



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

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## 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

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3 the future studies.  
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8 *Originality/value*  
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10 This study advances and complements the dominant behavior approach that emphasizes  
11 cognitive and other psychological processes in explaining individual ethical attitudes. It is  
12 also seemingly the first study to examine the influence of three materialism facets on  
13 entrepreneurial ethical attitudes.  
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23 **Keywords.** Ethical attitude towards money-related deviances, strain theory, social  
24 stratification, materialism dimensions, SMEs  
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30 **Paper type:** Research paper  
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34 **Introduction**  
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37 Compared to managers especially in large companies, small- and medium-sized  
38 enterprise (SME) owners has been seldom empirically investigated in respect of their ethical  
39 attitudes (Cullen et al., 2004; Fernandez and Camacho, 2016). This research insufficiency  
40 deems problematic as there are a prevalent number of SMEs in the world economy and the  
41 ethical inclination of SME owners tends to exert a far more direct influence on business acts  
42 than managers (De Clercq and Dakhli, 2009). Ethical attitudes capture the essence of  
43 individual ethical reasoning (O'Fallon and Butterfield, 2005; Craft, 2013), which refers to  
44 individuals' unwillingness to justify behaviors that are generally considered ethically suspect  
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3 solutions to ethical dilemmas (Cullen et al., 2004, p. 412; De Clercq and Dakhli, 2009). This  
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5 unwillingness is a crucial moral component that precedes actual action (Craft, 2013).  
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7 Specifically, this study focuses on SME owners' ethical attitudes towards money-related  
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9 deviances; these attitudes depict the owners' moral stance towards pecuniary gains that are  
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11 derived from deviant behaviors (Cao, 2007). Because money is a utility metric, an ethical  
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13 dilemma involving pecuniary elements usually entails an inconsistency between market  
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15 pricing and social norms (Au and Tse, 2001; Kouchaki et al., 2013). It represents the situation  
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17 that SME owners frequently encounter while seldom empirically investigated (Kouchaki et  
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19 al., 2013).  
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25 In the business ethics research, descriptive moral theoretical models (e.g., Kohlberg,  
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27 1981; Rest, 1986; Trevino, 1986) interpreting ethical attitudes generally rely on a behavior  
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29 approach, which stresses an individual's cognitive and other psychological processes to arrive  
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31 at an ethical stance. Empirically, Rest's four-component model (Rest, 1986) usually enhanced  
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33 by planned-behavior theory (Ajzen, 1991) constitutes a foundational framework to explain  
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35 individual moral reasoning (O'Fallon and Butterfield 2005; Craft, 2013). Despite its  
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37 significance, this behavior-oriented explanation sheds little light on the *social root* of ethical  
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39 attitudes (Cullen et al., 2004; De Clercq and Dakhli, 2009). Little is known about how  
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41 variations in the personal strains of SME owners are reflected in their ethical stance. Strain  
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43 refers to the tension that SME owners can experience as a result of the incongruence between  
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45 their economic aspirations and the availability of legitimate methods of achieving their goals  
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47 (Cullen et al., 2004). The lack of attention to strain factors in relation to entrepreneurial  
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49 ethical stance is surprising because SMEs owners usually encounter severe constraints in  
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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  
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6 SME owners can be pressured into justifying *economic* deviant acts when conventional  
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8 methods of achieving their aspirations are blocked by social conditions (Agnew, 1992; De  
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10 Clercq and Dakhli, 2009).  
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16 Strain theory is employed for this study to understand SMEs owner's propensity to  
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18 commit illicit behaviors clung to money (Agnew, 1992; Moon et al., 2009). The key tenet of  
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20 this theory, which highlights the role of the tension in ethical reasoning, is well applicable for  
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22 Chinese SME owners. They usually experience substantial strain pressure because of their  
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24 limited access to resources (Ahlstrom and Ding, 2014; Lee, Lim, and Tan, 1999). Industrial  
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26 policies in China explicitly or implicitly restrict SMEs that are primarily privately owned  
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28 from profitable upstream sectors. Chinese SME owners usually struggle to survive their  
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30 businesses in fierce and undifferentiated competitions (Zhao, 2009). A constrained access to  
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32 credit is another challenge facing Chinese entrepreneurs as the banking system in China does  
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34 not favor ordinary SMEs (Ahlstrom and Ding, 2014; Fagan and Zhao, 2009).  
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40 Specifically, the current study investigates two major sources of personal strain: social  
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42 stratification and materialism. In strain theory, social stratification captures the primary  
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44 structural reason that individuals are willing to accept deviant acts (Featherstone and Deflem,  
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46 2003). A stratified social structure embodies unevenly distributed access to one's aspirations  
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48 because the chances of being economically successful are not evenly distributed among social  
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50 classes (Merton, 1968). Materialism captures the aspirational aspect of individuals'  
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52 justification of economic misconduct. Highly materialistic individuals experience strain  
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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),  
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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  
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10 assimilated prevalent economic values in strain theory better than other treatments such as  
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12 personal traits (Belk, 1985) and behavior (Micken and Roberts, 1999).  
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18 Materialism is a multi-faceted construct and conceptually encompasses three domains:  
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20 the judgment of success based on material possessions, the central focus of acquisition in  
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22 one's life, and the belief that material possessions and acquisition lead to happiness  
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24 (Kilbourne et al., 2005; Richins, 2004). In the interest of brevity, the terms *success*, *centrality*,  
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26 and *happiness* are used to refer to these facets. Contextually, materialistic values are  
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28 evidently pervasive in the present China (Sun et al., 2014; Yang and Stening, 2012), which  
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30 are not only manifested by Chinese consumers topping in luxury products shopping,  
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32 accounting for around one-third of global sales (Hancock, 2017), but also witnessed by  
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34 popular slogans such as “to be rich is glorious” and “it doesn't matter if a cat is black or  
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36 white, so long as it catches mice” that prioritize economic goals in the society (Yang and  
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38 Stening, 2012, p. 443).  
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45 Drawing from strain theory, this study seeks to address the following questions. First,  
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47 how do stratifications variables—namely income and education level for this study—affect  
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49 ethical attitudes towards money-related deviances? Second, how do dimensions of  
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51 materialism—namely, success, centrality and happiness—relate to ethical attitudes towards  
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53 money-related deviances? To answer these questions, this study analyzed data collected from  
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3 741 SME owners in China. SMEs refer to companies with fewer than 250 employees  
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6 (Musteen et al., 2014).  
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8 This paper is structured as follows. Before discussing methodological aspects, this study  
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10 reviews the literature and develop hypotheses. In the penultimate section, the results of the  
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12 statistical analysis are presented and discussed. The final section analyzes the study's  
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14 implications, its associated limitations and future research directions.  
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## 20 **Theoretical Background and Hypotheses**

