



Materialism, Social Stratification, and Ethics: Evidence from SME Owners in China

| | |
|------------------|---|
| Journal: | <i>International Journal of Entrepreneurial Behavior & Research</i> |
| Manuscript ID | IJEBR-11-2017-0435.R2 |
| Manuscript Type: | Research Paper |
| Keywords: | Entrepreneurs, SMEs, Motivation |
| | |

SCHOLARONE™
Manuscripts

Materialism, Social Stratification, and Ethics: Evidence from SME Owners in China

Abstract

Purpose

The study of business ethics has seldom shed light on small- and medium-sized enterprises (SMEs) despite their theoretical and practical significance. Drawing from strain perspective, this research intends to address this insufficiency and investigate SME owners' ethical attitudes towards money-related deviances.

Design/methodology/approach

Based on a large sample of 741 Chinese SMEs, an OLS regression analysis was employed to test associated hypotheses. The robustness of results was additionally checked.

Findings

Results suggest that for stratification variables, education level is positively related to ethical attitudes, whereas household income level is surprisingly negatively associated with ethical attitudes; for materialism facets, success and happiness exert a negative impact on ethical attitudes as hypothesized, but centrality has no associated impact.

Research limitations/implications

This study has examined both structural and motivational sources of personal strains on the ethical attitude of SME owners, while the characteristics of these strains could be explored in

the future studies.

Originality/value

This study advances and complements the dominant behavior approach that emphasizes cognitive and other psychological processes in explaining individual ethical attitudes. It is also seemingly the first study to examine the influence of three materialism facets on entrepreneurial ethical attitudes.

Keywords. Ethical attitude towards money-related deviances, strain theory, social stratification, materialism dimensions, SMEs

Paper type: Research paper

Introduction

Compared to managers especially in large companies, small- and medium-sized enterprise (SME) owners has been seldom empirically investigated in respect of their ethical attitudes (Cullen et al., 2004; Fernandez and Camacho, 2016). This research insufficiency deems problematic as there are a prevalent number of SMEs in the world economy and the ethical inclination of SME owners tends to exert a far more direct influence on business acts than managers (De Clercq and Dakhli, 2009). Ethical attitudes capture the essence of individual ethical reasoning (O'Fallon and Butterfield, 2005; Craft, 2013), which refers to individuals' unwillingness to justify behaviors that are generally considered ethically suspect

1
2
3 solutions to ethical dilemmas (Cullen et al., 2004, p. 412; De Clercq and Dakhli, 2009). This
4
5 unwillingness is a crucial moral component that precedes actual action (Craft, 2013).
6
7 Specifically, this study focuses on SME owners' ethical attitudes towards money-related
8
9 deviances; these attitudes depict the owners' moral stance towards pecuniary gains that are
10
11 derived from deviant behaviors (Cao, 2007). Because money is a utility metric, an ethical
12
13 dilemma involving pecuniary elements usually entails an inconsistency between market
14
15 pricing and social norms (Au and Tse, 2001; Kouchaki et al., 2013). It represents the situation
16
17 that SME owners frequently encounter while seldom empirically investigated (Kouchaki et
18
19 al., 2013).
20
21
22
23
24

25 In the business ethics research, descriptive moral theoretical models (e.g., Kohlberg,
26
27 1981; Rest, 1986; Trevino, 1986) interpreting ethical attitudes generally rely on a behavior
28
29 approach, which stresses an individual's cognitive and other psychological processes to arrive
30
31 at an ethical stance. Empirically, Rest's four-component model (Rest, 1986) usually enhanced
32
33 by planned-behavior theory (Ajzen, 1991) constitutes a foundational framework to explain
34
35 individual moral reasoning (O'Fallon and Butterfield 2005; Craft, 2013). Despite its
36
37 significance, this behavior-oriented explanation sheds little light on the *social root* of ethical
38
39 attitudes (Cullen et al., 2004; De Clercq and Dakhli, 2009). Little is known about how
40
41 variations in the personal strains of SME owners are reflected in their ethical stance. Strain
42
43 refers to the tension that SME owners can experience as a result of the incongruence between
44
45 their economic aspirations and the availability of legitimate methods of achieving their goals
46
47 (Cullen et al., 2004). The lack of attention to strain factors in relation to entrepreneurial
48
49 ethical stance is surprising because SMEs owners usually encounter severe constraints in
50
51
52
53
54
55
56
57
58
59
60

1
2
3 their daily business operations (De Clercq and Dakhli, 2009). The engagement of a strain
4 explanation provides a unique sociological angle from which to view ethical issues because
5
6 SME owners can be pressured into justifying *economic* deviant acts when conventional
7
8 methods of achieving their aspirations are blocked by social conditions (Agnew, 1992; De
9
10 Clercq and Dakhli, 2009).
11
12
13
14

15
16 Strain theory is employed for this study to understand SMEs owner's propensity to
17
18 commit illicit behaviors clung to money (Agnew, 1992; Moon et al., 2009). The key tenet of
19
20 this theory, which highlights the role of the tension in ethical reasoning, is well applicable for
21
22 Chinese SME owners. They usually experience substantial strain pressure because of their
23
24 limited access to resources (Ahlstrom and Ding, 2014; Lee, Lim, and Tan, 1999). Industrial
25
26 policies in China explicitly or implicitly restrict SMEs that are primarily privately owned
27
28 from profitable upstream sectors. Chinese SME owners usually struggle to survive their
29
30 businesses in fierce and undifferentiated competitions (Zhao, 2009). A constrained access to
31
32 credit is another challenge facing Chinese entrepreneurs as the banking system in China does
33
34 not favor ordinary SMEs (Ahlstrom and Ding, 2014; Fagan and Zhao, 2009).
35
36
37
38
39

40 Specifically, the current study investigates two major sources of personal strain: social
41
42 stratification and materialism. In strain theory, social stratification captures the primary
43
44 structural reason that individuals are willing to accept deviant acts (Featherstone and Deflem,
45
46 2003). A stratified social structure embodies unevenly distributed access to one's aspirations
47
48 because the chances of being economically successful are not evenly distributed among social
49
50 classes (Merton, 1968). Materialism captures the aspirational aspect of individuals'
51
52 justification of economic misconduct. Highly materialistic individuals experience strain
53
54
55
56
57
58
59
60

1
2
3 pressures when their material aspirations outpace their real conditions (Bernburg, 2002;
4 Johnson and Duberley, 2011). In line with Richins and Dawson (1992) and Richins (2004),
5
6 materialism refers to the importance that SME owners attribute to material possessions and
7
8 associated acquisition in their lives. This conceptualization of materialism fits the notion of
9
10 assimilated prevalent economic values in strain theory better than other treatments such as
11
12 personal traits (Belk, 1985) and behavior (Micken and Roberts, 1999).
13
14
15
16
17

18 Materialism is a multi-faceted construct and conceptually encompasses three domains:
19
20 the judgment of success based on material possessions, the central focus of acquisition in
21
22 one's life, and the belief that material possessions and acquisition lead to happiness
23
24 (Kilbourne et al., 2005; Richins, 2004). In the interest of brevity, the terms *success*, *centrality*,
25
26 and *happiness* are used to refer to these facets. Contextually, materialistic values are
27
28 evidently pervasive in the present China (Sun et al., 2014; Yang and Stening, 2012), which
29
30 are not only manifested by Chinese consumers topping in luxury products shopping,
31
32 accounting for around one-third of global sales (Hancock, 2017), but also witnessed by
33
34 popular slogans such as “to be rich is glorious” and “it doesn't matter if a cat is black or
35
36 white, so long as it catches mice” that prioritize economic goals in the society (Yang and
37
38 Stening, 2012, p. 443).
39
40
41
42
43
44

45 Drawing from strain theory, this study seeks to address the following questions. First,
46
47 how do stratifications variables—namely income and education level for this study—affect
48
49 ethical attitudes towards money-related deviances? Second, how do dimensions of
50
51 materialism—namely, success, centrality and happiness—relate to ethical attitudes towards
52
53 money-related deviances? To answer these questions, this study analyzed data collected from
54
55
56
57
58
59
60

1
2
3 741 SME owners in China. SMEs refer to companies with fewer than 250 employees
4
5
6 (Musteen et al., 2014).
7

8 This paper is structured as follows. Before discussing methodological aspects, this study
9
10 reviews the literature and develop hypotheses. In the penultimate section, the results of the
11
12 statistical analysis are presented and discussed. The final section analyzes the study's
13
14 implications, its associated limitations and future research directions.
15
16
17
18
19

20 **Theoretical Background and Hypotheses**

21
22
23 In the field of business ethics, Rest's (1986) four-component model serves as the
24
25 groundwork (O'Fallon and Butterfield 2005) for understanding ethical attitude and behaviors.
26
27 The model consists of four components including moral awareness (ability to discern ethical
28
29 issues), moral judgement that is similar to ethical attitude (De Clercq and Dakhli, 2009),
30
31 moral motivation (prioritization of moral values), and moral character (perseverance in a
32
33 moral event). Each one has certain impact on other components and these components
34
35 precede ethical action. Frequently some elements derived from planned-behavior theory
36
37 (Ajzen, 1991) and Jones' (1991) issue-contingent model are incorporated into Rest's (1986)
38
39 model to enrich contextual conditions. Consequently, extant explanations for ethical
40
41 decision-making are primarily built on individual ethical competence and personal moral
42
43 character that interact with contextual situation including characteristics of the moral event
44
45 and organizational factors (Jones, 1991). Coherent with ethics research (Craft, 2013),
46
47 substantial evidence in the field of entrepreneurship suggests that individual psychological
48
49 and cognitive characteristics (Warren and Smith, 2015; Fischer et al., 2017) along with
50
51
52
53
54
55
56
57
58
59
60

