To what extent is Choice Overload a Universal Phenomenon? Critically Evaluate Research Findings which Examine Cross-Cultural Variability in Choice Overload Effects.

Introduction

The contemporary world tends to manifest that more access to variety is a signal of freedom which in turn coincides with satisfaction and happiness. The perception of the freedom to choose or make decisions breeds the positive virtue of self-control (Psychological Reactance: Brehm, 1989) and happiness (Self-determination theory: Ryan & Deci, 2000). Early studies have shown that the presence of choice control and more variety enhances intrinsic motivation, performance, and attractiveness (Iyengar & Lepper 1999, 2000), however, these effects are short-lived in the long run, especially when more varieties are present. In other early studies, Reinstein et al. (1975), and Ryan and Deci (2000) found that having too few varieties diminishes motivation, satisfaction, and health, while having more options appears to improve well-being. This has led several studies to examine to what extent, in terms of choice-set sizes, do more choice (assortment, option, or variety) elicits more harm than good. The contemporary "inverted U-shape" perspective opted to establish a balance and explains how having too much than ideal (*Choice Overload*) or too little (choice deprivation) could be detrimental to subjective well-being, specifically the construct of satisfaction (Reutskaja & Hogarth, 2009; Grant & Schwartz 2011; Reutskaja et al., 2018, 2022). This essay will exclusively focus on *Choice Overload* (CO).

The theory of bounded rationality (Herbert Simon, 1957, as cited in Herbert Simon, 1982) could further explain the concept of CO. Since CO involves having either too many attributes per option (Greifeneder et al., 2010) or just too many options, there could be too much information which could be hard for non-Bayesian machines to process. Furthermore, Keller & Staelin (1987) found that as the number of options increases, the cognitive effort in evaluating those options increases. Although an increasing number of studies examine how

increasing or decreasing options could have an implication for subjective well-being, a few have looked at the effect of culture.

Within the domain of education, Iyengar & Lepper (1999) found that Anglo-American kids tend to elicit higher intrinsic motivation and performance than Asian-American kids when the former makes a personal choice versus when their mum or an outsider chooses what activity to engage in. This cross-cultural phenomenon has also manifested in other several domains i.e., jobs, health, shopping (Brown et al., 2015; Reutskaja et al., 2022).

The Significance of this Essay

The study of CO's universal and cross-cultural effects is imperative since it has implications for businesses, policy design and implementation, and the development of behavioural interventions (Reutskaja et al., 2022; Goldstein, 2001; Broniarczyk et al., 1998; Lehman, 1998). However, there have been limited studies evaluating the cross-cultural effects of CO leaving gaps that raise questions about the generalizability of these studies' findings. This is in part due to very limited literature covering the nature of having more than ideal in collectivist cultures. Chernev et al. (2015) in their meta-analysis of choice assortment size showed that the United States (US) accounted for 72% of studies in the literature. To further strengthen how a cross-cultural study gap exists, the authors also revealed that about 91% of studies were conducted in countries characterised by individualistic cultures (Chernev et al., 2015).

Hence, this essay's objective is to evaluate CO's universality and its cross-cultural effect(s). This essay will give an overview and critical evaluation of CO; its historical effects based on past studies; its universal pervasiveness and cross-cultural effects leveraging the limited cross-cultural studies. The final sections will highlight methodological limitations and areas of methodological improvement and further research.

Choice Overload and its Effects: A Broader Perspective

The historical effects of having too much than ideal, drawing from past studies, have been associated with a mix of both positive (Iyengar & Lepper, 2000; Reibstein, Youngblood,

Fromkin, 1975) and negative (Iyengar & Lepper, 2000; Herrmann & Heitmann, 2006; Haynes 2009; Diehl and Poynor, 2010; Morrin et al., 2012) consequences. However, an underlying theme in the early studies is that the positive consequences could be due to the characteristically small number of alternating choice sets presented. Hence, these studies are potentially checking for the preference between no choice and some choice (Iyengar & Lepper, 2000) which is different from what modern consumers experience.

