How Does Power Distance Belief Affect Consumers’ Preference For User- Versus Designer-Designed Products?

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This study uncovers an important cultural boundary condition for the positive effect of user design. We demonstrate that low-PDB consumers prefer user-designed to designer-designed products because they identify more with user-driven companies. In contrast, high-PDB consumers prefer designer-designed to user-designed products due to these consumers’ stronger trust in designer-driven companies.

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EXTENDED ABSTRACT

User design, whereby firms draw on their user communities to generate ideas for new products (Dahl, Fuchs, and Schreier 2015), has become increasingly popular among marketers. However, there are substantial differences in the effectiveness of this design approach across countries, suggesting that cultural orientation is important in understanding the effect of user design on consumer preferences. Until now, the extant research has not yet investigated the role of cultural orientation. We propose that power distance belief (PDB), defined as “the extent to which a society accepts and views as inevitable or functional human inequality in power, wealth, or prestige” (Oyserman 2006, 353), moderates the relationship between design philosophy and consumer preference. More specifically, we predict that consumers with high (low) PDB will prefer designer- (user-) designed products to user- (designer-) designed products (H1). Additionally, the impact of low PDB on preferring user-designed products to designer-designed products is mediated by a stronger identification with the user-driven company (H2a), while the impact of high PDB on preferring designer-designed products to user-designed products is mediated by a stronger trust in the designer-driven company (H2b).

Study 1 used Apache’s country-level market share to measure consumers’ preference between user- and designer-designed products. We used Hofstede’s country scores of power distance (PD) as independent variable, while individualism, masculinity, uncertainty avoidance, long-term orientation per capita GDP, educational index, and the Internet users index of each country as control variables. The results of regression on 75 matching countries indicated that only PD had a significant negative effect on Apache’s market share ($b = -0.099$, $z = -2.21, p = .02$), such that Apache’s market share was smaller in countries with higher PD than in those with lower PD. Further, we found that the relationship between PD and user-designed product preference is robust by controlling for alternative explanations such as other cultural dimensions and economic variables. Taken together, the results supported hypothesis 1 at country level.

Study 2 was a 2 (PDB: low US vs. high China) × 2 (Design philosophy: designer design vs. user design) between-subjects design. The results revealed a significant interaction between country and design philosophy ($F(1, 463) = 24.67, p < .001$). American participants (low PDB) demonstrated a stronger preference ($M_{user, A} = .43$) for user-designed products than for designer-designed products ($M_{designer, A} = -.18; F(1, 463) = 10.31, p = .001$), consistent with Dahl et al. (2015). The Chinese participants (high PDB) indicated a reverse pattern ($M_{user, A} = -.36, M_{designer, A} = .39; F(1, 463) = 14.46, p < .001$). Thus, hypothesis 1 was supported at individual level.

Study 3 was designed to investigate the underlying mechanism proposed in hypotheses 2a and 2b. It was a 2 (PDB: low vs. high) × 2 (Design philosophy: designer design vs. user design) between-subjects design. We used the sentence-scrambling task developed by Zhang et al. (2010) to prime PDB, and we manipulated design philosophy following Schreier et al. (2012). The results revealed that the interaction effect between design philosophy and PDB ($F(1, 172) = 8.45, p = .004$) was significant. A planned contrast indicated a similar pattern to Study 2. More importantly, a bootstrap analysis revealed the significant moderated mediation effects of identification (95% CI: [-1.19, -0.02]) and trust (95% CI: [-.50, -.03]) at different levels of PDB. For low-PDB condition, identification (95% CI: [.03, .92]) mediated the positive effect of user design on purchase intention, whereas trust (95% CI: [-.27, .05]) did not. For high-PDB condition, the negative relationship between user design and purchase intention was mediated by trust (95% CI: [-.55, -.12]) but not by identification (95% CI: [-.48, .27]). Thus, hypothesis 2a and hypothesis 2b were supported.

Study 4 was a 4 (Design philosophy: novice designer design vs. designer design vs. user design vs. male user design) between-subjects design. The description in “designer design” and “user design” conditions was identical to Study 3. To manipulate the female participants’ identification with the user-driven company, we additionally described the members of the user-community as predominantly male in the “male user design” condition. We manipulated participants’ trust in the designer-driven company by undermining the expertise of the internal designers in the “novice designer design” condition. We measured purchase intention, identification, trust and chronic PDB. The results revealed a significant interaction effect between design philosophy and chronic PDB ($t(368) = -3.26, p = .001$). More importantly, when identification was manipulated to be low, there was no significant difference in purchase intention between the low-PDB participants in the “male user design” and the “designer design” conditions ($M_{male, user} = 4.13$ vs. $M_{designer} = 4.18; t(368) = -.16, p > .80$), suggesting that identification was underlying low-PDB’s effect on preference between designer and user designed products. However, when trust was manipulated to be low, no significant difference was found between the high-PDB participants’ purchase intention in the “novice designer design” and “user design” conditions ($M_{novice, design} = 4.47$ vs. $M_{user} = 4.49; t(368) = -.07, p > .90$), suggesting that trust was mediating high-PDB’ effect on dependent variable. Thus, this study provided stronger evidence regarding the underlying psychological processes using a moderation-by-process design.

This paper contributes to the relevant literature in several significant ways: advancing user-design research by uncovering a very important theoretical boundary condition, i.e., PDB; documenting a new psychological process for user-design evaluation by showing that trust is also essential to explain consumer’s preference for user- versus designer-designed products among high-PDB consumers; advancing the PDB literature by demonstrating that PDB effect can be mediated by different psychological process, depending on the decision contexts.

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