

The Relationship between Consumer Life Style and Ecological Footprint

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Received: Nov., 2013

Accepted: Mar., 2014

Expanded Abstract

Introduction

Development of studies on the urban, environment and conservation of natural resources, due to increase of urbanization as common lifestyles of citizens, has improved the sustainable urbanization approach that tries to improve human interaction with nature for sound behavior. Cities are the origins of consumerism and consequently irregular use of natural resources and energies. The consumerism also leads to the production of waste and garbage that goes beyond recycling and reconstruction tolerance of the environment. The origin of this idea is that consumer habits and the used technologies affect the environment. Ecological footprint represents the difference between what nature offers us to use for live, and what we consumes.

Concept of re-loaded resources presented by ecological footprint approach is a key factor in sustainable development of human societies. Increasing instability due to changes in natural resources is a serious threat to the ecosystems because they lose the ability and opportunity to rebuild and re-load.

Through this approach we are able to do individual and collective actions for environmental conservation and responsible behavior about it. Each person can control their usage and reduce the amount of ecological footprint. This case requires sufficient knowledge about the environment and the impact of human behaviors on. The behavior based on environment protection, including consumer behavior to create a lifestyle, involves a pattern of behavior that has been coordinated with ecosystems and will not disrupt the natural cycles.

Total average per capita ecological footprint (EF) is calculated by adding all the ecosystem areas assigned for each individual to fill his/her annual shopping basket of consumption goods and services. Ultimately, the ecological footprint of the study population (EFp) is obtained by multiplying the average per capita footprint in population size (N).

Due to the differences in styles, habits and generally the lifestyle of people around the world it is not easily possible to provide a global standard questionnaire to calculate the footprint. Thus, researchers according to the lifestyle of people in different countries have designed questions to measure this indicator.

Materials and Methods

Tabriz is the largest city in the west and northwest of Iran. Due to its political and industrial centrality and its focus on economic, industry, university, high level of expertise and service and free trade zones, Tabriz City has a wide sphere of influence on the region.

Despite natural limitations to provide the population of Tabriz, as the only metropolitan area in northwest Iran with the required resources, the borders of the city have expanded more than five times in the recent decades. This rapid growth in the past decades has led to unsustainable urban development. The available physical and natural pressures and various types of pollutions as the most threatening environmental hazards in this region with some conditions such as population density, mass consumption, rubbish production, and a lot of different lifestyles has made this city a suitable case for the study of sustainable urbanization.

This research has an applied method and statistical population is Tabriz citizens between 15 to 75 years old; data was collected by questionnaire with the samples selected by utilizing multi step cluster sampling.

The dependent variable was measured by the questionnaire designed for calculating personal ecological footprint according to the characteristics and living conditions of the people in Middle East and the Mediterranean basin. The variable of consumption and its constructive components were extracted based on dignity consumption, craving consumption and consumption.

Reliability and validity measured by the coefficient of KMO and Cronbach's Alpha have appropriate values. The results of this test for dependent variable show KMO = 0.761, with sig=0.000. This KMO value indicates

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that the number of items and their classification based on factor analysis can be appropriate for this variable. The value of variable based on calculated variance was 53.58 percent. This index for the consumption was $KMO = 0.912$, with $sig = 0.000$. Cronbach's coefficient was calculated for studying the reliability of survey instrument, its amount for dependent variable is $\alpha = 0.780$ and is $\alpha = 0.891$, for independent variable.

Results

Pearson correlation coefficient was calculated to test the relationship between ecological footprint and consumption. The results show that the calculated correlation coefficient is 0.664 and significant at 99% of confidence level. This means that there is a positive correlation between the ecological footprint and consumption. The results also show that there is significant and positive relationship between the independent variable and components of dependent variable. There is a strong relationship between consumer lifestyles and consumption. Pearson correlation coefficient calculated for this component was 0.578 and significant at 99% of confidence level.

Regression analysis was used to determine the contribution of lifestyle as the independent variable to explain and predict its effects on dependent variable and also explain the contribution of independent variable to predict changes in the ecological footprints components. The results also indicate that the consumer lifestyle affect all the components of ecological footprint. The most impact is observed on the good consumption, services and then transportation component.

Conclusion

The results show that the EF mean of Tabriz citizens is 58.66 percent of defined scale, which is slightly more than the average value. Investigating the constructive components of the dependent variable showed that the studied citizens obtained 80 percent of score in the component of reusable consumption goods have left the largest value of EF in not using the reusable goods. Obviously recycling the reusable goods decrease the amount of consumption and ultimately leads to less use of natural resources and the environmental damage.

In transportation aspect, Tabriz citizens obtained 70 percent of the maximum obtainable score on the defined scale in this component. This has a relatively high footprint, leading to air pollution due to the production and distribution of emissions from fossil fuel consumption. Public transportation sector has a dominant role in fuel consumption and air pollution in cities. In other aspects of consumption, such as food and energy consumption, the obtained scores were higher than the obtainable mean for each component. It seems that the private car attraction and becoming a kind of social status on the one hand and the serious shortcomings in public transportation system, on the other hand, are the main reasons for this approach.

Consumer behavior creates a lifestyle that can be preserve or harm to the environment. Environmental lifestyle includes patterns of behavior that are harmonious with the environment and do not disrupt the environmental cycles. The main issue is that such actions require the more environmental cognition and more environmental beliefs and knowledge about environmental subjects. In this case, most people will be careful of individual actions to deal effectively with the environment.

Recommendations

Based on these findings, it is recommended as following: use of durable goods, which are frequently consumed, should be promoted to reduce the demand for consumption. The quantity and quality of public transport must be increased to reduce uses of personal vehicle and special paths should be designed to promote biking and walking. Small and medium-sized areas with a variety of urban tissues have to be designed for reducing the needs for motorized transportation within the urban areas, and establishing a responsible behavior towards environment protection in the higher classes. This should lead to emulating of these behaviors of the lower classes to affect the reduction of ecological footprint. It can be lead to decreases in non-responsible behavior towards the environment and decreases in ecological footprint.

Keywords: ecological footprint, conservation of environment, consumer pattern, sustainable urbanization.