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

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37 Strain theory asserts that individual deviances have social roots (Featherstone and  
38 Deflem, 2003). It posits that personal strains introduced by social circumstances are a  
39 primary cause of crimes (Agnew, 1992; Baumer, 2007). Although Durkheim (1897) initiated  
40 this view, its classic version was formulated by Merton's (1938) influential essay 'Social  
41 Structure and Anomie'. In sociology, this perspective and its associated variants represent  
42 one of the most-cited frameworks for explaining instrumental illicit behaviors (Agnew, 2001;  
43 Moon et al., 2009).  
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55 Insightfully Merton (1938) concentrates on *access* to socially prescribed goals that is  
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3 depicted as universally emphasized monetary success in his theory. From Merton's (1938)  
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6 view, the unequal distribution of legitimate access to economic aspirations among individuals  
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8 in various social classes is responsible for crime. Specifically, the lower classes are provided  
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10 with fewer legitimate methods of achieving monetary success, potentially pressuring them to  
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12 upgrade their position by accepting methods that violate either societal norms or laws  
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14 (Baumer, 2007; Messner and Rosenfeld, 2009). For Merton, strain derived from an  
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16 individual's position in a socially stratified structure, which determines the provision of  
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18 economic opportunities, is the very reason for deviance. In particular, this study focuses on  
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20 Chinese SME owners' household income and education level. These income and education  
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22 classification variables address the differentiated accessibility to financial and intellectual  
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24 resources that is critical for SME owners' economic success (Lee et al., 1999; Pompe, 2013,  
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26 Kirkwood 2016). In addition, the selection of these two variables embraces the essence of  
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28 social stratification in strain theory (e.g. Cao, 2007; De Clercq and Dakhli, 2009).  
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36 Socially prescribed goals do not represent a focal issue in Merton's theory and have not  
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38 been configured as a source of strain (Johnson and Duberley, 2011). This is unsurprising  
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40 because the emphasis on economic success was indispensably embedded in the liberal market  
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42 economy ideology (Maume and Lee, 2003; Messner and Rosenfeld, 2001). Nevertheless,  
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44 strain theorists have recently advocated that not only structured opportunity access but also  
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46 the fetishism of materialistic achievement should account for deviances (Bernburg, 2002;  
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48 Johnson and Duberley, 2011; Messner and Rosenfeld, 2001). For instance, Messner and  
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50 Rosenfeld (2001, p. 5) argue that the overarching problem is the goal of materialistic success  
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52 and 'the drive to succeed entails criminogenic consequences for the lower and upper classes  
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3 alike'. Similarly, both Bernburg (2002) and Johnson and Duberley (2011) suggest that an  
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5 exaggerated emphasis on individuals' monetary achievement fosters the commodification of  
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7 the self and leads to the adoption of the most technically efficient way to achieve one's goals.  
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9 These researchers believe that individuals' strong materialism, along with social stratification,  
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11 could be another source of personal strain. This study incorporates both this theoretical  
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13 advancement and Merton's classic stratification reasoning into the current investigation of  
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15 Chinese SME owners' ethical attitudes towards money-related deviances.  
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### 23 *Social Stratification and Ethical Attitude toward Money-Related Deviance*

