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**MATERIALISTIC VALUES AND WELL-BEING AMONG BUSINESS
STUDENTS: FURTHER EVIDENCE FOR THEIR DETRIMENTAL EFFECT**

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Materialistic Values and Well-being Among Business Students:
Further Evidence For Their Detrimental Effect

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Abstract

According to an environmental-match perspective regarding the content of values (Sagiv & Schwartz, 2000), extrinsic or materialistic values should positively predict well-being in populations in which extrinsic values match with the environmentally promoted values (e.g., among business students), while intrinsic values should positively predict well-being in populations in which intrinsic value pursuit is encouraged and reinforced. In contrast, according to other value researchers (Kasser & Ahuvia, 2002), attaching high importance to materialistic values should even negatively predict well-being in extrinsic value oriented environments. Although the present study shows that business students ascribe higher importance to extrinsic values than infant school teacher students, the negative relation of extrinsic values with well-being and the positive relation with internal distress and drug use was not moderated by the department students belonged to. Finally, mediational analyses revealed that value orientations could account for the fact that business students report lower well-being and higher drug use in comparison to infant school teacher students.

Materialistic Values and Well-being Among Business Students: Further Evidence For Their Detrimental Effect

Introduction

Currently, there is a debate going on concerning the type of associations that should exist between value orientations and well-being. Drawing on humanistic (Fromm, 1976; Maslow, 1954) and organismic (Deci & Ryan, 2000; Ryan & Deci, 2000) theorizing, some authors (Kasser, 2002; Kasser & Ahuvia, 2002) argue that being focused on extrinsic or materialist values, such as financial success, fame and physical appearance, rather than on intrinsic values, such as growth, community contribution and affiliation, is detrimental for people's well-being. Such an effect would occur because extrinsic goal pursuits relate to excessive interpersonal comparisons (Lyubomirsky & Ross, 1997) and unstable self-esteem (Kernis, Brown, & Brody, 2000), both of which relate negatively to well-being. Furthermore, extrinsically oriented individuals would less often engage in activities that can satisfy the psychological needs of autonomy, competence and relatedness (Deci & Ryan, 2000; Kasser, 2002; Ryan & Deci, 2000) that function as nutriments for one's well-being (La Guardia, Ryan, Couchman, & Deci, 2000; Sheldon, Elliot, Kim, & Kasser, 2001). For instance, extrinsic value pursuits tend to crowd out psychological need satisfying behaviors such as prosocial engagement and affiliation (Solberg, Diener, & Robinson, *in press*; Ryan, Sheldon, Kasser, & Deci, 1996).

In contrast, other researchers (Sagiv & Schwartz, 2000) claim that the associations between (materialistic) values and well-being depend on the match between people's value orientation and the type of values that are emphasized within their environments. Holding environmentally congruent values should be positively related to well-being. Thus, the relation between people's values and well-being would not as much depend on the content of the values that are held, but on the fit between these values and the values that are environmentally emphasized and encouraged. That is, if an environment provides opportunities to meet goals embodied in one's values, and provides support and reinforcement for the importance of such values, then holding environmentally congruent values should positively predict well-being regardless of its content. This hypothesis is also held by various organizational researchers (Meglino, Ravlin, & Adkins, 1989).

These two different positions result in diverging hypotheses concerning the relationship between materialistic values and well-being among business students. According to the position defended by Kasser and colleagues, an extrinsic value orientation should negatively predict well-being, even among business

students who are socialized in rather extrinsically oriented environments (Sagiv & Schwartz, 2000). In line with this hypothesis, Kasser and Ahuvia (2002) reported that, among a group of Singaporean business students, extrinsic values negatively predicted self-actualization, vitality and general happiness, while they were positively related to anxiety and physical complaints. Similar results were obtained by Srivastava, Locke, and Barthol (2001) among a group of entrepreneurs and business students.

