



Instruments to Overcome the Negative Influence of Country-of-Origin on the Adoption of a Radical Innovation

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Abstract

This study focuses on the influence of the country-of-origin on the adoption for Asian radical innovations in Western countries. Product bundling and superior warranties are proposed as instruments to overcome such adoption barriers. An experiment with 661 German participants was conducted employing a three-factorial between-subjects design. The findings show that an Asian's country-of-origin compared to no country-of-origin cue has a negative influence on the intention to adopt a radical innovation. Product bundling proves to be an effective instrument to dampen this negative impact. The provision of a superior warranty impacts the adoption intention positively, however, does not reduce the influence of country-of-origin on adoption.

Keywords: country-of-origin, adoption, innovation, bundling, warranty

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1. Introduction and Conceptual Background

Asian countries are on the rise regarding their market share. For example, Taiwanese companies take leading positions in their respective industries. *Acer* is the world's second largest computer shipper, *HTC Cooperation* leads the market for Android smartphones, and *Giant* sustains its position as the world's biggest manufacturer of bicycles. Among the 139 evaluated economies in the 2010 World Economic Forum's business innovation ranking, several Asian countries perform in the top twenty countries. While this may seem impressive, the successful marketing of their innovative products remains challenging. One major challenge is the made-in-Asia label (Amine, Chao, & Arnold 2005) as it causes a barrier to innovation adoption in Western countries.

The influence of a product's country-of-origin (COO) is one of the most widely researched effects in the field of international consumer behavior (e.g. Amine, Chao, & Arnold 2005). The extent of COO influence on product evaluation varies heavily in empirical studies, and the results are often somewhat inconclusive or contradicting (Peterson & Jolibert 1995). Especially for radical product innovations, the COO may play a critical role because it offers simple information cues in an unfamiliar situation. Cue utilization theory postulates that customers make use of intrinsic and extrinsic information cues when evaluating a product. Each cue serves as an indicator for certain product characteristics. Intrinsic cues are inherent product characteristics, such as the functions of a product. Extrinsic cues refer to externally attributed characteristics, such as price, brand, and COO (Martin, Lee, & Lacey 2011). For radical innovations, which are perceived as being very unfamiliar, the evaluation of intrinsic cues is difficult and extrinsic cues are used. Hence, for radical innovations extrinsic cues like COO have to be carefully considered if they result in negative perceptions. So far, research has highlighted prestigious retail distribution (Lin & Sternquist 1994), premium pricing (Chowdhury & Biswas 2011), or branding (Jo, Nakamoto, & Nelson 2003) as instruments to overcome COO related disadvantages. However, these studies do not investigate the specific context of innovation adoption and all these instruments inhibit drawbacks. For example, high-prestigious retail stores may be reluctant to list products that carry negative stereotypes due to their origin.

We argue that warranties and product bundling are two extrinsic cues which companies can use to reduce the negative impact of an unfavorable COO on innovation adoption. While the adequacy of product bundling and warranties to drive the adoption of innovations has been discussed previously, their application for mitigating adoption barriers caused by COO has not been investigated before. Even though, previous literature has considered product bundling as a launch strategy for innovations, the interaction of bundling and innovation adoption has been identified as a topic requiring more investigation (e.g., Reinders, Frambach, & Schoormans 2010). Warranties have received some attention in the context of innovation marketing (e.g., Price & Dawar 2002) and COO research (e.g., Tan & Leong 1999), but the focus of previous research was on their effect on evaluative measures. Overall, this study aims at exploring the influence of the country-of-origin on the adoption for Asian radical innovations. Product bundling and superior warranties are proposed as instruments to overcome such adoption barriers.

2. Hypotheses Development

Marketing research has developed several theoretical frameworks to describe the process that leads to innovation adoption (Nabih, Bloem, & Poiesz 1997; Ram & Sheth 1989). In the

innovation adoption process, the evaluation stage is pivotal for the decision to adopt an innovation because here customers form an attitude towards the innovation which determines adoption intention. During the evaluation phase, customers may encounter barriers circumventing innovation adoption. In their seminal article, Ram and Sheth (1989) differentiate between functional and psychological barriers. Functional barriers affect concerns about the usage, value, or risk involved in adopting the innovation, while psychological barriers are related to conflicts

($M=3.64$). Furthermore, in order to select a matching bundle and to avoid a confounding influence evoked by negative perceptions of the bundled brand, participants were presented different bundle combinations for the kitchen countertop. They were asked about the overall bundle-fit and the perceived expedience of the bundle-product. Finally, participants were asked about the attitude towards the bundle-brand. The bundle with *Tefal* pots and pans was chosen for the main study, as it showed the highest score for perceived fit ($M=5.18$) and brand attitude ($M=4.79$).

In the main study, participants were randomly assigned to one of the 8 treatment conditions. The data was collected via an online experiment. Every questionnaire started with a general introduction asking for participation in a study on product innovations. Then, participants were shown a slide show with six pictures of the kitchen countertop, alongside with a written description of the innovation. Depending on the assigned condition, participants were presented with the COO cue (Taiwan), a description of the provided warranty (seven-year unlimited manufacturer-warranty), and/or the bundled product (here the information was given that the price of the bundle is not different than the prices of the single products to avoid the influence of perceived price advantages). After the respective stimulus, participants were asked to answer questions about the innovation and personal characteristics. Overall, the effective sample consists of 611 German participants (61.1% female; average age: 33 years). The sample size of each treatment condition differed between 80 and 85. Adoption intention was measured with four seven-point items ($\alpha = .909$) adapted from Rijdsdijk and Hultink (2003).