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25 *Household Income.* Economic issues represent a major aspect of personal strain  
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27 (Messner and Rosenfeld, 2001). According to strain theory, the tension experienced by  
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29 individuals in pursuit of their economic success is substantially subject to their financial  
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31 wealth (Agnew, 1992; Agnew et al; 2002; De Clercq and Dakhli, 2009). This investigation  
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33 estimates that SME owners with lower household incomes may experience a greater degree  
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35 of frustration because their limited wealth constitutes a financial barrier to their business  
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37 growth and reminds them of their inability to operate their businesses successfully (Boyd and  
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39 Gumpert, 1983; De Clercq and Dakhli, 2009). The drawback effect of financial constraints  
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41 could be exacerbated for SME owners because they seldom receive credit from the  
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43 state-owned banking sector (Ahlstrom and Ding, 2014, Frid et al. 2016). This painful  
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45 blockage, reinforced by a sense of alienation from society, may drive them to consider  
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47 justifying an approach to accumulating financial wealth that violates socially accepted norms  
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55 (De Clercq and Dakhli, 2009). Prior entrepreneurship research has found that entrepreneurs  
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4 make ethical compromises or lower their ethical standards when experiencing financial  
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6 constraints (Morris and Zahra, 2000; De Clercq and Dakhli, 2009). In comparison, SME  
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8 owners in the higher household income category are more likely to enjoy financial  
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10 advantages in exploring the economic opportunities provided by the current social system and  
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12 therefore do not seem to be prone to pursuing monetary gains by accepting behaviors that  
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14 violate societal norms. Therefore, this study hypothesizes the following:  
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18 *Hypothesis 1: SME owners' household income is positively related to their ethical*  
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20 *attitude towards money-related deviance.*  
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23 *Education level.* Strain theory suggests that education should decrease entrepreneurial  
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25 willingness to justify money-related deviances by curbing aspects of personal strain (De  
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27 Clercq and Dakhli, 2009). For Chinese SME owners, higher levels of education enable them  
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29 to develop important analytical or bricolage ability and skills (Baker and Nelson, 2005) to run  
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31 their business, which could alleviate economic pressures from the environment, resources,  
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33 stakeholders, or time in business operations (Cooper et al., 1997). Moreover, prior evidence  
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35 suggests that higher education substantially enriches and diversifies individual values  
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37 (Inglehart, 1997). Higher-educated SME owners may attach greater importance to spiritual  
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39 aspects of success such as self-actualization or quality of life than to societally endorsed  
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41 monetary aspects (Inglehart, 1997), which consequently releases associated economic strain.  
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43 Finally, Chinese SME owners with higher levels of education are expected to have received  
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45 ethics education and have learned more about Chinese traditional virtues such as Confucian  
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47 ethics (Ji and Dimitratos, 2013), which are likely to discourage egoism and the pursuit of  
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49 economic self-interest (Cullen et al., 2004; Agnew et al., 2002). Thus, this study hypothesizes  
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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

