

# Judith Hagenhofer

## Environmental Concern in East Asia

### A Study based on World Values Survey Data and Informal Surveys

#### Topic and Research Question

This research paper aims to determine which factors influence the environmental concern of East Asians. Its focus is on attitude theory and the investigation of respondents' beliefs, attitudes and behaviors. Sociodemographic and attitudinal factors are studied with respect to individual level environmental concern in Chinese, Japanese, South Korean and Taiwanese populaces. Consequently, the research question is:

*What are the factors that influence environmental concern in Chinese, Japanese, South Korean and Taiwanese individuals?*

After decades of economic development, the East Asian region is facing a multitude of environmental problems, ranging from limited natural resources to severely degraded local environments. In addition to those site-specific problems, issues like global warming are increasingly threatening the wellbeing of East Asians. Overcoming those challenges relies on the support of the masses. Studying which factors are linked to the environmental concern of East Asians is therefore increasingly important.

#### State of the Art

There are many studies dealing with environmental concern. Van Liere and Dunlap (1980) review five general hypotheses that link age, gender, social class, residence, and political outlook to environmental attitudes. Many of the more recent studies deal with values as the basis for environmentalism. The George Mason University group (i.e. Stern and Dietz 1994; Stern et al. 1999) published on the link between values, beliefs, attitudes and behavior. According to their values-beliefs-norms theory, pro-environmental attitudes are strongly shaped by egoism, social altruism, and biospheric altruism. For Inglehart (1990, 1995, 2000), it is a society's materialist or postmaterialist values that determine environmental concern in individuals.

A large number of studies deal with environmentalism in the context of European and American societies, but an increasing number also focuses on the Asian and East Asian region. Overall it can be said that the research and literature on environmental topics in East Asia are on the rise, especially in China, because environmental quality is increasingly seen as an integral part of sustainable development.

#### Methodology and Approach

In this thesis, I am using a self-derived Python script to do higher order cross tabulation on the World Values Survey (WVS) data. Python is a simple programming language; the WVS is a worldwide survey that uses standardized measures to determine the values of populaces all over the globe. I used WVS data from the fifth wave (2005-2007) to evaluate environmental concern as related to several other factors. From a set of WVS questions, those responses that are positively associated with the measured factor (i.e. faith in science) are chosen. Once all of the questions in a factor have been evaluated, the sum of the positive weights is compared with a threshold, which is chosen to be usually just slightly more than half of the questions that are used in each factor. The factors that are set up in this way are environmental concern, age, gender, exposure to environmental degradation, social class, postmaterialism, altruism vs egoism, libertarianism vs authoritarianism, and faith in science.

In order to strengthen the findings from this analysis, I interviewed a number of Chinese, Japanese, Korean and Taiwanese citizens of different ages and occupations. The interviewees were asked about their perceptions regarding the relationship between a factor (i.e. age) and environmental concern in their country. Their opinions merely represent individual views.

#### Main Facts

Environmental concern is assessed based on ten WVS questions, which include awareness of environmental issues, willingness to pay for environmental protection, and a choice between economic growth and environmental protection.

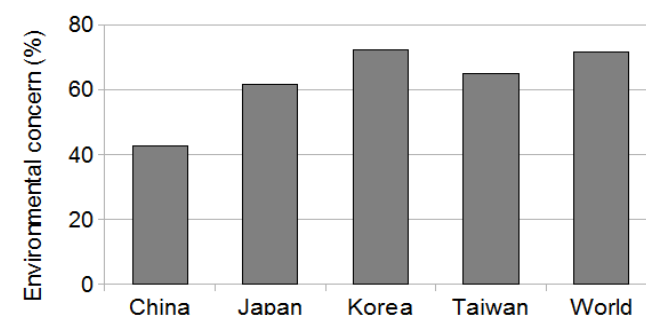


Figure 1: Overall environmental concern by region (Data derived from the 2005-2008 World Values Survey)

First, the analysis shows that age was negatively linked to the environmental concern of East Asians. According to the interviewees, the reasons why young East Asians are more likely than older ones to show concern range from the youngsters' formal education to their relative freedom and their socialization in a time with exposure to environmentalism through the media.

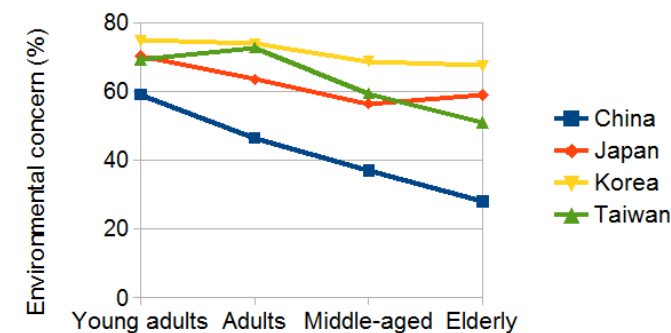


Figure 2: Environmental concern by age groups (Data derived from the 2005-2008 World Values Survey)

Second, there is no trend in the data with respect to gender influencing environmental concern. Only in China do significantly more men show concern than women. This finding is surprising given many interviewees' view that women would be more likely than men to perceive things as a risk to their health and to care for their children's wellbeing.

Third, a positive link between being exposed to environmental degradation and showing concern is found only in the Chinese sample. As for the interviewees' opinions, most believe that exposure to pollution would raise people's environmental concern, because of health reasons.

Fourth, the analysis shows that the level of formal education is positively related to the environmental concern of East Asians. Similarly, a higher income also predicts concern in all but the Japanese sample. Subjective social class is found to have an influence only among Chinese and Taiwanese, but these findings are questionable as only very few people identify as upper class.

Fifth, the postmaterialism hypothesis seems to hold up in all samples but the Chinese one. More Japanese, Korean and Taiwanese postmaterialists show concern than do materialists.

The samples for libertarianism and authoritarianism turned out to encompass too few respondents to have any real significance. Moreover, neither altruism nor

egoism emerged as strong influences on environmental concern in East Asia.

The results furthermore suggest that there is no correlation between faith in science and concern for the environment in Japanese and Taiwanese individuals. The relationship between the two is found to be positive in China, and negative in Korea.

#### Results

The analysis showed that some factors were indeed correlated with the environmental concern of East Asians. Age and social class were strongly linked to the environmental concern of East Asian WVS respondents, with concern being more likely in younger, higher class respondents. According to the analysis and interviewees' statements, the claims made in the age and social class hypotheses thus apply to the East Asian sample groups.

Furthermore, in three out of four samples altruistic and postmaterialist respondents were more likely to show concern than egoists and materialists. Gender and exposure to environmental degradation were linked to environmental concern only in the Chinese sample.

The factors libertarianism, authoritarianism, and faith in science, however, did not show strong links to concern in the East Asian WVS samples. These findings partly contradict existing hypotheses that apply in Western societies, indicating that the motivation for East Asians' environmentalism warrants further research.

#### References

All references can be found in the full version of the MA thesis available at <http://othes.univie.ac.at>

#### About the Author

Judith Hagenhofer holds a BA degree in Chinese Studies from the University of Vienna. In the course of her studies she spent one year as an exchange student in China. This research was part of the MA program East Asian Economy and Society.

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