However, from an environmental-match perspective, the well-being of extrinsically oriented business students should be enhanced, because holding extrinsic values is congruent with the type of values that are supported in a business school environment (Holland, 1985). In contrast, the well-being of, for instance, psychology students should be increased if they emphasize the attainment of community contribution, a value that is encouraged within their immediate environment. In fact, Holland (1985) classified psychology as an environment that stresses the importance of caring for and helping others. In line with this reasoning, Sagiv and Schwartz (2000) showed that there was no main effect of valuing power (i.e., an extrinsic value) over universalism (i.e., an intrinsic value) upon well-being, as indexed by satisfaction with life (Diener, Emmons, Larsen, & Griffin, 1985), positive affect (Bradburn, 1969), and general mental health (Becker, 1989), in a group of Israeli business and psychology students, but that the effect of value-orientation interacted with the type of environments people are placed in. In line with the environmental-match hypothesis, this interaction suggests that business students who emphasize power above universalism report more positive affect, higher life satisfaction, and better mental health, while psychology students report more optimal functioning when they value universalism over power.

These diverging findings may be due to the different type of value-measures used in both studies. While Sagiv and Schwartz use the Schwartz Value Inventory (1992), Kasser and Ahuvia assessed people's values with the Aspiration Index (Kasser & Ryan, 1996). Because the Aspiration Index was explicitly developed to distinguish between intrinsic and extrinsic values and to examine its relation with well-being, we decided to make use of this questionnaire in the current study.

Aims of the present study

The aim of this study is to further test these conflicting hypotheses, because there are only a few studies (Kasser & Ahuvia, 2002; Sagiv & Schwartz, 2000) that have directly researched these hypotheses. In doing so, we used a bigger sample of both business students ($N = 119$) and infant school teachers ($N = 129$) than was the case in past research. In addition, we elaborated on these previous studies in three different ways. First, next to measures of vitality, we also included a measure of life satisfaction (Diener, et al., 1985). Although this important well-being variable was assessed by Sagiv and Schwartz (2000), it was

missing in the study by Kasser and Ahuvia (2002). In addition, we also assessed the use of cigarettes, alcohol and other drugs. This was not considered in past value-research among business students in spite of the fact that some authors (e.g., Kasser & Ryan, 2001; Williams, Cox, Hedberg, & Deci, 2000) found that extrinsic values positively predicted the use of cigarettes and alcohol. These behaviors were interpreted as indicators of "self-medication". Extrinsically oriented individuals would be more prone to engage in these distracting activities as a way to cope with the lack of natural need satisfaction they experience during their extrinsic value pursuits (Kasser, 2002). Finally, we also included a measure of internal distress which was missing in past value research among business students. Second, we examined how being focused on intrinsic rather than extrinsic goals in general and on financial success vs. community contribution in particular relate to well-being. Although Kasser and Ahuvia (2002) found a negative effect of adopting an extrinsic value orientation among business students, this effect might have been due to the fact that the extrinsic value measure contained, next to financial success, also physical appearance and status/fame. It is likely that the pursuit of the latter two types of extrinsic values might be less supported in business school environments. Therefore, we explicitly focused on the effect of financial success, which is considered to be more strongly reinforced within business schools than within infant school teaching environments, vs. community contribution, which pursuit is considered to be more strongly encouraged within business schools than within infant school teacher environments. Finally, we want to examine whether any differences between the business and infant school sample in terms of vitality, life satisfaction, drug use and internal distress be a function of the type of values students hold. In other words, we explored whether value orientations would mediate differences in well-being between the two samples.

Method

Participants

Participants were 54 male and 65 female 18-20 year olds majoring in business studies (N = 119) and 21 male and 108 female 18-20 year olds studying to become infant school teachers (N = 129) at a Belgian college. Participants filled out the questionnaire package at the end of their regular school hours in small group sessions of 20-30 students. Students had thus been exposed to the environments that would match with their own values during nine months prior to their participation in the study. All participants had Belgian nationality and belonged to the Flemish-speaking part of the country. The translation into Flemish was done according to the guidelines of the International Test Commission (Hambleton, 1994), using the translation back-translation procedure (Brislin, 1980). Differences between the back-translated and the

original version were minimal. A committee of bilingual research assistants decided on the final Flemish version (Van de Vijver & Leung, 1997).