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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  
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6 SME owners focus on material acquisition in their lives. They attach greater importance to  
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8 material ends than the legitimacy of means when the two aspects are not in congruence  
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10 (Messner and Rosenfeld, 2009). When the tension derived from this inconsistency is present,  
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12 they are prone to justify ethically suspect solutions to achieve monetary goals. Second,  
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14 materialists are more likely to have low-level construal minds, which are associated with  
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16 concrete objects, than high-level construal minds (Kim, 2013). Highly materialistic SME  
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18 owners' specifications of success and happiness in terms of the quantity and quality of  
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20 material acquisition represent a more powerful source of stress than abstract ethical  
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22 consideration. When the two aspects cannot be conciliated, the general ethical concern of  
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24 high-materialism SME owners is likely to succumb to the pressure of calculated monetary  
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26 returns (Fujita et al., 2006). Third, highly materialistic SME owners rely on material  
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28 possessions to define their success and happiness (Christopher et al., 2009). Inevitably, what  
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30 influences these SME owners' possessions will affect the two aforementioned aspired aspects.  
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32 Higher-materialism SME owners tend to experience greater deprivation tension (Agnew,  
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34 2001) than their lower-materialism counterparts when considering the idea of abandoning  
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36 monetary gains, even when those gains are derived from unethical solutions. Fourth,  
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38 materialists attach meanings of success and happiness to extrinsic possessions and acquisition  
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40 that reflect their internally insecure self-worth and poor management of social relationships  
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42 (Chang and Arkin, 2002; Christopher et al., 2009). Characterized by low self-control (Kim,  
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44 2013), high-materialism SME owners are more vulnerable to monetary temptations than  
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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

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3 because of cost considerations. Another mailing was delivered to informants who did not  
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5 respond three weeks after the first mailing. Reminder telephone calls or emails from CASME  
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7 regional affiliations were placed between the two mailings. The current research received 763  
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9 returned questionnaires (response rate = 44%), 741 of which were usable. In this study, a  
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11 satisfactory response rate is attributable to support from CASME and local business networks,  
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13 the relative shortness of the instrument, and professional survey skills.  
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18 The items in the structured questionnaire were built on previously developed scales with  
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20 additional validation in the context of China, as refined based on the feedback of four  
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22 academics and sixteen SME owners' comments on the clarity of the concepts, language  
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24 habits, and questionnaire format. This study adopted translation and back-translation  
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26 procedures to ensure consistency between the Chinese and English versions of the  
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28 questionnaire (Brislin, 1970). To check for non-response bias, t-tests were used for the  
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30 number of employees ( $p = 0.77$ ) and the age of entrepreneurs ( $p = 0.69$ ) between early and  
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32 late respondents in the two mailings (Armstrong and Overton, 1977); these tests suggested no  
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34 significant differences. To assess data quality, a second-round on-site survey was conducted  
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36 among 150 SME owners who returned the questionnaires. The entrepreneurs' answers to the  
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38 identical questions were compared between the mail and on-site methods. The Pearson's  
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40 correlation coefficients, which range from 0.89 to 0.98, suggest a high consistency of replies  
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42 between the two methods (Kline, 1993).  
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50 Several measures were taken to control potential social desirability bias that can arise  
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52 when individuals deny socially undesirable behaviors (Chung and Monroe, 2003). First, this  
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54 study relied on the self-administration data collection method to control interviewer effects.  
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4 In the presence of interviewers, informants could experience negative feelings such as shame,  
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6 embarrassment and jeopardy when responding to sensitive questions (Krumpal, 2013).  
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9 Second, when asking SME owners questions about their ethical attitudes, the current research  
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11 adopted an indirect questioning approach that allows informants the judge the behaviors of a  
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13 hypothetical 'someone' in scenarios of ethical dilemmas (O'Fallon and Butterfield, 2005, p.  
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15 404). Third, this study used a short, clear statement to assure confidentiality and anonymity in  
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17 the questionnaire because poor response quality has been found to result from either an  
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19 assurance that is too sophisticated or the absence of such a statement quality (Singer et al.,  
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21 1995). Fourth, some item anchors in the questionnaire were reversed. In addition to these  
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23 methods, prior evidence shows that Chinese respondents demonstrate less social desirability  
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25 bias than their Western counterparts in response to business ethics issues (Dunn and Shome,  
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27 2009).  
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### 35 *Operationalization of Variables*

