

COMPLETION REPORT

Study on Energy Saving Perspective of the Japanese Home Appliance Products in Indonesian Market and Its Impact on Indonesian Electricity Consumption.

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Japanese home appliance brands have very long history in Indonesian market. Their products used to dominate consumer electronics in Indonesia from 1980s to early 2000s, well known as reliable makers of high quality electronic products and also consume less power. However, times have changed. Korean electronic products have been overtaking market share domination of Japanese electronic products in Indonesia. Korean electronic producers bring cheaper high-end technology products as compared to Japanese brands in Indonesian market.

On the same time, there is huge potential demand of Indonesian consumers to looking more energy-efficient appliances than before to reduce their monthly expenditure, particularly on electricity consumption.

This study aims to find mutual solutions for Japanese electronic producers, Indonesian electronic consumers, and also Indonesian government, through understanding perspective of Indonesian electronic consumers about energy saving of Japanese home appliance brand and find policy recommendations on the most suitable policies for stimulating production and adoption of high-efficiency appliances in Indonesia.

This study employs a questionnaire survey, through natural field experiment during the actual consumer purchases. This method allows us to understand psychological model of the consumers' decision-making process. A total 134 electronic appliance buyers from 3 major electronic stores in Jakarta were selected as respondents of this study. Among the respondents, 53 out of 134 electronic appliance buyers purchase Japanese brands. From survey, we find that initial price is mostly considered fair to high factors that influence the purchase of appliances for respondents, while energy consumption of appliances seems not to be considered as the high significant factor. Interestingly, although initial price of Japanese brand relatively high, people still consider buying it since in their perspective it has durability and its own prestige.

From the results, we recommend total life time cost of use should be informed to consumers or displayed in the store to encourage them in adopting high-efficiency appliances, instead of only showing initial price of its appliances. If lifetime energy costs are not salient to consumers at the point of purchase, they might not fully account for these costs when making their decision and end up purchasing less efficient products than what is optimal for the individual, given a reasonable discount rate. Therefore, consumers should not be worse off that an increase in product price would be compensated by the decrease of other costs, especially lower energy costs.

We develop long-term energy consumption in Indonesia by considering adoption of Japanese high-efficiency appliances from 2014 to 2024. In 2024, with 25% of adoption rate, household energy consumption could be reduced by 5%, or could avoid expansion of 383 MW new coal power plant.

In addition to influence costumer to adopt high-efficiency appliances through changing a choice determinant in the purchase of electrical appliances and decision-making in the purchase of electrical appliances, a government policy should favor to production of energy-efficient electrical appliances by lowering taxes of high-efficiency appliances and giving incentive to high-efficiency appliances producers.

Publication of the Results of Research Project:

Verbal Presentation (Date, Venue, Name of Conference, Title of Presentation, Presenter, etc.)
1. 28-31 October 2014, Rome, Italy, the 14th IAEE European Energy Conference Sustainable Energy Policy and Strategies for Europe, Study on Energy Saving Perspective of the Japanese Home Appliance Products in Indonesian Market, Muhammad Ery Wijaya.
2. 6-8 March 2015, Banda Aceh, Indonesia, The 18th Kyoto University Southeast Asia Forum, Developing Household Electricity Consumption Saving Policy in Indonesia: An Approaches related to Home Appliances, Muhammad Ery Wijaya.
Thesis (Name of Journal and its Date, Title and Author of Thesis, etc.)
Book (Publisher and Date of the Book, Title and Author of the Book, etc.)