1
2
3 specific operations and financing situation (Johnsen and Sørensen, 2017; Pollack and Bosse,
4 2014) are responsible for entrepreneurs' decision-making for engaging into deviance.
5
6

7
8 Nevertheless, little research attention has been hitherto given to social conditions
9 attached to entrepreneurs and their ethical implications (De Clercq and Dakhli, 2009). It is
10 surprising as many entrepreneurs are aspirant to upgrade their socioeconomic positions in
11 societies (Frid et al., 2016), while their conventional ways to attain the aspiration are usually
12 obstructed by inherent social conditions (Agnew, 1992). Frequently it is the frustration rather
13 than inability to identify ethical issues, which leads SME owners into justifying their
14 unethical behaviors (De Clercq and Dakhli, 2009). An absence of sociological explanation to
15 entrepreneurial ethical decision-making may produce "...an illusory representation of reality
16 that effectively distorts and obscures the actual material interests and power relations between
17 social classes" (Johnsen and Sørensen, 2017, p. 231).
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34

35 *Strain Theory*

36 Strain theory asserts that individual deviances have social roots (Featherstone and
37 Deflem, 2003). It posits that personal strains introduced by social circumstances are a
38 primary cause of crimes (Agnew, 1992; Baumer, 2007). Although Durkheim (1897) initiated
39 this view, its classic version was formulated by Merton's (1938) influential essay 'Social
40 Structure and Anomie'. In sociology, this perspective and its associated variants represent
41 one of the most-cited frameworks for explaining instrumental illicit behaviors (Agnew, 2001;
42 Moon et al., 2009).
43
44
45
46
47
48
49
50
51
52
53

54 Insightfully Merton (1938) concentrates on *access* to socially prescribed goals that is
55
56

1
2
3 depicted as universally emphasized monetary success in his theory. From Merton's (1938)
4
5
6 view, the unequal distribution of legitimate access to economic aspirations among individuals
7
8 in various social classes is responsible for crime. Specifically, the lower classes are provided
9
10 with fewer legitimate methods of achieving monetary success, potentially pressuring them to
11
12 upgrade their position by accepting methods that violate either societal norms or laws
13
14 (Baumer, 2007; Messner and Rosenfeld, 2009). For Merton, strain derived from an
15
16 individual's position in a socially stratified structure, which determines the provision of
17
18 economic opportunities, is the very reason for deviance. In particular, this study focuses on
19
20 Chinese SME owners' household income and education level. These income and education
21
22 classification variables address the differentiated accessibility to financial and intellectual
23
24 resources that is critical for SME owners' economic success (Lee et al., 1999; Pompe, 2013,
25
26 Kirkwood 2016). In addition, the selection of these two variables embraces the essence of
27
28 social stratification in strain theory (e.g. Cao, 2007; De Clercq and Dakhli, 2009).
29
30
31
32
33
34

35
36 Socially prescribed goals do not represent a focal issue in Merton's theory and have not
37
38 been configured as a source of strain (Johnson and Duberley, 2011). This is unsurprising
39
40 because the emphasis on economic success was indispensably embedded in the liberal market
41
42 economy ideology (Maume and Lee, 2003; Messner and Rosenfeld, 2001). Nevertheless,
43
44 strain theorists have recently advocated that not only structured opportunity access but also
45
46 the fetishism of materialistic achievement should account for deviances (Bernburg, 2002;
47
48 Johnson and Duberley, 2011; Messner and Rosenfeld, 2001). For instance, Messner and
49
50 Rosenfeld (2001, p. 5) argue that the overarching problem is the goal of materialistic success
51
52 and 'the drive to succeed entails criminogenic consequences for the lower and upper classes
53
54
55
56
57
58
59
60

1
2
3 alike'. Similarly, both Bernburg (2002) and Johnson and Duberley (2011) suggest that an
4
5 exaggerated emphasis on individuals' monetary achievement fosters the commodification of
6
7 the self and leads to the adoption of the most technically efficient way to achieve one's goals.
8
9 These researchers believe that individuals' strong materialism, along with social stratification,
10
11 could be another source of personal strain. This study incorporates both this theoretical
12
13 advancement and Merton's classic stratification reasoning into the current investigation of
14
15 Chinese SME owners' ethical attitudes towards money-related deviances.
16
17
18
19
20
21
22

23 *Social Stratification and Ethical Attitude toward Money-Related Deviance*

24
25 *Household Income.* Economic issues represent a major aspect of personal strain
26
27 (Messner and Rosenfeld, 2001). According to strain theory, the tension experienced by
28
29 individuals in pursuit of their economic success is substantially subject to their financial
30
31 wealth (Agnew, 1992; Agnew et al; 2002; De Clercq and Dakhli, 2009). This investigation
32
33 estimates that SME owners with lower household incomes may experience a greater degree
34
35 of frustration because their limited wealth constitutes a financial barrier to their business
36
37 growth and reminds them of their inability to operate their businesses successfully (Boyd and
38
39 Gumpert, 1983; De Clercq and Dakhli, 2009). The drawback effect of financial constraints
40
41 could be exacerbated for SME owners because they seldom receive credit from the
42
43 state-owned banking sector (Ahlstrom and Ding, 2014, Frid et al. 2016). This painful
44
45 blockage, reinforced by a sense of alienation from society, may drive them to consider
46
47 justifying an approach to accumulating financial wealth that violates socially accepted norms
48
49
50
51
52
53
54
55 (De Clercq and Dakhli, 2009). Prior entrepreneurship research has found that entrepreneurs
56
57
58
59
60

1
2
3 make ethical compromises or lower their ethical standards when experiencing financial
4
5 constraints (Morris and Zahra, 2000; De Clercq and Dakhli, 2009). In comparison, SME
6
7 owners in the higher household income category are more likely to enjoy financial
8
9 advantages in exploring the economic opportunities provided by the current social system and
10
11 therefore do not seem to be prone to pursuing monetary gains by accepting behaviors that
12
13 violate societal norms. Therefore, this study hypothesizes the following:
14
15
16

17
18 *Hypothesis 1: SME owners' household income is positively related to their ethical*
19
20 *attitude towards money-related deviance.*
21
22

23 *Education level.* Strain theory suggests that education should decrease entrepreneurial
24
25 willingness to justify money-related deviances by curbing aspects of personal strain (De
26
27 Clercq and Dakhli, 2009). For Chinese SME owners, higher levels of education enable them
28
29 to develop important analytical or bricolage ability and skills (Baker and Nelson, 2005) to run
30
31 their business, which could alleviate economic pressures from the environment, resources,
32
33 stakeholders, or time in business operations (Cooper et al., 1997). Moreover, prior evidence
34
35 suggests that higher education substantially enriches and diversifies individual values
36
37 (Inglehart, 1997). Higher-educated SME owners may attach greater importance to spiritual
38
39 aspects of success such as self-actualization or quality of life than to societally endorsed
40
41 monetary aspects (Inglehart, 1997), which consequently releases associated economic strain.
42
43 Finally, Chinese SME owners with higher levels of education are expected to have received
44
45 ethics education and have learned more about Chinese traditional virtues such as Confucian
46
47 ethics (Ji and Dimitratos, 2013), which are likely to discourage egoism and the pursuit of
48
49 economic self-interest (Cullen et al., 2004; Agnew et al., 2002). Thus, this study hypothesizes
50
51
52
53
54
55
56
57
58
59
60

as follows:

Hypothesis 2: SME owners' educational level is positively related to their ethical attitudes towards money-related deviances.

Materialism and Ethical Attitude towards Money-Related Deviance

Among several conceptualizations, Richins and her colleague's work (Richins and Dawson, 1992; Richins, 2004) constitutes the most influential one (Kilbourne and LaForge, 2010; Sun et al., 2014), viewing materialism as a system of individual values. The materialistic value system notionally encapsulates three domains, namely, acquisition, centrality, and possession-oriented success and happiness, representing a three-dimensional solution to capture the essences of materialism (Kilbourne et al., 2005). This construct is of importance in various disciplines because prior research has revealed that individuals' overemphasis of possessions has various individual consequences in areas such as subjective well-being (Burroughs and Rindfleisch, 2002), psychological functioning (Flouri, 2005), locus of control (Christopher et al., 2009), construal level (Kim, 2013), life satisfaction (Roberts and Clement, 2007), and addictive buying (Otero-López et al., 2011).