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38 *Dependent Variable.* Ethical attitude towards money-related deviances was measured  
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40 using a ten-point Likert scale drawn from Cullen et al. (2004) and De Clercq and Dakhli  
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42 (2009). The five measures (Cronbach alpha = 0.86) assess the extent to which SME owners  
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44 consider the justifiability (1 = always be justified; 10 = never be justified) of ethically suspect  
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46 behaviors for monetary gains. Exemplar items include 'cheating on taxes if someone has a  
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48 chance', 'claiming government benefits to which someone is not entitled', and 'someone  
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50 lying in her/his own economic interest'. The scale has been validated in both the  
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52 cross-national and the Chinese context (Cao, 2007; Cullen et al., 2004), showing a perception  
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3 consistency in various countries regarding these deviant behaviors (Cullen et al., 2004).  
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6 *Independent Variables.* *Household income* was measured on a scale between 1 (lowest  
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8 decile) and 10 (highest decile) relative to other entrepreneurs in China, taking into account all  
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10 wages, pensions, investment returns and other income. *Education level* assesses respondents'  
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12 highest education level received, which appears on a seven-point Likert scale ranging from 1  
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14 (no formal education) to 7 (having a Ph.D.).  
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18 The current study employed a total thirteen-item seven-point Likert scale (1 = strongly  
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20 disagree; 7 = strongly agree) to measure *materialism dimensions*, which assess the  
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22 significance of respondents attached to material possessions and associated acquisition in  
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24 their lives on three facets in terms of *success*, *centrality*, and *happiness*. Specifically, five,  
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26 three, and five items were used to measure success (Cronbach alpha = 0.85), centrality  
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28 (Cronbach alpha = 0.71), and happiness (Cronbach alpha = 0.87), respectively. Exemplar  
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30 items for *success* include 'I admire people who own expensive homes, cars, and clothes', for  
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32 *centrality* include 'I try to keep my life simple, as far as possessions are concerned' (reverse  
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34 scaled), and for *happiness* include 'I would be happier if I could afford to buy more things'.  
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40 This scale, developed by Richins (2004), has been widely applied to measure the facets of  
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42 materialism as individual differences in various disciplines (Kilbourne and LaForge, 2010).  
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49 The effectiveness of this scale has been confirmed in the context of China (e.g., Sun et al.,  
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*Controls.* This study employed five control variables in this study. First, the *age* of SME  
owners was included because older entrepreneurs were found to have higher ethical standards  
than their younger counterparts (De Clercq and Dakhli, 2009). Second, the *gender* of

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

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3 approximation = 0.07; normed fit index = 0.96; non-normed fit index = 0.96). All of the items  
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5 significantly loaded on their associated dimensions, with the lowest t-value being 14.84;  
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7 therefore, the convergent validity of the dimensions is satisfied. The *discriminant validity* of  
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9 the measures was assessed in two ways. This study first calculated all confidence intervals ( $\pm$   
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11 two standard errors) around the correlation estimate (*phi* value) between the pairwise  
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13 dimensions, which do not include 1 (Anderson and Gerbing, 1988). The square root of the  
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15 average variance extracted (AVE) value for each of the dimensions was higher than the latent  
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17 correlation of its pair with any other dimensions (Fornell and Larcker, 1981). Therefore,  
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19 collectively, these analyses approved the notion that the measures of *success*, *centrality* and  
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21 *happiness* employed in this study satisfactorily enjoyed both reliability and validity.  
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28 This investigation implemented both ex ante and ex post strategies (Podsakoff et al.,  
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30 2003) to alleviate and detect the potential threat of common method variance (Cong et al,  
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32 2017). First, this study deliberately separated the dependent and independent variables into  
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34 different pages of the questionnaire to psychologically isolate them, a strategy that was  
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36 reinforced by reversing some of the item anchors and the clear assurance of anonymity and  
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38 confidentiality. Second, the *post hoc* Harman's one-factor test was adopted to assess common  
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40 method variance (Podsakoff et al., 2003). A principal component factor test of all of the  
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42 variables in the model showed that four factors emerged, with the largest factor explaining  
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44 only 17.69% of the total variance. Third, this study employed a CFA approach by introducing  
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46 an unmeasured latent method factor into the measurement model (Podsakoff et al., 2003).  
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48 The addition of this commonly shared method factor did not improve the model fit  
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50 substantially, which extracted a variance figure of only 0.12, far below the 0.50 threshold  
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(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

