Low Socio-economic Status and High Stress Suppress Consumer Creativity

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Abstract:

Consumer creativity benefits companies and consumers, through co-creation of ideas and products/services. Creativity is not bestowed on selected few, but influenced by situational and contextual factors. The family investment and stress models posit that socio-economic status (SES) background is key determinant of various psychological and cognitive outcomes. Thus, we used four measures of SES and two measures of creativity to examine whether SES and stress impact consumer creativity in an African context. In two studies, we show that SES (past and current) is associated with creativity. The first study established the link between SES background and creativity using a South African sample, because the link had not been tested in developing country setting and for a highly SES inequality country like South Africa. The second study replicated the finding in older, larger US based sample and provided an initial evidence of a moderator (current stress) in the SES-creativity relationship.

Keywords: Consumer creativity; Socio-economic status; Stress

Track: Consumer Bahavior

1. Introduction of Paper

In the past decades, there has been a shift from passive consumers who acquire, consume and dispose of products and services to active consumers who innovate and co-create products and services. This has been facilitated by consumer creativity, which is defined as a consumer's general ability to generate innovative ideas in a consumption-related context (Wu, Wen, Dou & Chen, 2015). Snyder, Witell, Elg and McColl-Kennedy (2019) view a creative consumer as an individual that "adapts, modifies, or transforms products or services to better suit their needs". A creative consumer or individual has the ability to use available resources to solve problems and co-create value (Snyder et al., 2019). Consumer creativity benefits both companies and consumers. For companies, the benefit is in terms of consumers' idea generation for new product development, modification and for products and services co-creation. Consumer creativity also assist companies to identify consumers' needs and positively impacts brand attitudes and acceptance (Wu et al., 2015).

When consumers are creative, they benefit in terms of their ability to generate their own web contents and create personal brands and general brand meanings (Moreau, Franke, & von Hippel, 2018). Consumers can use their creativity to prepare delicious meals from a creative mix of ingredients (Wu et al., 2015). In a healthcare setting, Snyder et al. (2019) found that the ideas that customers generate improve the value of health services, enhance customer experiences and generally improve customers' clinical health. In this era of scarce resources, consumers' creativity enables them to skillfully use and even give producers and marketers ideas to use scarce resources to satisfy their needs and wants. With the advancement of technology, consumers are becoming very innovative and create value for themselves, rather than simply acquire it (Morreau et al., 2018).

Consumer creativity is being motivated and rewarded (Nowlan, 2019) and for its enhancement, researchers are investigating its drivers. While Hirschman (1983) and Burroughs and Mick (2004) suggest that personal/ psychological factors such as risk taking, metaphoric thinking ability and locus of control impact consumer creativity, Moreau and Dahl (2005) opine that it is external factors such as input availability/restriction and time constraints that influence information processing and ultimate creativity. Nowlan (2019) found that consumer creativity is influenced by busyness because it "disrupts one's ability to control thoughts on a focal task". Researchers commonly agree that creativity is not something bestowed on selected few, but is influenced by situational and contextual factors,

such as time constraints (Burroughs & Mick, 2004), socioeconomic status (Dai et al., 2012) and service settings (Snyder et al., 2019).

Despite the agreement that situational factors generally impact creativity, Synder et al. (2019) are concerned about the lack of research on the drivers of customer creativity outside the boundaries of a firm. They suggest an investigation into the 'non-firm' conditions under which consumers' creativity are developed or underdeveloped. In line with recent suggestions that conditions of consumers' household socioeconomic status (SES) can affect them intellectually, economically and psychologically (Ayoub et al., 2018) we examined the extent to which SES (past and current) is linked to creativity. In two studies using different population samples (South African and US based) we show that people coming from low SES background are less creative than individuals coming from higher SES background. Furthermore, we provide some initial evidence on the process underlying the relationship by showing that stress moderates the relationship between SES and creativity.

2. Literature Review for Hypotheses Development

2.1 SES and creativity

SES is viewed as the background conditions under which individuals have been raised and are currently living in terms of social, economic/material and cognitive/intellectual support from parents and relatives (Ayoub et al., 2018; Dai et al., 2012). Baker (2014) construes SES as the level of income, educational and occupational attainments of a household where children are being raised. SES has been found to predict various outcomes, such as academic achievement (Frederickson & Petrides, 2008), children cognitive ability (Spengler et al., 2015), emotional and social functioning (Conger & Donnellan, 2007), materialism (Li, Lu, Xia & Guo, 2018) and personality traits of conscientiousness, emotional stability, openness to experience, negative emotionality, extraversion and effortful control (Ayoub et al., 2018).