With regard to ethical attitudes, strain theorists (Bernburg, 2002; Johnson and Duberley, 2011; Johnson and Smith, 1999; Maume and Lee, 2003) argue that materialistic SME owners are apt to experience more frustrations than their less materialistic counterparts because their insatiable desire for possessions cannot be matched by their limited access to resources (Morales and Holtschlag 2013). In turn, these lasting frustrations may shape SME owners' ethical stance towards money-related deviances (Agnew, 2001). Specifically, the premise of

1
2
3 strain theory suggests four reasons that SME owners higher in centrality, success, and
4 happiness are more likely to justify their money-related deviance. First, high-materialism
5
6 SME owners focus on material acquisition in their lives. They attach greater importance to
7
8 material ends than the legitimacy of means when the two aspects are not in congruence
9
10 (Messner and Rosenfeld, 2009). When the tension derived from this inconsistency is present,
11
12 they are prone to justify ethically suspect solutions to achieve monetary goals. Second,
13
14 materialists are more likely to have low-level construal minds, which are associated with
15
16 concrete objects, than high-level construal minds (Kim, 2013). Highly materialistic SME
17
18 owners' specifications of success and happiness in terms of the quantity and quality of
19
20 material acquisition represent a more powerful source of stress than abstract ethical
21
22 consideration. When the two aspects cannot be conciliated, the general ethical concern of
23
24 high-materialism SME owners is likely to succumb to the pressure of calculated monetary
25
26 returns (Fujita et al., 2006). Third, highly materialistic SME owners rely on material
27
28 possessions to define their success and happiness (Christopher et al., 2009). Inevitably, what
29
30 influences these SME owners' possessions will affect the two aforementioned aspired aspects.
31
32 Higher-materialism SME owners tend to experience greater deprivation tension (Agnew,
33
34 2001) than their lower-materialism counterparts when considering the idea of abandoning
35
36 monetary gains, even when those gains are derived from unethical solutions. Fourth,
37
38 materialists attach meanings of success and happiness to extrinsic possessions and acquisition
39
40 that reflect their internally insecure self-worth and poor management of social relationships
41
42 (Chang and Arkin, 2002; Christopher et al., 2009). Characterized by low self-control (Kim,
43
44 2013), high-materialism SME owners are more vulnerable to monetary temptations than
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

low-materialism owners in the presence of strain pressure (Christopher et al., 2009).

Therefore, this study hypothesizes as follows:

Hypothesis 3: SME owners' acquisition centrality is negatively related to their ethical attitude towards money-related deviances.

Hypothesis 4: SME owners' possession-oriented success is negatively related to their ethical attitude towards money-related deviances.

Hypothesis 5: SME owners' possession-oriented happiness is negatively related to their ethical attitude towards money-related deviances.

The research model of this study and all the hypotheses are illustrated in Figure 1.

Insert Figure 1 Here

Research Methods

Data Collection

A strain perspective examining entrepreneurs' ethical attitudes ratified the individual-level analysis of this study (Agnew, 1992). With support from the regional bodies of the China Association of Small and Medium Enterprises (CASME) and local business networks, we conducted a survey among that group's members in both the Yangtze (Shanghai and Jiangsu Province) and Pearl (Guangdong Province) deltas, where SMEs congregate. Prior survey practice in China (Cong et al, 2017) proved the support from public officials to be of importance to research success. Questionnaires were sent to 1,726 SME owners who provisionally agreed to participate during a pre-contact with 2,500 randomly selected CASME members. The number was chosen for its statistical significance and

1
2
3 because of cost considerations. Another mailing was delivered to informants who did not
4
5 respond three weeks after the first mailing. Reminder telephone calls or emails from CASME
6
7 regional affiliations were placed between the two mailings. The current research received 763
8
9 returned questionnaires (response rate = 44%), 741 of which were usable. In this study, a
10
11 satisfactory response rate is attributable to support from CASME and local business networks,
12
13 the relative shortness of the instrument, and professional survey skills.
14
15
16
17

18 The items in the structured questionnaire were built on previously developed scales with
19
20 additional validation in the context of China, as refined based on the feedback of four
21
22 academics and sixteen SME owners' comments on the clarity of the concepts, language
23
24 habits, and questionnaire format. This study adopted translation and back-translation
25
26 procedures to ensure consistency between the Chinese and English versions of the
27
28 questionnaire (Brislin, 1970). To check for non-response bias, t-tests were used for the
29
30 number of employees ($p = 0.77$) and the age of entrepreneurs ($p = 0.69$) between early and
31
32 late respondents in the two mailings (Armstrong and Overton, 1977); these tests suggested no
33
34 significant differences. To assess data quality, a second-round on-site survey was conducted
35
36 among 150 SME owners who returned the questionnaires. The entrepreneurs' answers to the
37
38 identical questions were compared between the mail and on-site methods. The Pearson's
39
40 correlation coefficients, which range from 0.89 to 0.98, suggest a high consistency of replies
41
42 between the two methods (Kline, 1993).
43
44
45
46
47
48
49

50 Several measures were taken to control potential social desirability bias that can arise
51
52 when individuals deny socially undesirable behaviors (Chung and Monroe, 2003). First, this
53
54 study relied on the self-administration data collection method to control interviewer effects.
55
56
57
58
59
60

1
2
3
4 In the presence of interviewers, informants could experience negative feelings such as shame,
5
6 embarrassment and jeopardy when responding to sensitive questions (Krumpal, 2013).

7
8 Second, when asking SME owners questions about their ethical attitudes, the current research
9
10 adopted an indirect questioning approach that allows informants the judge the behaviors of a
11
12 hypothetical 'someone' in scenarios of ethical dilemmas (O'Fallon and Butterfield, 2005, p.
13
14 404). Third, this study used a short, clear statement to assure confidentiality and anonymity in
15
16 the questionnaire because poor response quality has been found to result from either an
17
18 assurance that is too sophisticated or the absence of such a statement quality (Singer et al.,
19
20 1995). Fourth, some item anchors in the questionnaire were reversed. In addition to these
21
22 methods, prior evidence shows that Chinese respondents demonstrate less social desirability
23
24 bias than their Western counterparts in response to business ethics issues (Dunn and Shome,
25
26 2009).

31 32 33 34 35 *Operationalization of Variables*

36
37
38 *Dependent Variable.* Ethical attitude towards money-related deviances was measured
39
40 using a ten-point Likert scale drawn from Cullen et al. (2004) and De Clercq and Dakhli
41
42 (2009). The five measures (Cronbach alpha = 0.86) assess the extent to which SME owners
43
44 consider the justifiability (1 = always be justified; 10 = never be justified) of ethically suspect
45
46 behaviors for monetary gains. Exemplar items include 'cheating on taxes if someone has a
47
48 chance', 'claiming government benefits to which someone is not entitled', and 'someone
49
50 lying in her/his own economic interest'. The scale has been validated in both the
51
52 cross-national and the Chinese context (Cao, 2007; Cullen et al., 2004), showing a perception
53
54
55
56

1
2
3 consistency in various countries regarding these deviant behaviors (Cullen et al., 2004).
4
5

6 *Independent Variables.* *Household income* was measured on a scale between 1 (lowest
7
8 decile) and 10 (highest decile) relative to other entrepreneurs in China, taking into account all
9
10 wages, pensions, investment returns and other income. *Education level* assesses respondents'
11
12 highest education level received, which appears on a seven-point Likert scale ranging from 1
13
14 (no formal education) to 7 (having a Ph.D.).
15
16
17

18 The current study employed a total thirteen-item seven-point Likert scale (1 = strongly
19
20 disagree; 7 = strongly agree) to measure *materialism dimensions*, which assess the
21
22 significance of respondents attached to material possessions and associated acquisition in
23
24 their lives on three facets in terms of *success*, *centrality*, and *happiness*. Specifically, five,
25
26 three, and five items were used to measure success (Cronbach alpha = 0.85), centrality
27
28 (Cronbach alpha = 0.71), and happiness (Cronbach alpha = 0.87), respectively. Exemplar
29
30 items for *success* include 'I admire people who own expensive homes, cars, and clothes', for
31
32 *centrality* include 'I try to keep my life simple, as far as possessions are concerned' (reverse
33
34 scaled), and for *happiness* include 'I would be happier if I could afford to buy more things'.
35
36
37
38
39
40 This scale, developed by Richins (2004), has been widely applied to measure the facets of
41
42 materialism as individual differences in various disciplines (Kilbourne and LaForge, 2010).
43
44
45 The effectiveness of this scale has been confirmed in the context of China (e.g., Sun et al.,
46
47
48 2014).
49

50 *Controls.* This study employed five control variables in this study. First, the *age* of SME
51
52 owners was included because older entrepreneurs were found to have higher ethical standards
53
54 than their younger counterparts (De Clercq and Dakhli, 2009). Second, the *gender* of
55
56
57
58
59
60

entrepreneurs was controlled by a dichotomous scale (1 = male, 0 = female) because prior evidence suggests substantial gender differences in relation to questionable business practices (Marta et al., 2008). Third, this study used a dummy variable to capture the *marital status* of the SME owner (1 = married, 0 = other statuses) because marital status is an explanatory variable for ethical behavior (Cullen et al., 2004). Fourth, *firm size* was included to reflect the resource strength of SMEs, as measured by the number of employees. Fifth, this current research controlled for *industry types* through a dichotomous variable (1 = manufacturing sector, 0 = other sectors).