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

*Insert Table 2 Here*

### *Hypothesis Testing*

The results of the OLS regressions appeared in Table 3, which examined the effects of two sets of predictors on the dependent variable in the three models. Specifically, when controlling for age of entrepreneur, firm size, marital status, firm size, and industry types, the effects of household income and education level on ethical attitude were examined in Model 1, while the effects of centrality, success, and happiness on ethical attitude were assessed in Model 2. All independent and control variables were then included in Model 3 that constitutes the full model. The R squared values are 0.06, 0.12, and 0.16 respectively for the three models, which suggest 6%, 12%, and 16% variance in the dependent variable have been explained by these models. These relatively low R squared values may attribute to only a single perspective (strain theory) employed in this study, which could lead to missing variables grounded on other theoretical interpretations. However, the F-statistics, which reflect overall model fit, are highly significant for all of the regression models, suggesting the overall robustness of those models. Compared to Models 1 and 2, the overall model fit of Model 3 significantly improved after inclusion of the materialism facet variables ( $\Delta R^2 = 0.09$ ,  $p < 0.001$ ) and stratification variables ( $\Delta R^2 = 0.04$ ,  $p < 0.001$ ), respectively, which suggests a

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

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

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22 With regard to the stratification variables, the mixed results show that entrepreneurial  
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24 education level is positively related to ethical attitudes towards money-related deviances,  
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26 whereas household income level is surprisingly negatively associated with ethical attitudes.  
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28 The former evidence is in line with the premise of strain theory because higher-level  
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30 education better equips entrepreneurs with professional abilities and skill, critical thinking,  
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32 and ethical awareness to reduce personal strain in business operations, and accordingly,  
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34 higher-educated SME owners will be more likely to preserve the belief that individuals  
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36 should stick to ethical acts (Cullen et al., 2004; Merton, 1968). In addition, despite few  
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38 exceptions (e.g. De Clercq and Dakhli, 2009), this finding is generally consistent with prior  
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40 evidence of the effects of education on delinquencies or economic crimes at both the  
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42 individual and national level employing strain perspective or its extensions (e.g. Agnew et  
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44 al., 2002; Cullen et al., 2004) and Craft's (2013, p. 238) conclusion that 'education was found  
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46 to have both a positive and neutral impact on ethical decision-making' following his analysis  
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48 of *twenty-seven empirical studies* of ethical decision making involving *education predictors*.  
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3 It is noteworthy that although the prior ethical decision-making literature has identified a link  
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6 between education level and individual propensity to accept ethical practices, it does not  
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8 explain the underlying mechanism of the link, which is particularly emphasized in this study.  
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11 The latter result is somewhat counterintuitive as the strain perspective suggests that the  
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13 financial challenges facing SME owners could lead to their ethical compromises in business  
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15 operations (Agnew, 1992; Merton, 1968). Contrary to prior evidence (e.g. Agnew et al., 2002;  
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17 De Clercq and Dakhli, 2009), this study finds a negative relationship between SME owners'  
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19 income level and their ethical attitudes. One possible explanation for this conflicting finding  
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21 may reside in the argument that the downstream costs of unethical practices might be  
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23 perceived as relatively lower for higher-income SME owners than for lower-income ones,  
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25 which may reduce their cognitive thresholds of such deviance engagement. In addition,  
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27 contextual conditions in emerging economies characterized by institutional voids and  
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29 regulative enforcement difficulties may reinforce such an entrepreneurial perception (e.g.,  
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31 Puffer et al., 2010). Another potential explanation lies in the view that sufficient financial  
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33 resources lead higher-income entrepreneurs towards increased freedom and decreased  
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35 interdependence, potentially fostering their sense of entitlement and self-focused tendency  
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37 towards social behaviors (Piff et al., 2012). A prioritization of self-interest along with an  
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39 indifference to other stakeholders could instigate an unethical stance towards money-related  
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41 deviance among higher-income SME owners.  
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50 With regard to the facets of materialism, the findings suggest that success and happiness  
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52 exert a negative influence on ethical attitudes towards money-related deviances, as  
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54 hypothesized, but centrality has no associated impact, lending support to the strain premise.  
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4 In light of strain theory, the results indicate that SME owners who overemphasize  
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6 possession-defined success and happiness find it more difficult to repel strain pressures given  
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8 the higher insecurity of their self-worth, their greater vulnerability to specific objects, and  
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10 their deeper sensitivity to material deprivation (Christopher et al., 2009; Kim, 2013). In the  
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12 presence of economic strains, such entrepreneurs are prone to compromise their ethical  
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14 stances to ease internal uncertainty (Chang and Arkin, 2002). This evidence not only  
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16 confirms strain theory's recent theoretical progress of the notion that the fetish of  
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18 materialistic success is another source of strain (Bernburg, 2002; Messner and Rosenfeld,  
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20 2009) but also sheds light on the strain explanation for the association between materialistic  
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22 values and ethical stances. Nevertheless, this study failed to identify a relationship between  
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24 centrality and entrepreneurial ethical attitudes. Without attached meanings, acquisition  
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26 centrality perhaps could be neutral and not as detrimental as expected because individuals'  
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28 central focus on material acquisitions can be for just or ethical purposes. This explanation  
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30 synergizes the argument that it is the meanings attached to such material acquisitions that  
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32 constitute the crux of individuals' willingness to respond, not acquisition centrality per se  
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34 (Chang and Arkin, 2002, p. 403). Correspondingly, Csikszentmihalyi and Rochberg-Halton  
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36 (1978) stress that instrumental materialism is less harmful than terminal materialism. The  
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38 former type of materialism occurs when material possessions and acquisition are considered  
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40 the means to attain other life objectives such as quality of life, whereas the latter occurs when  
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42 the ownership of possessions is an end in itself.  
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## 55 **Conclusion**

