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The effect of post-communism on waste electrical and electronic equipment (WEEE): An empirical study on lifetime of home appliances

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Waste generation is primarily rooted in consumer behaviors. Lifetime of a device is determined from the interaction between users' characteristics and a product's functional lifetime. This study investigates the lifetime of home appliances across countries and clarifies the determinant of the length of lifetimes. Understanding how a social background links to the products' lifetime can provide useful implications for resource efficiency improvement. To estimate the determinants of the lifetime of home appliances, an empirical analysis was conducted using house living standard survey data for developing countries from the World Bank. Logistic regression model was designed for three home appliances- television, refrigerator and PC with a total of 13,619 households' samples of Bulgaria, Albania, Panama and Nigeria. The results showed that households in Bulgaria and Albania tend to hold on to the appliances for significantly longer than households in other countries. Among the demographic variables of household, education, region and age show significant and consistent effect on the lifetime of all the appliances, whilst income, family member, dwelling type and marital status have only weaker effect on limited appliances. It was found that the lifetime of home appliances differs considerably across countries. Countries which had once been governed by communist regime display tendency to hold on to the appliances for longer period of time. Moreover, a country's communist experience has even stronger effect on lengthening appliance's lifetime than its economic scale. It is noticeable that this behavior, which had once been formed under a severe planned economy system, is still observed. Further research is recommended to assess the product lifetime in countries which had experienced communist regime yet with developed economy or of non-European state. This may clarify the relative magnitude of communist effect which still resides in consumer behavior to a country's economic scales on product lifetime.

References

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Biography

Sinae Park is currently pursuing PhD in the Graduate School of Environmental Studies at Seoul National University. She has received her Master's degree in Urban Planning. She has served as the Program Director in Resource Circulation Bureau and International Cooperation Bureau of Ministry of Environment of Republic of Korea.

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