Insert Table 1 Here

All of the Cronbach's alphas were greater than 0.7, suggesting a satisfactory degree of internal consistency for all of the multi-item scales (Fornell and Larcker, 1981). The research further assessed the construct validity of success, centrality and happiness. First, an exploratory factor analysis was run using principal component extraction with the varimax orthogonal rotation method. Because Kaiser's criterion of an eigenvalue is greater than one, the results were in line with the theoretical premise when dropping off two offending items from the initial five measures of centrality. These two offenders were purified off because they demonstrated not only low loadings but also cross-loaded on all three dimensions. Table 1 presented the results of the analysis. Second, a set of confirmatory factor analysis (CFA) tests were employed to check one-, two-, and three-factor solutions for materialism items (Anderson and Gerbing, 1988). In line with theoretical predictions (Richins, 2004), the three-factor measurement model is superior to the others and fits the data well ($\chi^2/df = 1.79$; goodness of fit index = 0.94; comparative fit index = 0.96; root mean square error of

1
2
3 approximation = 0.07; normed fit index = 0.96; non-normed fit index = 0.96). All of the items
4
5 significantly loaded on their associated dimensions, with the lowest t-value being 14.84;
6
7 therefore, the convergent validity of the dimensions is satisfied. The *discriminant validity* of
8
9 the measures was assessed in two ways. This study first calculated all confidence intervals (\pm
10
11 two standard errors) around the correlation estimate (*phi* value) between the pairwise
12
13 dimensions, which do not include 1 (Anderson and Gerbing, 1988). The square root of the
14
15 average variance extracted (AVE) value for each of the dimensions was higher than the latent
16
17 correlation of its pair with any other dimensions (Fornell and Larcker, 1981). Therefore,
18
19 collectively, these analyses approved the notion that the measures of *success*, *centrality* and
20
21 *happiness* employed in this study satisfactorily enjoyed both reliability and validity.
22
23
24
25
26
27

28 This investigation implemented both ex ante and ex post strategies (Podsakoff et al.,
29
30 2003) to alleviate and detect the potential threat of common method variance (Cong et al,
31
32 2017). First, this study deliberately separated the dependent and independent variables into
33
34 different pages of the questionnaire to psychologically isolate them, a strategy that was
35
36 reinforced by reversing some of the item anchors and the clear assurance of anonymity and
37
38 confidentiality. Second, the *post hoc* Harman's one-factor test was adopted to assess common
39
40 method variance (Podsakoff et al., 2003). A principal component factor test of all of the
41
42 variables in the model showed that four factors emerged, with the largest factor explaining
43
44 only 17.69% of the total variance. Third, this study employed a CFA approach by introducing
45
46 an unmeasured latent method factor into the measurement model (Podsakoff et al., 2003).
47
48 The addition of this commonly shared method factor did not improve the model fit
49
50 substantially, which extracted a variance figure of only 0.12, far below the 0.50 threshold
51
52
53
54
55
56
57
58
59
60

(Zhang et al., 2015). Collectively, it appears that common method bias does not constitute a threat to this study.

Analysis Method

The current research analyzed and tested the hypotheses using OLS regressions. Prior to the analyses, all of the variables except for the categorical ones were standardized to render the magnitude of scales uniform and decrease the chances of collinearity between variables in the equation (Aiken and West, 1991).

Findings

A majority of respondents in this study was male (68.6%) and married (82.5%). Their average age was 40.1 years old, and more than half (51.9%) had not received any university or higher education. The size of the investigated firms was small, with 55 employees on average. Among the investigated SMEs, 31.9% of firms operated in the manufacturing sector mainly including information technology and electronics (11.0%), textiles (7.6%), and machinery and hardware (5.3%); and 68.1% operated in other sectors, typically including wholesale and retailing (17.1%), financial services and consulting (12.3%), catering (10.5%), and recreation (4.5%).

Descriptive Statistics

Table 2 displays the means, standard deviations, and correlations of the variables, along with collinearity statistics. In the correlation matrix, there are a few strong correlations, but

1
2
3 no correlation coefficient is higher than 0.50. All of the variance inflation factor (VIF) values
4
5
6 for the regression variables are close to 1, much lower than the common threshold value of 5
7
8 for concern (Menard, 1995). There appears to be no substantial collinearity effect in the
9
10 regression variables (cf. Neter et al., 1996).
11
12

13 *Insert Table 2 Here*
14
15
16
17

18 *Hypothesis Testing* 19

20 The results of the OLS regressions appeared in Table 3, which examined the effects of
21
22 two sets of predictors on the dependent variable in the three models. Specifically, when
23
24 controlling for age of entrepreneur, firm size, marital status, firm size, and industry types, the
25
26 effects of household income and education level on ethical attitude were examined in Model
27
28 1, while the effects of centrality, success, and happiness on ethical attitude were assessed in
29
30 Model 2. All independent and control variables were then included in Model 3 that
31
32 constitutes the full model. The R squared values are 0.06, 0.12, and 0.16 respectively for the
33
34 three models, which suggest 6%, 12%, and 16% variance in the dependent variable have been
35
36 explained by these models. These relatively low R squared values may attribute to only a
37
38 single perspective (strain theory) employed in this study, which could lead to missing
39
40 variables grounded on other theoretical interpretations. However, the F-statistics, which
41
42 reflect overall model fit, are highly significant for all of the regression models, suggesting the
43
44 overall robustness of those models. Compared to Models 1 and 2, the overall model fit of
45
46 Model 3 significantly improved after inclusion of the materialism facet variables ($\Delta R^2 = 0.09$,
47
48 $p < 0.001$) and stratification variables ($\Delta R^2 = 0.04$, $p < 0.001$), respectively, which suggests a
49
50
51
52
53
54
55
56
57
58
59
60

substantial increase in the variance explained after adding each set of predictors. With regard to the stratification explanatory variables in Model 1, education level ($\beta = 0.10, p < 0.05$) is positively and significantly related to ethical attitude towards money, offering support to *Hypothesis 2*. The results suggest that entrepreneurial education level promotes an ethical attitude towards money-related deviance. Household income level ($\beta = -0.27, p < 0.001$) is significantly but *negatively* related to an ethical attitude towards money-related deviances, opposite from the predicted direction and failing to support *Hypothesis 1*. With regard to the three facets of materialism in Model 2, success ($\beta = -0.26, p < 0.001$) and happiness ($\beta = -0.13, p < 0.01$) are highly and negatively related to an ethical attitude towards money-related deviances, as predicted, lending full support to *Hypotheses 4* and *5*. The results suggest that possession-oriented success and happiness decrease entrepreneurial ethical attitudes towards money-related deviances. The coefficient between centrality and an ethical attitude towards money-related deviances is not significant, thus failing to support *Hypothesis 3*.

Insert Table 3 Here

The robustness of the results was checked. First, a path analysis was applied to verify the regression results with regard to the association between three facets of materialism and ethical attitudes towards money-related deviances. The structural equation modelling (SEM) estimation demonstrated a good model fit ($\chi^2/df = 1.87$; goodness of fit index = 0.92; comparative fit index = 0.96; root mean square error of approximation = 0.07; normed fit index = 0.95; non-normed fit index = 0.95). The path coefficients of success-ethical attitude ($\beta = -0.26, p < 0.001$), centrality-ethical attitude ($\beta = -0.03, p > 0.1$), and happiness-ethical attitude association ($\beta = -0.12, p < 0.05$) affirmed the direction and statistical significance of

1
2
3 the hypothesized relationships. Second, this study re-ran the identical regression models for
4
5 two subsamples of the data split by two data-collection locations. The results proved both
6
7 similar and consistent. In addition, a repeated study of 150 SMEs from the second-round
8
9 on-site survey confirmed the reliability of the findings. Overall, all these tests corroborated
10
11 the findings. A summary of the test results is presented in Table 4.
12
13
14

15
16 *Insert Table 4 Here*
17
18
19

20 **Discussion**

21
22 With regard to the stratification variables, the mixed results show that entrepreneurial
23
24 education level is positively related to ethical attitudes towards money-related deviances,
25
26 whereas household income level is surprisingly negatively associated with ethical attitudes.
27
28 The former evidence is in line with the premise of strain theory because higher-level
29
30 education better equips entrepreneurs with professional abilities and skill, critical thinking,
31
32 and ethical awareness to reduce personal strain in business operations, and accordingly,
33
34 higher-educated SME owners will be more likely to preserve the belief that individuals
35
36 should stick to ethical acts (Cullen et al., 2004; Merton, 1968). In addition, despite few
37
38 exceptions (e.g. De Clercq and Dakhli, 2009), this finding is generally consistent with prior
39
40 evidence of the effects of education on delinquencies or economic crimes at both the
41
42 individual and national level employing strain perspective or its extensions (e.g. Agnew et
43
44 al., 2002; Cullen et al., 2004) and Craft's (2013, p. 238) conclusion that 'education was found
45
46 to have both a positive and neutral impact on ethical decision-making' following his analysis
47
48 of *twenty-seven empirical studies* of ethical decision making involving *education predictors*.
49
50
51
52
53
54
55
56