4. Results

At the time of the study, the kitchen countertop had not been launched. The innovation was perceived as very radical ($M=5.98$). In addition, the perceived fit of the product bundle showed satisfactory results ($M=5.23$). Participants further indicated that they were familiar with the *Tefal* brand ($M=5.91$) and perceived the brand favorably ($M=5.28$). As expected, products from Taiwan were perceived as rather negative in general ($M=3.68$) and for kitchen furniture and equipment in particular ($M=3.50$). Furthermore, 93% of the participants indicated to use kitchen appliances at least several times per week. All manipulation checks for the three manipulated variables revealed significant differences in the intended directions on a $p < .001$ level.

The main effect regarding the influence of COO on adoption intention was tested by ANOVA. The significant results ($F(1; 659)=4.954; p < .05$) show a lower mean value for adoption intention in the Taiwan condition ($M=5.54$) compared to the condition with no COO cue ($M=5.81$). This supports H_1 . To investigate the moderating effects, we employed hierarchical multiple linear regression analysis. For the analysis of H_{1a} , we regressed the predictor variable COO, the moderator variable product bundling, and the interaction term COO x product bundling onto adoption intention. The interaction term's influence is significant ($t=2.053, \beta=.138, p < .05$). Investigating the mean values of adoption intention, we see that for the COO condition the mean value for bundling ($M=5.72$) is greater than in the no bundling treatment ($M=5.35$). However, for the condition with no COO the bundling treatment yields a lower mean value ($M=5.75$) than the non-bundling treatment ($M=5.87$) (see Figure 1a). Regarding the direct effect of product bundling we found no significant difference in adoption intention ($F(1; 659)=1.152; p > .1$). For the interaction of COO and warranty (H_{1b}), the results indicate a slightly positive influence on adoption intention, however, this is not significant ($t=.513, \beta=.035, p > .1$; see Figure 1b). Examining the mean values we find higher adoption intentions in the warranty condition

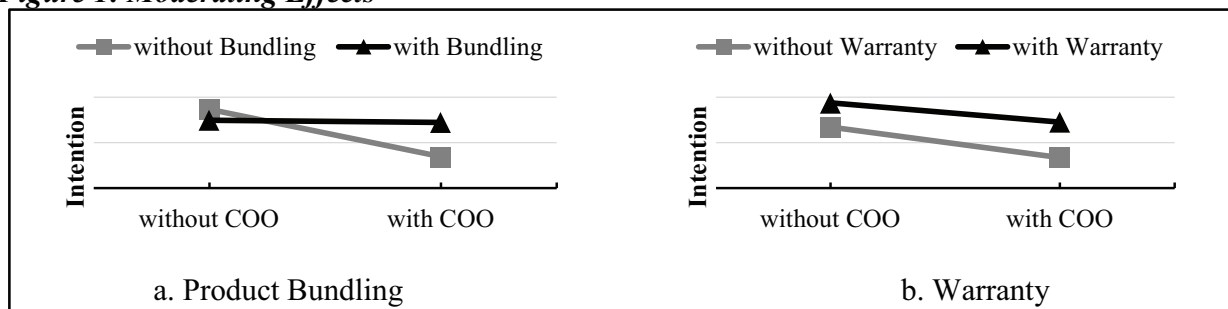
($M_{\text{noCOO}}=5.94$ vs. $M_{\text{COO}}= 5.73$) compared to the non-warranty condition ($M_{\text{noCOO}} =5.67$ vs. $M_{\text{COO}} = 5.34$). This shows that the provision of superior warranties is generally suitable to drive innovation adoption. Regarding an effect of superior warranties on adoption intention we saw that the mean values in the warranty treatment ($M=5.83$) are significantly higher than in the non-warranty treatment ($M=5.51$) ($F(1; 659)=7.260$; $p<.01$).

5. Discussion and Managerial Implications

We contribute to existing literature in two ways. First, we found that a Taiwanese COO has a negative influence on the adoption intention of radical innovations. Second, we demonstrated that bundling has the potential to reduce adoption barriers caused by such an unfavorable COO. Even though a superior warranty serves as an effective instrument to overcome adoption barriers, superior warranties are not especially useful to overcome the negative influence of an unfavorable COO. On a broader scale, our study contributes to the limited research on measures that Asian companies can deploy to cope with negatively perceived country images in Western countries. So far, previous research has proposed prestigious retail distribution, premium pricing, and branding as instruments to overcome COO related disadvantages. Our study extends this research by investigating the specific context of innovation adoption and by adding product bundling as an effective tool to overcome adoption barriers of radical innovations induced by COO.

Asian companies are indeed in a disadvantageous position when it comes to the adoption of their innovations in Western countries. These companies should be aware that an Asian COO is in fact an obstacle to innovation adoption and acknowledge the necessity to actively manage the evolving adoption barriers. Overall, we find that product bundling can be employed to attenuate the negative impact of an unfavorable COO. The provision of warranties is generally advisable to overcome adoption barriers, but may not be particularly feasible to mitigate a negative influence due to an innovation's origin.

Figure 1: Moderating Effects



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