In 2015, Chernev et al. conducted a meta-analysis by evaluating 99 observations across 7202 participants. The authors identified 4 key underlying factors that drive the impact that choice set sizes have on the effects of CO. The factors - choice set complexity, decision task difficulty, preference uncertainty, and decision goal – all reliably and significantly impact CO. The authors also identified 7 consequences of CO: *Choice Satisfaction, Decision Regret, Decision confidence, Choice deferral, Switching likelihood, Assortment choice, Option selection*.

The effects (consequences) of CO have been measured across a variety of domains (Chernev et al, 2015). These domains vary from non-consequential to consequential which, arguably, could affect the degree of impact choice-set sizes have on the effects of CO. In the domain of finance, Morrin et al. (2012), in a series of three studies, conducted a logistic regression analysis to predict investor participation rate using different investment option sizes, investor knowledge, and an interaction between variables. The authors' result indicated that larger mutual fund options significantly reduced fund participation rate but were only applicable to investors with little investment knowledge ($Wald$ (1) = 5.48, $p < .05$). This finding indicates that; knowledge or access to information, when individuals are faced with large choice sets, could influence the effect of CO. This result coincides with a series of shopping-domain studies (Broniarczyk et al., 1998; Iyengar & Lepper, 2000; Goldstein, 2001;). For example, Iyengar & Lepper (2000) found that although more choice sets increase attractiveness, smaller choice set sizes are significantly advantageous in stimulating purchasing behaviours (X2(2, N = 134) =

21.84, $p < .0001$). One can argue that with less set sizes, it is much easier to quickly build up context knowledge, than with a larger set size.

Although this arguably is intuitive when considering the theory of bounded rationality by Herbert Simon (1957, as cited in Herbert Simon, 1982) and how more options increase cognitive workload (Keller & Staelin, 1987), more domain-specific studies need to be conducted for cross-domain comparability and within-domain generalizations.

However, limited multiple 'within' and 'between' domain studies aren't the only drawback of current literature, more importantly, the generalizability of CO effects could also be questioned since most studies are conducted in the US and cultures categorized as individualistic (Chernev et al. 2015) than collectivist - a culture where independency of the self's wellbeing is more dominantly prioritized versus one whose wellbeing is dependent on other selves (Markus & Schwartz, 2010).

The Universality of Choice Overload

A significantly large proportion of the limited cross-cultural studies in the literature measure the construct of culture as the classification of countries into individualistic and collectivist. This classification dates to Triandis (1995). According to Triandis, in collectivist culture, individuals see themselves as part of a whole and hence are mainly motivated by norms of a collective entity. However, in individualistic cultures, individuals are seen as distinct and are mostly motivated by their own preferences and personal goals. Hence, individuals in individualistic cultures place a premium on choice, variety seeking and on personal freedom than individuals characterized by collectivist cultures (Herrmann & Heitmann, 2015). This was also supported by a study about how individuals from individualistic-featured countries (US & UK) showed relatively more preference for larger ice-cream choice sets and expectations for more restaurant menu items than those in collectivist-featured countries (Rozin et al., 2006).

The universal pervasiveness of choice overload was analysed by Reutskaja et al. (2022) as part of their cross-cultural study of the effect of CO. They analysed a self-reported

questionnaire from over 7000 participants across the US, and 5 countries characterized by collectivist cultures. The aggregated result revealed that choice overload was reported only 14% of the time across all nations. When disaggregated, choice deprivation (having less than ideal; a reversal of CO) was reported at least 50% of the time across all collectivist cultures. Surprisingly, CO was reported only a quarter of the time in the US. These results indicate that having too much than ideal seems not to be a universal occurrence, however, more studies accounting for more consequential domains and cultures should be conducted for reliability and validity.

The Cross-Cultural Effects of Choice Overload

Since individuals' perspectives of variety-seeking differ across cultures, current cultural theory suggests that they also encounter different cognitive and emotional costs when ultimately choosing and faced with choice overload.