1
2
3 It is noteworthy that although the prior ethical decision-making literature has identified a link
4
5 between education level and individual propensity to accept ethical practices, it does not
6
7 explain the underlying mechanism of the link, which is particularly emphasized in this study.
8
9
10 The latter result is somewhat counterintuitive as the strain perspective suggests that the
11
12 financial challenges facing SME owners could lead to their ethical compromises in business
13
14 operations (Agnew, 1992; Merton, 1968). Contrary to prior evidence (e.g. Agnew et al., 2002;
15
16 De Clercq and Dakhli, 2009), this study finds a negative relationship between SME owners'
17
18 income level and their ethical attitudes. One possible explanation for this conflicting finding
19
20 may reside in the argument that the downstream costs of unethical practices might be
21
22 perceived as relatively lower for higher-income SME owners than for lower-income ones,
23
24 which may reduce their cognitive thresholds of such deviance engagement. In addition,
25
26 contextual conditions in emerging economies characterized by institutional voids and
27
28 regulative enforcement difficulties may reinforce such an entrepreneurial perception (e.g.,
29
30 Puffer et al., 2010). Another potential explanation lies in the view that sufficient financial
31
32 resources lead higher-income entrepreneurs towards increased freedom and decreased
33
34 interdependence, potentially fostering their sense of entitlement and self-focused tendency
35
36 towards social behaviors (Piff et al., 2012). A prioritization of self-interest along with an
37
38 indifference to other stakeholders could instigate an unethical stance towards money-related
39
40 deviance among higher-income SME owners.
41
42
43
44
45
46
47
48
49

50 With regard to the facets of materialism, the findings suggest that success and happiness
51
52 exert a negative influence on ethical attitudes towards money-related deviances, as
53
54 hypothesized, but centrality has no associated impact, lending support to the strain premise.
55
56
57
58
59
60

1
2
3
4 In light of strain theory, the results indicate that SME owners who overemphasize
5
6 possession-defined success and happiness find it more difficult to repel strain pressures given
7
8 the higher insecurity of their self-worth, their greater vulnerability to specific objects, and
9
10 their deeper sensitivity to material deprivation (Christopher et al., 2009; Kim, 2013). In the
11
12 presence of economic strains, such entrepreneurs are prone to compromise their ethical
13
14 stances to ease internal uncertainty (Chang and Arkin, 2002). This evidence not only
15
16 confirms strain theory's recent theoretical progress of the notion that the fetish of
17
18 materialistic success is another source of strain (Bernburg, 2002; Messner and Rosenfeld,
19
20 2009) but also sheds light on the strain explanation for the association between materialistic
21
22 values and ethical stances. Nevertheless, this study failed to identify a relationship between
23
24 centrality and entrepreneurial ethical attitudes. Without attached meanings, acquisition
25
26 centrality perhaps could be neutral and not as detrimental as expected because individuals'
27
28 central focus on material acquisitions can be for just or ethical purposes. This explanation
29
30 synergizes the argument that it is the meanings attached to such material acquisitions that
31
32 constitute the crux of individuals' willingness to respond, not acquisition centrality per se
33
34 (Chang and Arkin, 2002, p. 403). Correspondingly, Csikszentmihalyi and Rochberg-Halton
35
36 (1978) stress that instrumental materialism is less harmful than terminal materialism. The
37
38 former type of materialism occurs when material possessions and acquisition are considered
39
40 the means to attain other life objectives such as quality of life, whereas the latter occurs when
41
42 the ownership of possessions is an end in itself.
43
44
45
46
47
48
49
50
51
52
53
54

55 **Conclusion**

1
2
3
4 The study has important research implications for entrepreneurial ethics. First, this study
5
6 investigates and advances the strain perspective for understanding the ethical attitudes of
7
8 SME owners who usually experience heavy economic pressures (Ahlstrom and Ding, 2014).
9
10 It initiates the first step to address not only “what”, “how”, but also “why” social conditions
11
12 of SME owners could affect their ethical stances (Whetten, 1989) in stratified societies in
13
14 which economic goals prevail (Merton, 1938). Second, it has introduced and tested both
15
16 structural and aspirational strain determinants of entrepreneurial ethical attitudes, generally
17
18 affirming the effectiveness of the strain perspective. Therefore, it advances and complements
19
20 the dominant behavior approach that emphasizes cognitive and other psychological processes
21
22 in explaining individual ethical attitudes (Kohlberg, 1981; Rest, 1986). Such an investigation
23
24 substantially broadens the research horizon of ethical reasoning in light of the fact that strain
25
26 pressures introduced by social conditions have been largely ignored in prior research despite
27
28 their significance and pervasiveness among SME owners (Cullen et al., 2004; De Clercq and
29
30 Dakhli, 2009). Third, to the best of our knowledge, it is the first study to examine the
31
32 influence of three materialism facets on entrepreneurial ethical attitudes towards
33
34 money-related deviance. The evidence provides overall support for the recent progress of
35
36 strain theory regarding the strain implications of prevalent materialistic values (Bernburg,
37
38 2002; Messner and Rosenfeld, 2009). In addition, the study found that only materialism
39
40 facets attached with meanings such as success and happiness impair entrepreneurial ethical
41
42 attitudes. It provides important implications for the research on the moral consequences of
43
44 materialism, especially with regard to the separation between instrumental and terminal
45
46 materialism (Csikszentmihalyi and Rochberg-Halton, 1978). Fourth, substantial prior
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 evidence has identified the association between demographics and ethical stances, albeit
4
5 somewhat fragmentally and in isolation (O'Fallon and Butterfield, 2005; Craft, 2013). The
6
7 reason for that situation may lie in the fact that the underpinning mechanism of these links is
8
9 underexplored (Craft, 2013; De Clercq and Dakhli, 2009). In this study, the employment of
10
11 the strain perspective attempts to investigate the mechanism from an insightful angle,
12
13 facilitating a systematic inquiry into the association of demographics and ethical attitudes
14
15 among SME owners. Finally, this study has assessed entrepreneurial ethical attitudes towards
16
17 a typical form of ethical dilemma that involves monetary elements, responding to appeals
18
19 from ethics researchers regarding the importance of context in ethical decision making
20
21 (Johnson and Smith, 1999; Trevino, 1986). Because money represents a central pursuit of
22
23 business organizations (Kouchaki et al., 2013), the current research contributes to the
24
25 growing body of literature on the overall role of money in SME operations (Harris et al.,
26
27 2009; Kouchaki et al., 2013).

28
29
30
31
32
33
34
35 The evidence identified in this study has substantial practical implications for policy
36
37 makers. First, the lack of a positive relationship between income level and ethical attitude
38
39 towards money-related deviances casts doubt on the popular slogan 'to get rich is glorious' in
40
41 Chinese society. For SME owners, becoming rich does not correspond to an increase in
42
43 ethical standards. It is recommended that policy makers improve their institutional efficiency
44
45 and effectiveness to increase the costs of committing money-related deviances and reward
46
47 ethical choices, and simultaneously constrain the sense of entitlement among the rich through
48
49 a certain reduction in income inequality (Côté et al., 2015; Piff et al., 2012). Second, the
50
51 meanings of success and happiness attached to material possessions are damaging to SME
52
53
54
55
56
57
58
59
60

1
2
3 owners' ethical stances. Policy makers should make an effort to enrich the meanings of
4 success and happiness in social media and to provide more complete criteria in addition to
5 material possessions for entrepreneurs to define success and happiness. Third, the result
6 suggests that higher levels of education play a positive role in shaping entrepreneurial ethical
7 attitudes. It is important for policy makers to provide subsidized or supported professional
8 education and training for SMEs in a manner that emphasizes not only vocational skills but
9 also business ethics. Besides, as SMEs represent 70 percent of GDP in China (Ahlstrom and
10 Ding, 2014), an investigation of SME owners' ethical stances and their social root contribute
11 to the promotion of moral standards of the economy (Sandberg 2015) and the advancement of
12 sustainable society in China.
13
14
15
16
17
18
19
20
21
22
23
24
25
26

27
28 This study is subject to limitations that provide useful directions for future research.
29 First, according to the premises of strain theory, this study tested the key structural and
30 aspirational sources of strains on SME owners, a practice that captures the scope but ignores
31 the characteristics of personal strains (Agnew, 2001). Future studies could explore strain
32 attributes and surrounding conditions under which individual strains are more likely to be
33 transformed into ethical reasoning (Agnew et al., 2002). Second, although this study offers
34 some possible explanations for surprisingly negative income-ethical attitude association, it is
35 important for qualitative studies to investigate the underlying causal mechanism. Third, an
36 incorporation of planned-behavior variables (Ajzen, 1991) such as subjective norms and
37 perceived behavioral control into the current strain explanation may substantially enrich our
38 understanding of SME owners' ethical attitudes, which constitutes a fruitful direction for
39 future studies. Fourth, SME owners may encounter varying levels of strain pressures at
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 different development stages of SMEs or in industries with different characteristics. This
4
5
6 study failing to include both aspects limits the power of the current explanations and loses
7
8 chances to further contextualize the strain interpretation among SMEs, which may represent
9
10 an important direction for future research. Fifth, this study reports the results based on a large
11
12 sample of Chinese SME owners. Additional evidence from their counterparts in other
13
14 emerging economies would extend the validity of this investigation's findings, which could
15
16 further include institutional, political, and cultural conditions in such investigations.
17
18
19