Measures

Values. Participants filled out the Aspiration Index (Kasser & Ryan, 2001), which assesses the importance people place on intrinsic and extrinsic values. Participants recorded whether they valued the extrinsic goals of financial success (e.g., 'I will have many expensive possessions'; Cronbach's Alpha = .73), fame (e.g., 'I will be admired by other people', Cronbach's Alpha = .97), and image (e.g., 'Achieving the 'good look' that your searching for'; Cronbach's Alpha = .82) and the intrinsic goals of growth (e.g., 'Developing yourself and learning new things'; Cronbach's Alpha = .70), community contribution (e.g., 'Helping people in need'; Cronbach's Alpha = .89) and affiliation (e.g., 'I will express my love for special people'; Cronbach's Alpha = .81) by encircling a number on a 7-point Likert scale. To support the classification into intrinsic and extrinsic values, a second order factor analysis with promax rotation was conducted on these six scales. Two interpretable factors (each defined by the three hypothesized scales) were found, explaining 77% of the variance. Each subscale had a minimal loading of .61 and no cross-loading above .30 were found. This provides support for the theoretically based distinction between intrinsic and extrinsic values, as found in other studies (Kasser & Ryan, 1996). Subsequently, an intrinsic value orientation score (Cronbach's Alpha = .86) and an extrinsic value orientation score (Cronbach's Alpha = .94) was constructed by summing and averaging the separate intrinsic and extrinsic subscales. Both factors were strongly negatively correlated in the present sample ($r = -.67, p < .001$).

Well-being. Participants completed the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) and the Vitality Index (Ryan & Frederick, 1997), which served as indicators of well-being. The Satisfaction with Life Scale is a widely used well-being measure, consisting of 5 items (e.g., 'I am satisfied with my present life') and intends to measure the cognitive component of subjective well-being (Diener, 1984). The 7-item vitality scale (e.g., 'I feel energized') measures the state of feeling alive and alert. The items of both scales were rated on a 5-point Likert scale. Cronbach's Alpha's were .94 for the Satisfaction with Life Scale and .96 for the Vitality Index, after omitting one item of the Vitality Index that considerably reduced the internal consistency of the scale. Because both scales were highly correlated ($r = .93, p < .001$), they were combined to form a single index of well-being.

Internal Distress. The measure used for this variable is the Internal Distress Scale (IDS; Weinmann, 1992) which is composed of 13 items derived from the Depression Scale of the Center for Epidemiologic Studies (CES-D; Radloff, 1977). Items refer to somatic and psychological symptoms of internal distress,

like headaches, stomachaches, colds, anxiety, tension, and depression. Participants were asked to indicate how often experienced each symptom over the past month by encircling a number on a 4-point Likert, varying between 0 (Never) and 3 (Often). Cronbach's alpha of in the present sample was .78.

Use of drugs. Participants indicated on a 4-point Likert scale to what extent they had engaged in cigarette, alcohol and drugs use since the beginning of the academic year (0 = Never, 1 = Seldom, 3 = Sometimes, 4 = Often). Internal consistency of this 5-item scale was satisfactory ($\alpha = .71$).

Results

Preliminary Analyses

Two different hypothesis were derived and tested on the basis of the description of both departments. First, it was expected that business students would, on average, more strongly emphasize extrinsic values in general and financial success in particular. In contrast, infant school teacher students were expected to attribute higher importance to intrinsic values in general and community contribution in particular. The means of the emphasis placed on each of the values by both departments are reported in Table 1. Independent t-tests (See Table 1) revealed that infant school teachers more strongly valued each of the intrinsic values and less strongly valued each of the extrinsic values compared to the business students. Importantly, in line with our reasoning, the largest effects were obtained for community contribution ($t(246) = -12.9, p < .001$) and financial success ($t(246) = 29.8, p < .001$). Second, we examined within-group differences in attributed importance to community contribution and financial success. As expected, independent sample t-tests indicated that business students more strongly emphasized the pursuit of financial success rather than community contribution ($t(118) = 15.1, p < .001$), whereas infant school teachers more strongly valued community contribution than financial success ($t(128) = -23.0, p < .001$). These findings replicate the results obtained by Sagiv and Schwartz (2000) and indicate that, as expected, business students are highly oriented towards wealth, while infant school teachers primarily focus on contributing to the community, presumably because these are the types of values emphasized within their immediate environments.¹

Correlational Analyses

In line with Kasser and Ahuvia (2002) and Sagiv and Schwartz (2000), in a first step, we considered the correlations between the intrinsic and extrinsic values and the three outcome variables (i.e. well-being, internal distress and the use of drugs). These correlations can be found in Table 2. Each of the three intrinsic values was positively related to well-being and negatively to drug use, while growth and community contribution were also negatively related to internal distress. Each of the three extrinsic values was

negatively related to well-being. Both financial success and physical appearance were also negatively related to drug use, and physical appearance was negatively related to internal distress. Only four out of 18 correlations between the values and the outcome variables were not significant. However, each of them went in the predicted direction. In addition, both the overall intrinsic and extrinsic value orientations were significantly related (in the expected direction) to the three outcome variables.