The study has important research implications for entrepreneurial ethics. First, this study investigates and advances the strain perspective for understanding the ethical attitudes of SME owners who usually experience heavy economic pressures (Ahlstrom and Ding, 2014). It initiates the first step to address not only “what”, “how”, but also “why” social conditions of SME owners could affect their ethical stances (Whetten, 1989) in stratified societies in which economic goals prevail (Merton, 1938). Second, it has introduced and tested both structural and aspirational strain determinants of entrepreneurial ethical attitudes, generally affirming the effectiveness of the strain perspective. Therefore, it advances and complements the dominant behavior approach that emphasizes cognitive and other psychological processes in explaining individual ethical attitudes (Kohlberg, 1981; Rest, 1986). Such an investigation substantially broadens the research horizon of ethical reasoning in light of the fact that strain pressures introduced by social conditions have been largely ignored in prior research despite their significance and pervasiveness among SME owners (Cullen et al., 2004; De Clercq and Dakhli, 2009). Third, to the best of our knowledge, it is the first study to examine the influence of three materialism facets on entrepreneurial ethical attitudes towards money-related deviance. The evidence provides overall support for the recent progress of strain theory regarding the strain implications of prevalent materialistic values (Bernburg, 2002; Messner and Rosenfeld, 2009). In addition, the study found that only materialism facets attached with meanings such as success and happiness impair entrepreneurial ethical attitudes. It provides important implications for the research on the moral consequences of materialism, especially with regard to the separation between instrumental and terminal materialism (Csikszentmihalyi and Rochberg-Halton, 1978). Fourth, substantial prior