20 21 **References**

- 22
23 Agnew, R. (1992), "Foundation for a general strain theory of crime and delinquency",
24
25 *Criminology*, Vol.30 No.1, pp. 47-87.
26
27
28 Agnew, R. (2001), "Building on the foundation of general strain theory: Specifying the types
29
30 of strain most likely to lead to crime and delinquency", *Journal of Research in Crime &*
31
32 *Delinquency*, Vol. 38 No.4, pp.319-361.
33
34
35 Agnew, R., Brezina, T., Wright, J. P. & Cullen, F. T. (2002), "Strain, personality traits, and
36
37 delinquency: Extending general strain theory", *Criminology*, Vol. 40 No. 1, pp. 43–72.
38
39
40 Ahlstrom, D., & Ding, Z. (2014), "Entrepreneurship in China: An overview", *International*
41
42 *Small Business Journal*, Vol. 32 No. 6, pp. 610–618.
43
44
45 Aiken, L. S., West, S. G. & Reno, R. R. (1991), *Multiple regression: Testing and interpreting*
46
47 *interactions*. Newbury Park, London: Sage.
48
49
50 Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human*
51
52 *Decision Processes*, Vol. 50 No.2, pp.179-211.
53
54
55 Anderson, J. C. & Gerbing, D. W. (1988), "Structural equation modeling in practice: A
56
57
58
59
60

- 1
2
3 review and recommended two-step approach”, *Psychological Bulletin*, Vol.103 No.3.
4
5 pp.411- 423.
6
7
8 Armstrong, J. & Overton, T. (1977), “Estimating nonresponse bias in mail surveys”, *Journal*
9
10 *of Marketing Research*, Vol.14 No.3, pp.396-402.
11
12
13 Au, A. K. M. and Tse, A. C. B. (2001), “Marketing ethics and behavioral predisposition of
14
15 Chinese Managers of SMEs in Hong Kong”, *Journal of Small Business Management*,
16
17 Vol. 39 No. 3, pp. 272–278.
18
19
20 Baker, T., & Nelson, R. E. (2005), “Creating something from nothing: Resource construction
21
22 through entrepreneurial bricolage”, *Administrative Science Quarterly*, Vol.50 No.3,
23
24 pp.329-366.
25
26
27
28 Baumer, E. P. (2007), “Untangling research puzzles in Merton's multilevel anomie theory”,
29
30 *Theoretical Criminology*, Vol.11 No.1 pp.63-93.
31
32
33 Belk, R. W. (1985), “Materialism: Trait aspects of living in the material world”, *Journal of*
34
35 *Consumer Research*, Vol.12 No.3, pp.265-80.
36
37
38 Bernburg, J. G. (2002), “Anomie, social change and crime: A theoretical examination of
39
40 institutional-anomie theory”, *British Journal of Criminology*, Vol.42 No. 4, pp.729–742.
41
42
43 Bian, Y., Breiger, R. L., Davis, D., & Galaskiewicz, J. (2005). “Occupation, class and social
44
45 networks in urban China.” *Social Forces*, Vol.83 No. 4, pp.1143-1167.
46
47
48 Boyd, D.P., Gumpert, D.E., 1983. “Coping with entrepreneurial stress.” *Harvard Business*
49
50 *Review*, Vol 61, No. 2, pp.44–64.
51
52
53 Brislin, R. W. (1970). “Back-translation for cross-cultural research.” *Journal of cross-cultural*
54
55 *psychology*, Vol.1 No.3, pp.185-216.
56
57
58
59
60

- 1
2
3 Burroughs, J. E., & Rindfleisch, A. (2002). "Materialism and well-being: a conflicting values
4 perspective", *Journal of Consumer Research*, Vol.29 No.3, pp.348-70.
5
6
7
8 Cao, L. (2007). "Returning to normality: Anomie and crime in China." *International Journal*
9
10
11
12
13 of Offender Therapy and Comparative Criminology, Vol.51 No.1, pp.40-51.
14
15 Chang, L. and Arkin, R. M. (2002). "Materialism as an attempt to cope with uncertainty."
16
17
18 *Psychology & Marketing*, Vol.19 No.5, pp.389–406.
19
20 Christopher, A. N., Saliba, L., & Deadmarsh, E. J. (2009), "Materialism and well-being: The
21
22
23 mediating effect of locus of control", *Personality & Individual Differences*, Vol.46 No.7,
24
25
26 pp.682-686.
27
28 Chung, J. & Monroe, G. S. (2003), "Exploring social desirability bias", *Journal of Business*
29
30
31
32 *Ethics*, Vol.44 No.4, pp.291-302.
33
34
35 Cong C, Dempsey M & Xie H M, (2017) "Political skill, entrepreneurial orientation and
36
37
38 organizational justice: A study of entrepreneurial enterprise in China", *International*
39
40
41
42 *Journal of Entrepreneurial Behavior & Research*, Vol. 23 No.1, pp.20-34
43
44
45 Cooper, A., Ramachandran, M., & Schoorman, D., (1997), "Time allocation patterns of
46
47
48
49 craftsmen and administrative entrepreneurs: implications for financial performance",
50
51
52
53 *Entrepreneurship Theory & Practice*, Vol.22 No.2, pp.123–136.
54
55
56 Côté, S., House, J., & Willer, R. (2015), "High economic inequality leads higher-income
57
58
59
60 individuals to be less generous" *Proceedings of the National Academy of Sciences of the*
United States of America, Vol.112 No.52, pp.15838–15843.
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000

- 1
2
3 Csikszentmihalyi, M. and Rochberg-Halton, E. (1978), "Reflections on Materialism",
4
5
6 *University of Chicago Magazine*, Vol.70 No.3, pp.6-15.
7
- 8 Cullen, J.B., Parboteeah, K.P., & Hoegl, M. (2004), "Cross-national differences in managers'
9
10 willingness to adhere to ethically suspect behaviors: A test of institutional anomie
11
12 theory", *Academy of Management Journal*, Vol.47 No.3, pp.411–421.
13
14
- 15 De Clercq, D. & Dakhli M. (2009), "Personal strain and ethical standards of the
16
17 self-employed", *Journal of Business Venturing*, Vol.24 No.5, pp.477–490.
18
19
- 20 Dunn, P., & Shome, A. (2009), "Cultural crossvergence and social desirability bias: Ethical
21
22 evaluations by Chinese and Canadian business students". *Journal of Business Ethics*,
23
24
25 Vol.85 No.4, pp.527-543.
26
27
- 28 Durkheim, E., (1897), *Suicide: A study in sociology*. New York: Free Press.
29
- 30 Goldthorpe J (2007), *On Sociology: Vol. 2 Illustration and Retrospect*. Stanford, CA:
31
32 Stanford University Press.
33
34
- 35 Fagan, M., & Zhao, S. (2009), "SME financing in China: the current situation, problems and
36
37 possible solutions", *International Journal of Entrepreneurship and Small Business*, Vol.8
38
39 No2, pp.171–185.
40
41
- 42 Featherstone, R. & Deflem, M. (2003), "Anomie and strain: Context and consequences of
43
44 Merton's two theories", *Sociological Inquiry*, Vol.73 No.4, pp.471- 489.
45
46
- 47 Fernández, J. L., & Camacho, J. (2016), "Effective Elements to Establish an Ethical
48
49 Infrastructure: An Exploratory Study of SMEs in the Madrid Region", *Journal of*
50
51 *Business Ethics*, Vol.138 No.1, pp.113–131.
52
53
- 54 Fischer, D., Mauer, R. & Brettel, M. (2017), "Regulatory focus theory and sustainable
55
56
57
58
59
60

entrepreneurship", *International Journal of Entrepreneurial Behavior & Research*,
Forthcoming.

Flouri, E. (2005), "Adult materialism/postmaterialism and later mental health: The role of
self-efficacy", *Social Indicators Research*, Vol.73 No.1, pp.1–18.

Fornell, C., & Larcker, D. F. (1981), "Evaluating structural equation models with
unobservable variables and measurement error", *Journal of Marketing Research*, Vol.18
No.1, pp.39–50.

Frid C.J, Wyman D.M, Gartner W.B, Hechavarria D H, (2016), "Low-wealth entrepreneurs
and access to external financing", *International Journal of Entrepreneurial Behavior &
Research*, Vol. 22 No. 4, pp.531-555

Fujita, K., Trope, Y., Liberman, N., & Levin-Sagi, M. (2006), "Construal levels and
self-control", *Journal of Personality and Social Psychology*, Vol.90 No.3, pp.351-367.

Hancock, T. (2017), *Chinese shoppers begin to buy luxury brands again — at home.*
<https://www.ft.com/content/61bc103a-e38a-11e6-8405-9e5580d6e5fb>. (accessed 1st
May 2017)

Harris, J. D. Sapienza, H. J. & Bowie, Norman E. (2009), "Ethics and entrepreneurship,"
Journal of Business Venturing, Vol.24 No.5, pp.407-418.

Inglehart, R., (1997), *Modernization and postmodernization: Cultural, economic, and
political change in 43 societies*. Princeton, NJ: Princeton University Press.