Regression analyses

To further test our hypotheses, hierarchical regression analyses were conducted. Each of the three outcome measures was predicted by entering students' department (business students = 1, infant school teachers = 2) and gender in a first step, their values in a second step, and the interaction between department and values as well as the interaction between gender and values in a final step. If the claim of Sagiv and Schwartz' (2000) that the degree of experienced well-being depends on the fit between the environment (i.e., department) and the person (i.e., individual value orientation) is correct, the interaction term should explain a significant amount of variance in the outcome variables.

Two different sets of regression analyses were executed, because two different measures reflecting the relative importance placed on intrinsic versus extrinsic values were constructed. The first regression contained people's overall intrinsic value orientation relative to their extrinsic value orientation as an independent variable, while the second yielded the importance attributed to community contribution relative to financial success as a predictor. The value predictors were constructed by subtracting the mean of extrinsic values from the mean of intrinsic values for the first regression, and by subtracting the mean for financial success from the mean for community contribution for the second. This procedure is analogous to the one used by Sagiv and Schwartz. This procedure was also supported by the present data, because both intrinsic and extrinsic value orientations and community contribution and financial success were strongly negatively related ($r = -.67, p < .001$ and $r = -.65, p < .001$). Based on the environmental-match hypothesis, we especially expected that the interaction term in the second regression, when using community contribution vs. financial success as value predictor, would turn out to be significant, because these types of values are most differentially valued in both departments.

Regression analyses indicated that infant school teacher students reported higher well-being ($\beta = .15, p < .05$) and less engagement in drug use ($\beta = -.34, p < .001$) than business students. No differences were found for internal distress ($\beta = -.06, ns$). Furthermore, both the intrinsic vs. extrinsic composite score and the community contribution vs. financial success composite score positively predicted well-being ($\beta = .32, p < .01$; $\beta = .31, p < .01$) and were negatively related to drug use ($\beta = -.24, p < .01$; $\beta = -$

.36, $p < .01$) as well as internal distress (beta = -.28, $p < .01$; beta = -.31, $p < .01$). Most importantly, the interaction between department and each of the composite value scores was not significant for any of the outcome variables (beta's ranging between -.06 and .01, *ns*), suggesting that the effect of value orientation on well-being is not dependent upon the type of values that are emphasized within the environment. Apparently, the upholding of extrinsic values also constitutes a psychological cost for people who are placed in an environment that supports their extrinsic goal pursuits. The independent variables explained a significant portion of the variance in each of the three outcome variables (R^2 between .03 and .16, $p < .05$).

Mediational Analyses

A final aim of the present study was to examine whether the difference in well-being between the two student samples would be mediated by the type of values people hold. In order to determine whether the value orientations mediate the relations between type of department and the outcome variables, tests of mediation were conducted. Each test consisted of checking four necessary conditions for strict mediation (Baron & Kenny, 1986). (a) The independent variable predicts the dependent variable. (b) The independent variable predicts the mediating variable. (c) The mediator is related to the dependent variable, even after controlling for the independent variable. (d) The effect of the independent on the dependent variables disappears after statistical control for the mediator.