Roets et al. (2012) conducted a study investigating the cross-cultural effect of choice overload for maximisers versus satisficers. Roets et al. (2012) found that being a maximiser either from Western Europe, the US, or Mainland China is a significant predictor of Regret, after choosing from a large choice set (β = .59, β = 60, and β =.57, all p <.001). However, this goes on to significantly predict well-being for only individuals from individualist cultures (the US and Western Europe) (β =−.30, and β = −.48, respectively, both p < .001) and not significant for the maximisers in Mainland China (β = −.11, ns). This finding tangents with Iyenger & Lepper's (2000) result of how individuals in individualistic nations manifest a first-order effect (attractiveness and regret) and then a second-order effect (purchase paralysis and decreased choice satisfaction) which is arguably more implicating. However, more studies evaluating first-order and second-order effects look promising and hence should be conducted, especially in collectivist countries. This study also has a sample size balance drawback of proxying only Mainland China (*participant size:* 218) as a collectivist culture against a more diverse group of individualistic regions (543 participants).

Supporting the findings of Roets et al. (2012), Brown et al. (2015) conducted a cross-cultural (US & Japan) study, in the health domain, leveraging ANOVA to investigate the effect of increasing treatment size (2, 10, and 15) options on discomfort and choice satisfaction. Results revealed that Japanese participants showed lower ratings of discomfort when faced with fewer choices and an increase in discomfort rating when choice options were increased (two options: adj. M = 4.76; ten options: adj. M = 5.39, p = .014, d =.64; and 15 options: adj. M = 5.38, p = .019, d =.61). However, in the case of US participants, there wasn't any significance between choice options. Rather, there appeared to be a slight linear decrease in discomfort rating as choice options increased. Regarding effects on choice satisfaction, similar results were demonstrated which was even more highly significant. The effect of culture & choice complexity was as in the case of discomfort. Japanese had higher ratings of satisfaction for lower treatment options. In the US, participants demonstrated unclear patterns, also displaying a slightly decreasing linear trend as options increased. This finding indicates that perhaps, in the domain of health, participants from collectivist nations dislike having to make so much self-cognitive effort in deciding health treatments – a few are good enough, unlike in individualistic nations where participants are indifferent in most cases.

To compensate for the sample size and within-culture diversity balance missed by Roets et al. (2012), Reutskaja et al. (2022) ran a robust and large-scale study. Over 7000 participants across 6 countries - the US, India, China, Japan, Russia, and Brazil – were surveyed. Their study considered 6 major choice domains (jobs, education, physicians, homes, automobiles, soda) varying from consequential to commercial. Using block regressions, their analysis evaluated the relationship between choice satisfaction and CO (with choice deprivation, and perceived balance) as predictors. 36 models evaluated the predictiveness of choice satisfaction with CO across all nations and domains. Results revealed that experiencing CO negatively predicts choice satisfaction in almost all cases: in 26 of all 36 models, with a significant beta coefficient across all models (p = .011 [binomial test]). However, there appeared to be some systematic variations,

especially in collectivist countries. For Japanese participants, choice overload never negatively predicts CO, in fact, it positively predicted choice satisfaction in several cases. For Chinese participants, for less consequential domains, having more than ideal was unrelated to Choice Satisfaction. This finding provides more evidence that supports how too much might be detrimental to consumers (Goldstein, 2001; Iyengar & Lepper, 2000), especially in individualistic nations. However, it also indicates that the effect of CO is diverse even across and within collectivist nations.

The limited cross-cultural literature has manifested that individuals' behavioural or psychological responses when faced with CO may vary cross-culturally. This is so since some individuals choose primarily based on their personal goals while others are more influenced by collective morals leaving implications for businesses, policy makers, and intervention designers. However, the operationalization of culture in the current literature is limited to countries and citizens (majority) perceived sense of autonomy. Further studies should not only consider diverse cultural studies but also other cultural drivers i.e., religion, wealth, and historical colonization. Moreover, evaluation of the current literature also revealed how several other factors (knowledge, maximizing versus satisficing, age) interact with CO to elicit varying effects, hence, for reliability, further studies should account for the effect of these and other confounding factors. More coverage should also be given to perceived consequential domains i.e., health, finance, and education, among others to facilitate cross-domain study comparison and generalizability. Overall, the current cross-cultural literature, although limited, has provided a basis for future studies to build on how diversity persists even in the art of choosing.

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