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

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35 The evidence identified in this study has substantial practical implications for policy  
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37 makers. First, the lack of a positive relationship between income level and ethical attitude  
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39 towards money-related deviances casts doubt on the popular slogan 'to get rich is glorious' in  
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41 Chinese society. For SME owners, becoming rich does not correspond to an increase in  
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43 ethical standards. It is recommended that policy makers improve their institutional efficiency  
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45 and effectiveness to increase the costs of committing money-related deviances and reward  
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47 ethical choices, and simultaneously constrain the sense of entitlement among the rich through  
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49 a certain reduction in income inequality (Côté et al., 2015; Piff et al., 2012). Second, the  
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51 meanings of success and happiness attached to material possessions are damaging to SME  
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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.  
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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  
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3 different development stages of SMEs or in industries with different characteristics. This  
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6 study failing to include both aspects limits the power of the current explanations and loses  
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8 chances to further contextualize the strain interpretation among SMEs, which may represent  
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10 an important direction for future research. Fifth, this study reports the results based on a large  
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12 sample of Chinese SME owners. Additional evidence from their counterparts in other  
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14 emerging economies would extend the validity of this investigation's findings, which could  
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16 further include institutional, political, and cultural conditions in such investigations.  
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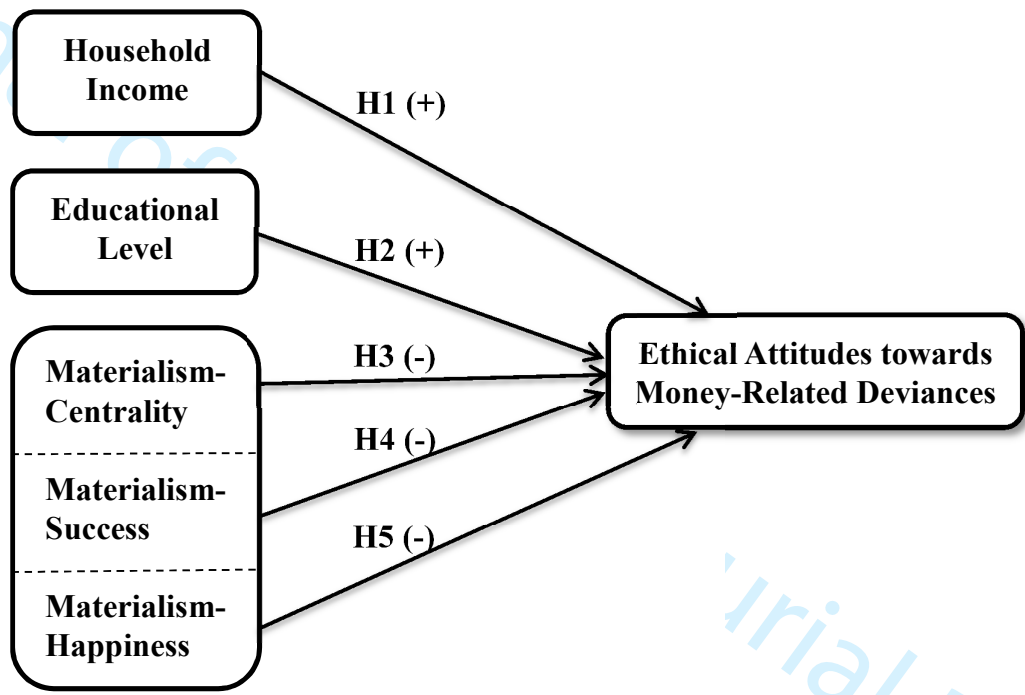


Figure 1: Research Model of this Study



**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 <sup>a</sup>
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	
	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>
<i>Explanatory variables:</i>						
Household income	-0.27	-5.55 <sup>***</sup>			-0.24	-5.07 <sup>***</sup>
Education	0.10	2.15 <sup>*</sup>			0.08	1.76 <sup>+</sup>
Materialism-Success			-0.26	-5.46 <sup>***</sup>	-0.21	-4.22 <sup>***</sup>
Materialism-Centrality			-0.01	-0.17	-0.02	-0.35
Materialism-Happiness			-0.13	-2.69 <sup>**</sup>	-0.16	-3.25 <sup>**</sup>
<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 <sup>+</sup>	0.24	2.01 <sup>*</sup>	0.22	1.81 <sup>+</sup>
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	
<i>Adjusted R</i> <sup>2</sup>	0.06		0.10		0.14	
$\Delta R^2$					From Model 1	From Model 2
<i>F</i> -statistic	5.59 <sup>***</sup>		9.09 <sup>***</sup>		0.09 <sup>***</sup>	0.04 <sup>***</sup>

*n* = 741; <sup>\*\*\*</sup> *p* < .001; <sup>\*\*</sup> *p* < .01; <sup>\*</sup> *p* < .05; <sup>+</sup> *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  $\beta$ s.

**Table 4.** Hypothesized Relations and Test Results

	<b>Hypothesized Relations</b>	<b>Direction</b>	<b>Test Results</b>
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