First, analyses show a significant effect of type of department on well-being and drug use, but not on internal distress. Therefore, the mediational analyses for internal distress was not continued. Second, the effect of type of department on the mediator variables (i.e., the two composite value scores) was also significant. Infant school teachers were more strongly oriented towards intrinsic than extrinsic values ($r = .78$, $p < .001$) and more strongly emphasized the attainment of community contribution than financial success ($r = .86$, $p < .001$). Third, after correcting for type of department, the intrinsic vs. extrinsic value composite score positively predicted well-being (beta = .32, $p < .05$) and was negatively related to drug use (beta = -.24, $p < .05$). Similarly, the community contribution vs. financial success composite positively predicted well-being (beta = .31, $p < .05$) and it negatively predicted drug use (beta = -.36, $p < .05$). Finally, when the intrinsic vs. extrinsic value composite was taken into account the significant effect of type of department on well-being and drug use (betas = -.10 and -.15, *ns*). Similarly, the significant effect of department on well-being and drug use disappeared after entering the community contribution vs. financial success composite (betas = -.11 and -.03, *ns*). Hence, it can be concluded that the type of values students hold fully mediates the relationship between the type of department they belong to and the outcome variables (i.e., well-being and drug use).

Discussion

The goal of the present study was to shed light on the relationship between extrinsic values and well-being among business studies, an issue that deserves further attention against the background of a recent debate in the literature. Specifically, some authors (Kasser & Ahuvia, 2002) claim that extrinsic values are negatively related to well-being, regardless of the type of values that are promoted within the environment, and, hence, that an extrinsic value orientation should also negatively predict well-being among people living in an extrinsically oriented environment (e.g., business students). In contrast, others (Sagiv & Schwartz, 2000) posit that the effect of the content of values depends on the match between one's own values and the values that are stressed within the environment. As a consequence, extrinsic values should positively predict well-being among people living in an extrinsically oriented environment, while intrinsic value should only be positively related to well-being among people living in an intrinsically oriented environment (e.g., infant school teachers). Past research provided evidence for both perspectives.

The present study demonstrates that extrinsic goals are strongly valued by business school students, while infant school teachers ascribe higher valence to intrinsic values. In line with Sagiv and Schwartz' (2000) description of both departments, the largest effects between both departments were found for community contribution and financial success. Specifically, it appears that especially the extrinsic value of financial success is a crucial aspect of business students' value systems, while the intrinsic value of community contribution is not so important to them. The reverse is true for infant school teacher students who emphasize more strongly the attainment of community contribution over financial success. In line with Holland (1985) and Sagiv and Schwartz (2000), we speculate that this differential importance placed on these two types of values reflects the different types of values promoted within each environment. As a consequence, it is particularly important to explore how being more focused on wealth relative to helping people in need differentially predicts well-being in both samples. This question has not been addressed yet in previous research which only considered the effect of an overall extrinsic vs. intrinsic value orientation among business students (Kasser & Ahuvia, 2002). The present study reveals that focusing on financial success relative to community contribution undermines well-being, increases the engagement in drug use, and is positively associated with internal distress. The absence of an interaction between type of values and type of department (business schooling vs. infant teacher schooling) suggests that the negative effect of valuing financial success over community contribution on well-being also occurs among people who find themselves in an environment that presumably supports the attainment of extrinsic values. A similar pattern of findings emerged when considering the overall effect of intrinsic vs. extrinsic values. These results

provide evidence for the assumption of Kasser and Ahuvia (2002) that extrinsic values negatively predict well-being and optimal functioning even within environments that reinforce and encourage the pursuit of such values.

In addition, the present study revealed another interesting finding. The mean differences in self-reported well-being and drug use between business students and infant school teacher students could be fully explained by the type of values that each group was primarily concerned about. Business students are less satisfied with their present lives, feel less vital and engage in more self-medication behaviors just because they are more oriented towards wealth than towards helping people in need. These findings are consistent with Sheldon and Krieger's (2003) observation that law students report a decrease in well-being from the beginning to the end of their first year in law school partly because they become more heavily oriented onto the attainment of extrinsic goal-pursuits.

Limitations and Suggestions

Although the results of the present study are quite straightforward, a few limitations need to be mentioned. First, the present results are based on self-reports and are cross-sectional in nature. It would be instructive to obtain objective scores of students' psycho-social functioning in order to obtain more evidence for the validity of these relationships. In line with Sheldon and Krieger (2003), it would also be important to obtain longitudinal data as to explore whether an increase in extrinsic value pursuits, under the influence of students' immediate environment, would account for a possible decline in well-being. Second, past value-studies assumed that the type of values students hold are influenced by the type of values reinforced within their immediate environments. However, no previous study directly assessed the type of values prevailing in students' environments. So, future research might well incorporate such environmental value measures as to determine whether the different types of values held by both groups of students are indeed influenced by the school environments they are socialized in. Third, in line with other researchers' suggestions (Deci & Ryan, 2000; Williams, Cox, Hedberg, & Deci, 2000), we reasoned that extrinsically oriented individuals might engage in self-medication behaviors such as cigarette, alcohol and drug use in order to compensate for the lack of psychological need satisfaction they experience because of their pursuit of materialist goals. In a similar vein, the lack of experienced psychological need satisfaction might well explain the undermining of their well-being and the presence of internal distress, but future research should explore this mediating hypothesis.

