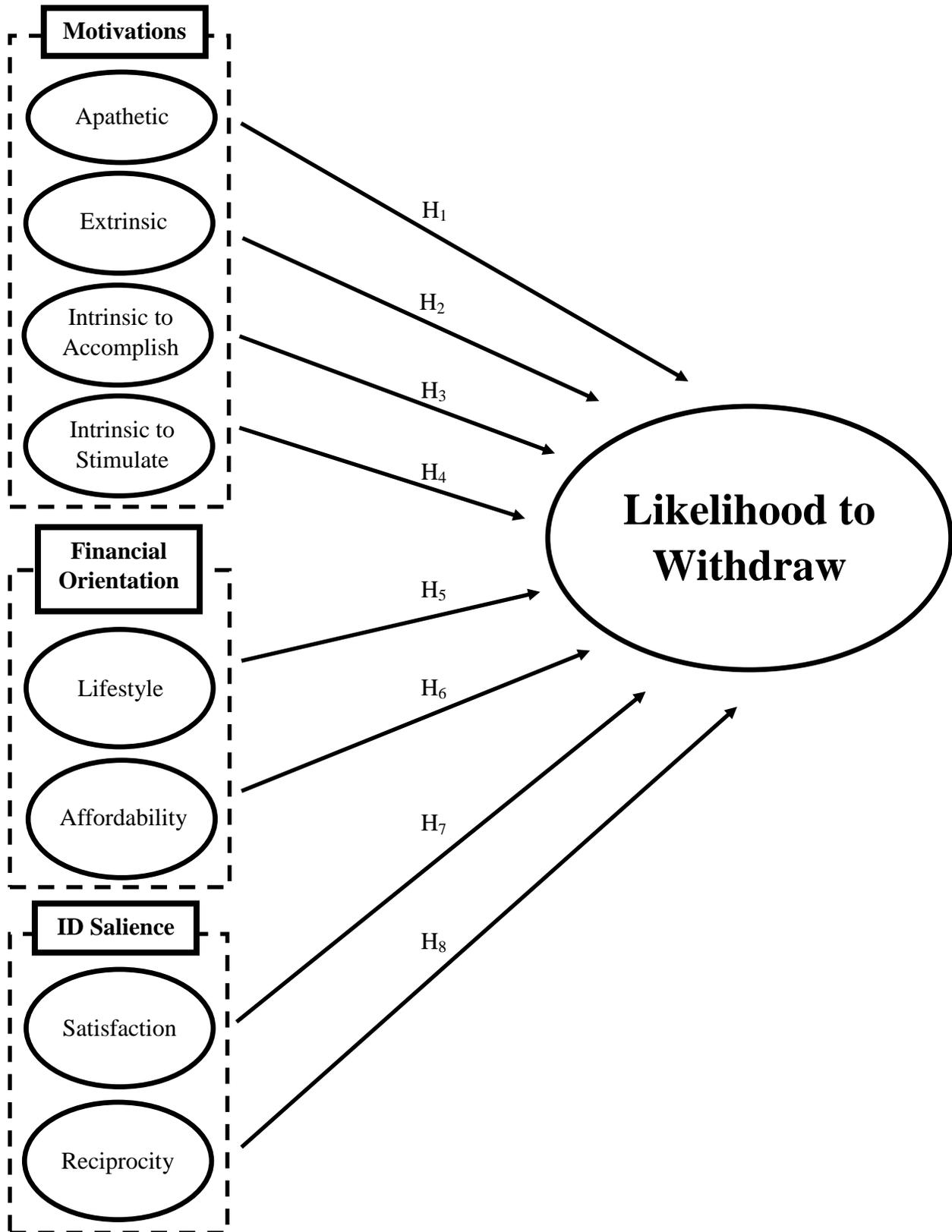


Figure 2
Measurement Model

