



What will lead Asian consumers into circular consumption? An empirical study of purchasing refurbished smartphones in Japan and Indonesia

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ABSTRACT

Although smartphones are small mini-computers, their impact on the environment is no longer small. In terms of e-waste, the challenges faced by many nations in Asia, where limited recovery and recycling practices exist, include sustainable choice and consumption habits. This study investigated the factors that affect Asian consumers' behavioral intention in purchasing unbranded third-party and original equipment manufacturer (OEM)-branded refurbished smartphones, respectively. Through online surveys and analysis of a representative sample of 1200 mobile phone users in Japan and Indonesia, the findings showed that in both countries, perceived risk, consumer innovativeness, and (to some extent) price are all vital factors affecting the participation of consumers in circular consumption. The study also examined mobile phone/smartphone markets and the related legislation in Japan and Indonesia to develop field-driven hypotheses and identify the salient characteristics of the circular economy (CE) for refurbishment in both countries. In Japan, the difference in purchase intention (PI) between unbranded third-party refurbished and OEM-branded smartphones is much smaller than in Indonesia. The demand for refurbished smartphones supplied by an OEM in Indonesia is relatively higher than in Japan. The findings from this cross-cultural study can yield rich insights for CE business practitioners who seek to grasp overall patterns across the two countries and identify the salient features of each country, improving their regional marketing initiatives.

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1. Introduction

Refurbishment (or refurbishing) has become a topic of dialogue among academia in the product lifetime extension area, environmental researchers interested in how the “circular economy” (CE) affects sustainability, and business managers who view CE a new market for revenue generation (Bakker et al., 2014; Morgan Stanley Research, 2017; O'Connell et al., 2013; Pamminger et al., 2021; Pearce, 2009). Refurbishment is a circular solution that enables the prolonged usage of products that have already been retired but were kept reasonably (British Standards Institution, 2009). In conjunction with recycling and other reuse options, such as remanufacturing, refurbishment can limit our rapidly growing global waste and resource consumption level (Pamminger et al., 2021).

Technically speaking, refurbishment differs from remanufacturing, although the two terms are often used interchangeably (Rathore et al., 2011; Van Weelden et al., 2016). A refurbished product is not an as-new product but rather a product restored to a good condition through one (or all) of the following processes: cleaning, replacing, repairing defective components, and upgrading appearance (MacArthur, 2013). These processes generally result in refurbished products' lower performance specifications than new or remanufactured products (Mugge et al., 2017a; Rathore et al., 2011). In addition, refurbishment does not always ask for the complete dismantling of a product (Van Weelden et al., 2016). Hence, an opportunity occurs to bring used resources back to life while reducing the energy and labor required for related processes and subsequent production. Refurbishment usually requires less rigorous tasks towards a standard than remanufacturing (Chen and Chen, 2019), indicating a relatively lower entry barrier for (prospective) refurbishers than remanufacturers in the CE market. If the vendors are not well-prepared for more thorough and costly processes, they should

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