We conclude by stating that one possible reason why the present study and the research by Kasser and Ahuvia (2002) reveal a different picture than Sagiv and Schwartz (2000) is because business students'

values were differently assessed. While Sagiv and Schwartz (2000) used the Schwartz Value Inventory (Schwartz, 1992), Kasser and Ahuvia (2000) used the Aspiration Index (Kasser & Ryan, 1996) to assess intrinsic and extrinsic values. The latter might more accurately represent the type of extrinsic values that self-determination theory (Deci & Ryan, 2000; Ryan & Deci, 2000) focuses on, namely the tendency to focus on external signs of worth and success. It would be instructive for future research to include both the Schwartz Value Inventory and the Aspiration Index to explore which values of Schwartz' questionnaire cluster together with people's intrinsic and extrinsic aspirations as measured by Kasser and Ryan (1996). This could possibly help to better understand the conflicting evidence reported in the literature.

Authors Note

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Foot notes

- ¹ Independent sample t-tests indicated that male participants ascribed higher importance to extrinsic values ($t(246) = 3.42, p < .001$) than female participants. In contrast, women were more strongly oriented towards intrinsic values than men ($t(246) = 3.42, p < .001$). No differences were found between male and female participants for well-being and internal distress, but male subjects reported to engage more in cigarette, alcohol and drug use than female subjects ($t(246) = 6.14, p < .001$). Therefore, we decided to control for gender in all of the subsequent analyses.

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Table 1 *Means and standard deviations for intrinsic and extrinsic values among business and infant school teaching students*

	Business students		School teachers		t-value
	Mean	SD	Mean	SD	
Intrinsic Values	5.15	0.46	5.48	0.28	-13.8 ***
Growth	5.60	0.34	6.03	0.43	-8.9 ***
Community Contribution	3.90	0.97	5.27	0.70	-12.9 ***
Affiliation	5.88	0.31	6.24	0.42	-7.7 ***
Extrinsic Values	4.01	0.87	2.20	0.69	18.3 ***
Financial Success	5.76	0.56	2.80	0.93	29.8 ***
Fame / Image	2.22	1.42	1.54	0.61	4.9 ***
Physical Appearance	4.06	1.00	2.25	0.90	14.9 ***

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

Table 2 *Correlations between intrinsic and extrinsic values and outcome variables*

	Well-being	Use of Drugs	Internal Distress
Intrinsic Values	.26 ***	-.31 ***	-.15 *
Growth	.27 ***	-.27 ***	-.14 *
Community Contribution	.19 **	-.24 ***	-.14 *
Affiliation	.23 ***	-.29 ***	-.07
Extrinsic Values	-.22 ***	.36 ***	.13 *
Financial Success	-.21 ***	.44 ***	.12
Fame / Image	-.15 *	.10	.10
Physical Appearance	-.22 ***	.34 ***	.13 *

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

Table 3 *Unstandardized beta weights for the paths in the mediational analyses*

	Step	Department	I / E	CC / FS	R ²
Well-being	Step 1	.15 *	—	—	.02 *
	Step 2	-.10	.32 **	—	.06 **
	Step 3	-.11	—	.31 *	.05 *
Use of drugs	Step 1	-.35 **	—	—	.12 **
	Step 2	-.15	-.26 **	—	.15 **
	Step 3	-.03	—	-.37 **	.15 **

Note: Step 1 refers to the path from the independent to the dependent variable.

Step 2 refers to the path from the mediator to the dependent variable controlled for the independent variable.

Step 3 refers to the path from the independent variable to the dependent variable controlled for the mediating variable.

R² = variance explained in the dependent variable.

I / E = Intrinsic vs. extrinsic values.

CC / FS = Community contribution vs. financial success.

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