Ji, J., & Dimitratos, P. (2013), "Confucian dynamism and Dunning's framework: Direct and
moderation associations in internationalized Chinese private firms", *Journal of Business
Research*, Vol.66 No.12, pp. 2375-2382.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Johnsen, C. G. & Sørensen, B. M. (2017), "Traversing the fantasy of the heroic entrepreneur",
International Journal of Entrepreneurial Behavior & Research, Vol. 23 No. 2,
pp.228-244.

Johnson, P., & Duberley, J. (2011), "Anomie and culture management: reappraising
Durkheim", *Organization*, Vol.18 No.4, pp.563-584.

Johnson, P. & Smith, K. (1999), "Contextualizing business ethics: Anomie and social life",
Human Relations, Vol.52 No.1, pp.1351-484.

Jones, T. (1991), "Ethical decision making by individuals in organizations: An
issue-contingent model", *Academy of Management Review*, Vol.16 No. 2, pp. 366-395.

Kilbourne, W., Grünhagen, M., & Foley, J. (2005), "A cross-cultural examination of the
relationship between materialism and individual values", *Journal of Economic
Psychology*, Vol.26 No.5, pp.624-641.

Kilbourne, W. E., & Laforge, M. C. (2010), "Materialism and its relationship to individual
values", *Psychology & Marketing*, Vol.27 No.27, pp.780-798.

Kirkwood J J, (2016), "How women and men business owners perceive success",
International Journal of Entrepreneurial Behavior & Research, Vol.22 No.5, pp.594-615

Kim, H. (2013), "Situational materialism: How entering lotteries may undermine
self-control", *Journal of Consumer Research*, Vol.40 No.4, pp.759-772.

Kline, P. (1993), *The handbook of psychological testing*. London: Routledge.

Kohlberg, L. (1981), *Essays in moral development: The philosophy of moral development*
(Vol. 1). New York: Harper and Row.

Kouchaki, M., Smith-Crowe, K., Brief, A. P., & Sousa, C. (2013), "Seeing green: Mere

- 1
2
3 exposure to money triggers a business decision frame and unethical outcomes”,
4
5
6 *Organizational Behavior and Human Decision Processes*, Vol.121 No.1, pp.53-61.
7
- 8 Krumpal, I. (2013), “Determinants of social desirability bias in sensitive surveys: a literature
9
10 review”, *Quality & Quantity*, Vol.47 No.4, pp.2025-2047.
11
12
- 13 Lee, K., Lim, G., & Tan, S. (1999), “Dealing with resource disadvantage: Generic strategies
14
15 for SMEs”, *Small Business Economics*, Vol.12 No.4, pp.299-311.
16
17
- 18 Marta, J., Singhapakdi, A. and Kraft, K. (2008), “Personal characteristics underlying ethical
19
20 decisions in marketing situations: A survey of small business managers”, *Journal of*
21
22 *Small Business Management*, Vol.46 No.4, pp.589–606.
23
24
- 25 Maume, M. O., & Lee, M. R. (2003), “Social institutions and violence: A sub-national test of
26
27 institutional anomie theory”, *Criminology*, Vol.41 No.4, pp.1137-1172.
28
29
- 30 Menard, S. (1995), *Applied logistic regression analysis: Sage university series on*
31
32 *quantitative applications in the social sciences*. Thousand Oaks, CA: Sage.
33
34
- 35 Merton, R. K. (1938), “Social structure and anomie”, *American Sociological Review*, Vol.3
36
37 No.5, pp.672–682.
38
39
- 40 Merton, R.K. (1968), *Social Theory and Social Structure*. New York: Free Press.
41
- 42 Messner, S. F., & Rosenfeld, R. (2001), *Crime and the American dream*, Belmont, CA:
43
44 Wadsworth.
45
46
- 47 Messner, S., & Rosenfeld, R. (2009), “Institutional anomie theory: A macro-sociological
48
49 explanation of crime”, In Krohn, M. D., Lizotte, A. J., Hall, G. P. (Ed.), *Handbook on*
50
51 *crime and deviance* (pp. 209-224). New York: Springer.
52
53
54
- 55 Micken, K. S., & Roberts, S. D. (1999), “Desperately seeking certainty: Narrowing the
56
57

- materialism construct”, *Advances in Consumer Research*, Vol.26 No.1, pp.513-518.
- Moon, B., Hays, K. & Blurton, D. (2009), “General strain theory, key strains, and deviance”, *Journal of Criminal Justice*, Vol.37 No.1, pp.98-106.
- Morales C E, Holtschlag C, (2013), "Post materialist values and entrepreneurship: a multilevel approach", *International Journal of Entrepreneurial Behavior & Research*, Vol.19 No.3, pp.266-282
- Morris, M.H., & Zahra, S., (2000), “Adaptation of the business concept over time: the case of historically disadvantaged South African owner/managers”, *Journal of Small Business Management*, Vol.38 No.1, pp.92–100.
- Musteen, M. Datta, D.K., & Butts, M. (2014), “Do international networks and foreign market knowledge facilitate SME internationalization? Evidence from the Czech Republic”, *Entrepreneurship Theory and Practice*, Vol.38 No.4, pp.749–774.
- Neter, J., Wasserman, W., & Kutner, M. (1996), *Applied linear statistical models* (4th ed.). Homewood, IL: Irwin.
- O’Fallon, M. J. & Butterfield, K. D. (2005), “A review of the empirical ethical decision-making literature: 1996–2003”, *Journal of Business Ethics*, Vol.59 No.4, pp.375-413.
- Otero-López, J. M., Pol, E. V., Bolaño, C. C., & Mariño, M. J. S. (2011), “Materialism, life-satisfaction and addictive buying: Examining the causal relationships”, *Personality and Individual Differences*, Vol.50 No.6, pp.772-776.
- Piff, P. K., Stancatoa, D. M., Côté, S., Mendoza-Dentona, R. & Keltner, D. (2012), “Higher social class predicts increased unethical behavior”, *Proceedings of the National*

- 1
2
3 *Academy of Sciences of the United States of America*, Vol.109 No.11, pp.4086-4091.
- 4
5
6 Podsakoff, P., Mackenzie, S., Lee, J. & Podsakoff, N. (2003), "Common method biases in
7
8 behavioral research: A critical review of the literature and recommended remedies",
9
10
11 *Journal of applied psychology*, Vol.88 No.5, pp.879-903.
- 12
13 Pollack, J.M., Bosse, D.A., (2014), "When do investors forgive entrepreneurs for lying?",
14
15
16 *Journal of Business Venturing*, Vol. 29 No. 6, pp.741-754.
- 17
18 Pompe, V. (2013), "Moral entrepreneurship: Resource based ethics", *Journal of Agricultural*
19
20
21 *& Environmental Ethics*, Vol.26 No.2, pp.313-332.
- 22
23 Puffer, S. M., McCarthy, D. J. & Boisot, M. (2010), "Entrepreneurship in Russia and China:
24
25 The impact of formal institutional voids", *Entrepreneurship Theory and Practice*, Vol.34
26
27
28 No.3, pp.441-467.
- 29
30 Razzaque, M. A. & T. P. Hwee (2002), "Ethics and purchasing dilemma: A Singaporean
31
32
33 view", *Journal of Business Ethics*, Vol.35 No.4, pp.307-326.
- 34
35 Rest, J. R. (1986), *Moral development: Advances in research and theory*. New York: Praeger.
- 36
37 Richins, M. L. & Dawson, S. (1992), "A consumer values orientation for materialism and its
38
39
40 measurement: Scale development and validation", *Journal of Consumer Research*,
41
42
43 Vol.19, No.3, pp.303-316.
- 44
45 Richins, M. L. (2004), "The material values scale: Measurement properties and development
46
47
48 of a short form", *Journal of Consumer Research*, Vol.31 No.1, pp.209-219.
- 49
50 Roberts, J., & Clement, A. (2007), "Materialism and satisfaction with overall quality of life
51
52
53 and eight life domains", *Social Indicators Research*, Vol.82 No.1, pp.79-92.
- 54
55 Sandberg, J. (2015), "Moral economy and normative ethics", *Journal of Global Ethics*,
56
57

Vol.11 No. 2, pp. 176–187.

Singer, E., Von Thurn, D. R. & Miller, E. R. (1995), “Confidentiality assurances and response:

A quantitative review of the experimental literature”, *Public Opinion Quarterly*, Vol.59

No.1, pp.66-77.

Sun, G., D'alessandro, S. & Johnson, L. (2014), “Traditional culture, political ideologies,

materialism and luxury consumption in China”, *International Journal of Consumer*

Studies, Vol.38 No.5, pp.578-585.

Trevino, L. K. (1986), “Ethical decision making in organizations: a person-situation

interactionist model”, *Academy of Management Review*, Vol.11 No.3, pp. 601-617.

Warren, L.& Smith, R. (2015), "Rule-breaking and legitimacy: a failure of artful

navigation?",

International Journal of Entrepreneurial Behavior & Research, Vol. 21 No. 2, pp.243-262.

Whetten, D. A. (1989), "What constitutes a theoretical contribution?", *Academy of*

Management Review, Vol. 14 No. 4, pp. 490-495.

Yang, S., & Stening, B. W. (2012), “Cultural and ideological roots of materialism in China”,

Social Indicators Research, Vol.108 No.3, pp.441-452.