Past research has linked SES with cognitive functions. For example, Lupien et al. (2000) found that low SES is linked to impaired cognitive function. Previous studies showed significant deficits in working memory between low SES kindergarten and 11-year-old children (Noble, Norman & Farah, 2005; Farah et al., 2006). Mani et al. (2012) found that poor individuals perform worse in an abstract reasoning task than rich individuals. Moreover, past research showed that children raised in higher SES homes compared to those from low

SES enjoyed distinct advantage in academic achievement and in creative thinking across cultures (Milgram, 1983; Vijayalakshmi, 1980).

Dai et al. (2012) compared the creative abilities of Chinese adolescents raised and studying in low and high SES communities. They found creativity gaps. The gaps can be explained by the family investment model proposed by Conger and Donnellan (2007). The model posits that variations in family SES causes variations in children's economic achievements, social, cognitive/intellectual and emotionally functioning. According to Dai et al. (2012), children raised in high-SES households and neighborhood are more likely to engage in explorative and intellectually stimulating activities. The evidence so far has been accumulated in the academic context among relatively rich young people. From a marketing perspective, it is important to investigate this link among adults, and also in a developing country setting that is relatively less rich but has high SES inequality.

H1a: Compared to adult consumers raised in and living in low SES, those raised in and living in high SES will be more creative.

H1b: The association between SES and creativity will replicate in less wealthy settings

2.2 SES, stress and creativity

Stress has been associated with different levels of creativity. In a large heterogeneous sample of working adults, Avey et al. (2012) found that high levels of stress are linked with reduced creativity. Some other studies showed that stress imposed by intense workload pressures negatively affects creativity (Amabile et al., 1996; Hallowell, 2005). Furthermore, stress has been shown to be connected with SES. Several studies have shown that poverty leads to high levels of chronic stress which in turn has various psychological and cognitive outcomes (Haushofer & Fehr, 2014). Moreover, current levels of stress have been found to moderate the effects of SES on psychological and cognitive functions. High levels of current stress have been shown to strengthen the relationship of SES and various psychological and cognitive variables (e.g. Griskevicius et al., 2013). According to Griskevicius et al. (2013), different SES backgrounds calibrate individuals toward behaviors which emerge more easily in difficult situations (e.g. experiencing high levels of stress). Therefore, we expect current stress to moderate the relationship between SES and creativity.

H2: The association between SES and creativity will be stronger under high levels of current stress.

3. Study 1

In study 1, we sought to establish the link between SES and creativity and to investigate also whether this link can be found in less wealthy settings. Therefore, our first study was conducted in South Africa, which is a developing country with high SES inequality.

3.1 Method

3.1.1 Participants and Procedure

One hundred and forty respondents from a South African university (47.9% Female, M_{age} =23.16, SD=5.16).

SES: SES was measured with four different measures. The first assesses childhood SES in a more subjective way. Participants were asked to indicate their agreement with three statements on a 9-point scale (1 = strongly disagree - 9 = strongly agree): "My family usually had enough money for things when I was growing up," "I grew up in a relatively wealthy neighborhood," and "I felt relatively wealthy compared to the other kids in my school." (Griskevicius, Tybur, et al., 2011; Griskevicius et al., 2013). The second measure assesses childhood SES in a more objective way. Participants had to answer the following question: "What was your household income when you were growing up?" Eleven response options were provided: R5.000 or less, R5.001 - R10.000, R15.001 - R20.000, R15.001 - R20.000, R20.001 - R25.000, R25.001 - R30.000, R30.001 - R35.000, R35.001 - R40.000, R40.001 - R45.000, R45.001 - R50.000, R50.001 or more. The third measure assessed subjective current SES. Participants were asked to indicate their agreement with three statements on a 9-point scale (1 = strongly disagree - 9 = strongly agree): "I have enough money to buy things I want," "I don't need to worry too much about paying my bills," and "I don't think I'll have to worry about money too much in the future". The fourth measure assessed objective current SES. Participants had to indicate their current household income in the same eleven categories as childhood income. The measures were standardized and combined ($\alpha = 0.77$).

Creativity: To measure creativity, participants had to come up with as many ideas as possible for the different ways in which one could use a brick (Guilford, 1967). Two independent calculations were made for the number of uses that every participant came up with. The two measures were averaged ($\alpha = 0.97$).