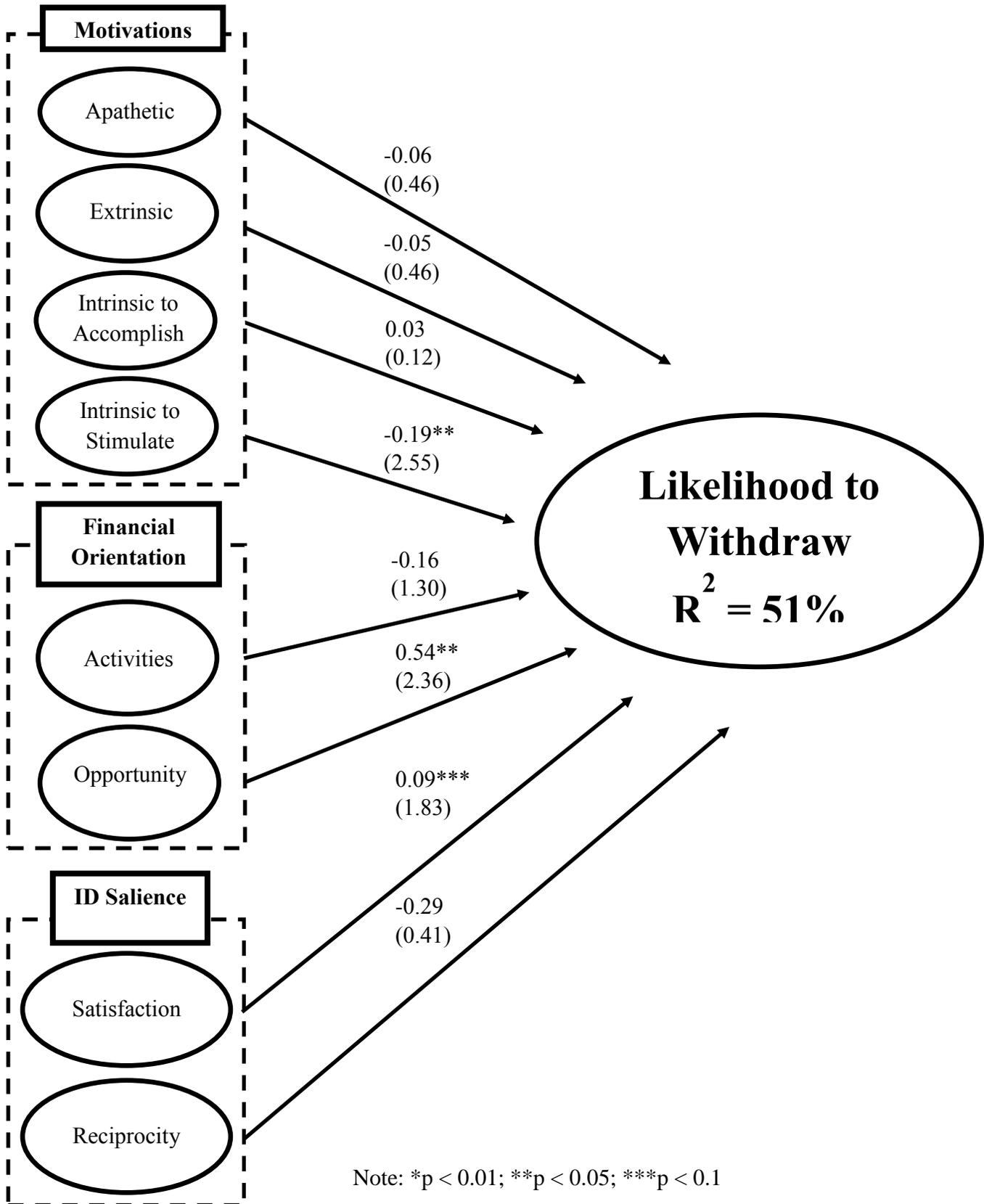


Figure 3
Reduced Model