Zhang, X., Zhong, W., & Makino, S. (2015), “Customer involvement and service firm

internationalization performance: An integrative framework”, *Journal of International*

Business Studies, Vol.46 No.3, pp.355-380.

Zhao, S. (2009), “Government Policies and Private Enterprise Development in China: 2003–

2006”, *China & World Economy*, Vol.17 No.4, pp.36-52.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

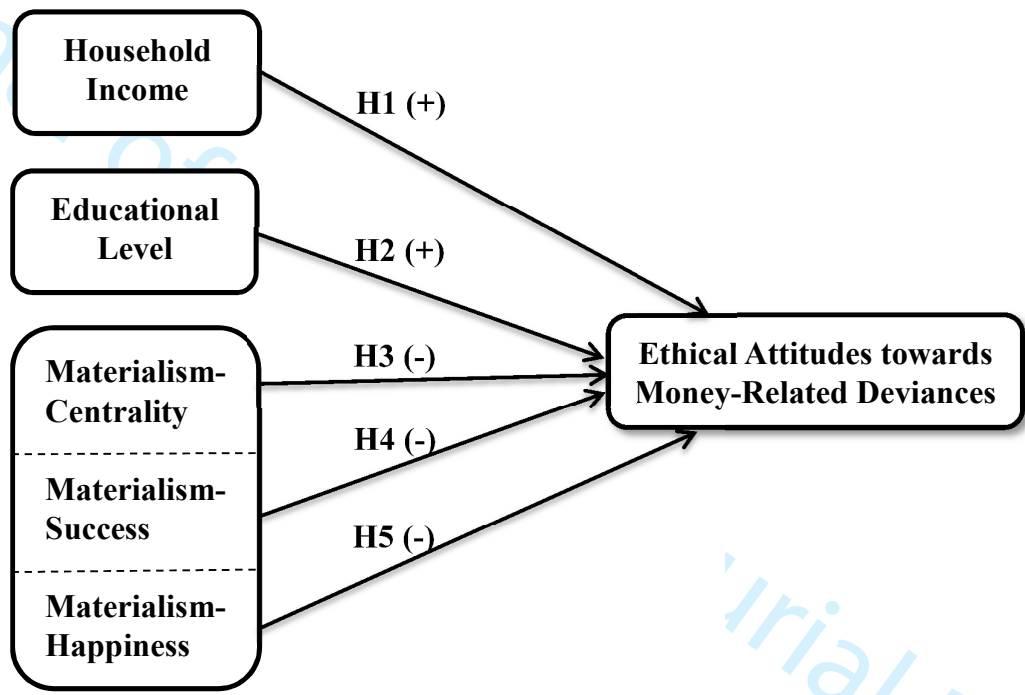


Figure 1: Research Model of this Study

Table 1: Principal Component Analysis with Varimax Rotation for Materialism Items

| Items | Success | Centrality | Happiness |
|--|---------|------------|-----------|
| I admire people who own expensive homes, cars, and clothes. | 0.69 | | |
| Some of the most important achievements in life include acquiring material possessions. | 0.77 | | |
| I place much emphasis on the amount of material objects that people own as a sign of success (reverse scale, corrected). | 0.83 | | |
| The things I own say a lot about how well I'm doing in life. | 0.84 | | |
| I like to own things that impress people. | 0.71 | | |
| I try to keep my life simple, as far as possessions are concerned (reverse scale, corrected). | | 0.82 | |
| The things I own are all that is important to me. | | 0.80 | |
| I put less emphasis on material things than most people I know (reverse scale, corrected). | | 0.75 | |
| I do not have all the things I really need to enjoy life. | | | 0.78 |
| My life would be better if I owned certain things that I don't have. | | | 0.80 |
| I would be happier if I owned nicer things. | | | 0.85 |
| I would be happier if I could afford to buy more things. | | | 0.84 |
| It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like. | | | 0.64 |
| <i>Eigenvalues</i> | 3.2 | 2.0 | 3.3 |
| <i>Variance explained</i> | | | |
| Proportional percentage | 24 | 15 | 25 |
| Cumulative percentage | | 39 | 64 |

Table 2. Descriptive Statistics, Correlations and Collinearity Statistics

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | Collinearity Statistics | | |
|--|---------|---------|-----------|---------|--------|-------|---------|-------|--------|---------|------|-------------------------|-----------|------------------|
| | Mean | 8.20 | 40.07 | 0.69 | 0.83 | 55.41 | 0.32 | 5.18 | 4.46 | 3.80 | 3.41 | 4.35 | Tolerance | VIF ^a |
| Standard Deviation | 1.92 | 8.77 | 0.46 | 0.38 | 139.55 | 0.46 | 1.63 | 1.45 | 1.44 | 1.35 | 1.45 | | | |
| 1. Ethical attitude towards money-related deviance | | | | | | | | | | | | | | |
| 2. Age of entrepreneur | 0.07 | | | | | | | | | | | | 0.70 | 1.43 |
| 3. Gender | -0.07 | 0.20** | | | | | | | | | | | 0.94 | 1.07 |
| 4. Marital status | 0.09* | 0.38** | 0.13** | | | | | | | | | | 0.83 | 1.20 |
| 5. Firm size | -0.07 | 0.06 | 0.06 | 0.01 | | | | | | | | | 0.94 | 1.06 |
| 6. Industry types | 0.01 | 0.12** | -3.00E-03 | 0.11** | 0.12** | | | | | | | | 0.96 | 1.04 |
| 7. Household income | -0.18** | 0.29** | 0.18** | 0.08* | 0.22** | 0.08 | | | | | | | 0.79 | 1.26 |
| 8. Education | 0.021 | -0.19** | -0.06 | -0.06 | 0.06 | -0.02 | 0.15** | | | | | | 0.89 | 1.12 |
| 9. Materialism-Success | -0.29** | -0.07 | 0.02 | -0.04 | 0.09* | -0.05 | 0.14** | 0.09* | | | | | 0.73 | 1.37 |
| 10. Materialism-Centrality | 0.02 | -0.06 | -0.02 | -0.08* | -0.05 | -0.03 | -0.14** | -0.07 | -0.07 | | | | 0.94 | 1.06 |
| 11. Materialism-Happiness | -0.22** | -0.16** | -0.03 | -0.11** | 0.04 | -0.01 | -0.05 | -0.03 | 0.49** | -0.12** | | | 0.71 | 1.40 |

$n = 741$; a: variance inflation factor; * $p < .05$ (two-tailed), ** $p < .01$ (two-tailed).

Table 3. Results of Regression Analysis for SME Owners' Ethical Attitude towards Money-Related Deviance

| | Explained variable: Ethical Attitude towards Money-Related Deviance | | | | | |
|-------------------------------|---|----------------------|---------------------|----------------------|---------------------|----------------------|
| | Model 1 | | Model 2 | | Model 3 | |
| | β | <i>t</i> | β | <i>t</i> | β | <i>t</i> |
| <i>Explanatory variables:</i> | | | | | | |
| Household income | -0.27 | -5.55 ^{***} | | | -0.24 | -5.07 ^{***} |
| Education | 0.10 | 2.15 [*] | | | 0.08 | 1.76 ⁺ |
| Materialism-Success | | | -0.26 | -5.46 ^{***} | -0.21 | -4.22 ^{***} |
| Materialism-Centrality | | | -0.01 | -0.17 | -0.02 | -0.35 |
| Materialism-Happiness | | | -0.13 | -2.69 ^{**} | -0.16 | -3.25 ^{**} |
| <i>Control variables:</i> | | | | | | |
| Age of entrepreneur | 0.07 | 1.38 | -0.04 | -0.79 | 0.03 | 0.64 |
| Gender | -3.00E-03 | -0.03 | -0.06 | -0.63 | 0.02 | 0.22 |
| Marital status | 0.23 | 1.84 ⁺ | 0.24 | 2.01 [*] | 0.22 | 1.81 ⁺ |
| Firm size | -0.02 | -0.59 | -0.03 | -0.88 | -3.00E-03 | -0.08 |
| Industry types | 2.00E-03 | 0.03 | -0.04 | -0.46 | -1.00E-03 | -0.01 |
| R^2 | 0.07 | | 0.12 | | 0.16 | |
| Adjusted R^2 | 0.06 | | 0.10 | | 0.14 | |
| ΔR^2 | | | | | From Model 1 | From Model 2 |
| F -statistic | 5.59 ^{***} | | 9.09 ^{***} | | 0.09 ^{***} | 0.04 ^{***} |

$n=741$; ^{***} $p < .001$; ^{**} $p < .01$; ^{*} $p < .05$; ⁺ $p < .10$ (two-tailed)

Notes: All regression models are based on standardized z -scores of all variables (apart from the dichotomous or categorical variables); the entries are unstandardized β s.

Table 4. Hypothesized Relations and Test Results

| | Hypothesized Relations | Direction | Test Results |
|----|---|------------------|---------------------|
| H1 | Household Income → Ethical attitude | + | Unsupported |
| H2 | Education level → Ethical attitude | + | Supported |
| H3 | Materialism (Centrality) → Ethical attitude | - | Unsupported |
| H4 | Materialism (Success) → Ethical attitude | - | Supported |
| H5 | Materialism (Happiness) → Ethical attitude | - | Supported |