3.2. Results

The correlation between SES and creativity was significant and positive (r=0.22, p=0.019), which means that lower levels of SES led to lower creativity. This result supports initial findings that people coming from lower SES backgrounds exhibit lower levels of creativity. Our result shows that even in a less wealthy setting, the link between SES and creativity can be replicated.

4. Study 2

In the second study, we replicated the findings of the first study using a different measure of creativity and provide an initial testing of the moderation effect of current stress. Last, we wanted to replicate our result using the appropriate sample size, therefore we conducted a priori power analysis (G*Power 3.1.9.2, Faul, Erdfelder, Lang & Buchner, 2007; two-tailed, α = .05; power=0.95) using the effect size of the first study (r=0.22). The power analysis revealed that we needed 258 participants. We recruited 340 to account for missing data.

4.1. Method

4.1.1 Participant and Procedure

Three hundred and forty respondents were recruited from a US based Amazon Mechanical Turk (Mturk) (47.9% Female, M_{age} =35.3, SD=11.54).

SES: To measure SES we used the same measure as study 1.

Creativity: Creativity this time was measured using the Remote Associate Task (RAT). The RAT was developed by Mednick (1962). The RAT consists of a set of quizzes where participants try to find a solution worked out of some stimuli words. For example, for stimuli words “cake,” “swiss,” and “cottage,” a potential answer is “cheese,” because it creates compound words that have new meanings: “cheesecake,” “swiss cheese,” and “cottage cheese.” For our RAT task, participants received ten different quizzes. The higher the number of the right solution the higher the levels of creativity.

Current Stress: Current stress was measured with three item taken from the State Trait Anxiety Inventory (STAI; Spielberger, 1983): I am tense, I feel upset, I am worried (1= Not at all – 4=Very Much; α = 0.89).

Control Variables: In study 2 we included some control variable. We measured levels of education, ethnicity (coded 0= Not white background, 1=White background) and native language as RAT was in English (coded 0=Other Languages, 1=English).

4.2 Results

The correlation between SES and creativity was again significant and positive (r=0.11, p=0.040), Furthermore, we regressed SES against creativity including as control variables education, ethnicity and language. The link between childhood SES and creativity remained significant (p=0.018) (see table 1). To test whether current stress acts as a moderator, we conducted a simple slopes analysis (Aiken & West, 1991). The interaction between SES and current stress was significant (t(331)=2.40, p=0.017, β=0.649). For low levels of stress (one standard deviation below the mean), the link between SES and creativity was not significant (t(331)=-1.110, p=0.912, β=-0.038). However, for high levels of stress the association between SES and creativity was significant (t(331)=3.114, p=0.002, β=1.259). Study 2 provided further support to our H1 and we find once again that the association between SES and creativity is positive and significant. Additionally, we provide some initial evidence about a moderation effect of current levels of stress.

	β (and SE)
SES	0.143* (0.282)
Education	-0.068 (0.166)
Ethnicity	0.021 (0.496)
Language	0.024 (1.541)

Table 1: Summary of multiple regressions predicting creativity

N=338, β =standardized regression coefficient
*p<0.05
**p<0.01
***p<0.001

5. Discussion

Consumer creativity is very important as we are in an era where co-creation of products and services is important and common (Wu et al., 2015). Therefore, exploring the drivers of creativity provides important insights on how it can be influenced and enhanced. In two studies, we provide evidence that SES is associated with creativity. Our results show that people coming from low SES backgrounds are less creative than people coming from high SES backgrounds. Additionally, we provide an initial evidence on the existence of a moderator in the relationship, i.e., current levels of stress.

Our findings come in line with recent studies showing that living under low SES condition can hinder cognitive ability (Noble, Norman & Farah, 2005; Farah et al., 2006) which in turn can be harmful for the decision making process (Mani et al., 2012). Living under these condition creates certain psychological and cognitive outcomes such as stress (Haushofer & Fehr, 2014) or a certain focus on the problem of resource scarcity (Shah, Mullainathan & Shafir, 2012) that leaves individuals (living under such condition) cognitively impaired and unable to function effectively on certain tasks (Mani et al., 2012).

However, we provide some evidence that this association between SES and creativity might be reversible. This is in our finding that under low levels of stress, the difference in creativity between poor and rich is not significant. Therefore, providing conditions that will reduce the levels of stress might help poor individuals to be equally creativity as the rick. Future research should formally test this possibility by using more rigorous measures of levels of stress and/or manipulate it. Furthermore, future research can test whether more relaxed settings where levels of stress is low can alleviate the creativity difference between poor and rich.

(1)

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