Consumer Environmental Activism, Sustainable Consumption Behavior and Satisfaction with Life

Abdel Mohsen Nassani [a], Jameel Ahmad Khader [b],Mitwali Abd-el Moemen[b] and Imran Ali [c]

[a]College of Business Administration, King Saud University, Riyadh Saudi Araiba
[b]Arriyadh Community College, King Saud University, Riyadh Saudi Araiba.
[c]COMSATS Institute of Information Technology Lahore, Pakistan.
E-mail: imranalinim@gmail.com

Abstract: This study proposed and tested a conceptual model that associates feelings of doing well by active participation in protecting environment and adopting sustainable consumption life pattern towards consumer's perceptions of satisfaction with life. The study found positive and significant association between consumer environmental activism and sustainable consumption behavior. The study also explores significant linkage between consumer's environmental activism, and sustainable consumption behavior with satisfaction with life perceptions. The study concludes that satisfaction with life can be increased by adopting socially responsible consumption pattern and doing well for the environment.
[Abdel Mohsen N, Jameel Ahmad K, Imran Ali. **Consumer Environmental Activism, Sustainable Consumption Behavior and Satisfaction with Life**. *Life Sci J* 2013;10(2):1000-1006] (ISSN:1097-8135).
http://www.lifesciencesite.com. 140

Keywords: Environmental activism, sustainable consumption behavior, satisfaction with life, structural equation model.

1. Introduction

A central question in the happiness research is how to increase satisfaction with life? The literature on happiness provides numerous answers to this question. Researches in happiness and well-being found various means to promote satisfaction with life. Young (2006) investigated the means that can increase ones satisfaction with life and hold that social support from staff and friends promote satisfaction with life. According to Young (2006) the life satisfaction measure includes living situation, daily activities and functioning, social relationship, financial situation, legal and safety issues, and health. Dunn et al. (2008) suggests that happiness can be increased by spending money on others; they argue that satisfaction with life can be increased by spending money on others than spending money on oneself. D'Amborsio et al. (2008) suggested that both income and wealth increased satisfaction with life. They noted income a long-term source for promoting satisfaction with life among Germans. Cohn et al. (2009) noted happiness as key to spend a satisfied life, they assert that people who remain happy in their daily life are also more satisfied with their life not only because they feel better but because they develop resources for living well.

Although researches in happiness studies provide subjective means of improving satisfaction with life, there is lack of research on social means that can increase one's satisfaction with life. The current study bridges this gap by examining the link between consumer's environmental activeness and socially responsible consumption pattern with satisfaction with life construct. The other contribution of this study is to examine the satisfaction with life perceptions among consumer's in the context of socially responsible activities and consumption patterns. The objective of this study is to examine the role of consumer's environmentally active attitude on this sustainable consumption behavior. The study also examines how pro-environmental and sustainable consumption behaviors influence on consumer's satisfaction with life perceptions.

Satisfaction with life is one among the components of subjective well being construct, the other constructs are positive affective appraisal and negative affective appraisal. Life satisfaction can be measured towards any particular domain of life for instance profession, married life, social life etc. The satisfaction with life scale (SWLS) is developed by Diener et al. (1985). This 5 item scale is used widely to measure happiness across the globe. Plenty of work on life satisfaction is done by Diener (1984); Diener and Biswas-Diener (1984); Diener et al. (1985); Diener et al. (1991); Diener et al. (1999); Diener et al. (2006) Diener (2007) to refine the concept of satisfaction with life and investigating the factor that contributes towards increasing satisfaction with life. However, there is lack of research on finding the social means to promote satisfaction with life. The work of Dunn et al. (2008) is very important in this regard who suggest that happiness can be increased by spending money on others than spending money on oneself. This postulates that feeling of sacrificing for others of philanthropic activities offers lasting satisfaction to individuals.

The influence of socially responsible attitude and pro-environmental attitude

1.1 Environmental Activism and Sustainable Consumption Behavior

The quality of our life depends upon on our decisions, the more responsible decisions we make the more we can rejoice our life, how? By developing environmentally active behavior and adopting sustainable consumption pattern in our everyday life. Environmental activism has attracted the attention of researchers from various disciplines including environment, education, political science, sociology and psychology. Environmental activism is viewed as 'function of specific behaviors' by number of scholars including Seguin et al. (1998). Numerous types of actions emerge from environmental activism behavior including; membership of environment protection groups, engage in political actions including participation in protests against environmental degradation or filing petitions against government's anti-environmental policies (Manzo & Weinstien, 1987; Edwards and Oskamp, 1992; Stern et al., 1995).

Researches also propose that environmental activism is a collective behavior to support environment protection movement and adopting a pro-environmental behavior in daily life (Brechin & Kempton, 1994; Crooke & Pakulski, 1995; Brulle, 1996; and Blake et al., 1997). Environmental activism not only provoke people to demonstrate against others destroying environment, but also develops a pledge amongst individuals to stop doing all activities that cause harm to environment and adopt pro-environmental behavior in every sphere of life. This also includes adoption of sustainable consumption pattern by environmentally conscious consumers. Dobson (2007) argues that behavior that induces consumer for sustainable consumption is driven by environmental citizenship. Sammer and Wustenhagen (2006) reported the consumer willing to pay more for the green products. Young et al. (2010) also studies the green purchase behavior among consumers and found that sustainable consumption can be increased by paying more focus on specific environmental concerns by corporations. We therefore, deduce the following hypothesis on the basis of these theoretical discussions.

H1: Environmentally active consumers tend to adopt more sustainable consumption behavior.

1.2 Environmental Activism and Satisfaction with Life

Environmental activism means individual's commitment towards environment and includes; membership of environment protection groups, participation in political actions including protesting against environmental degradation or filing petitions against government's anti-environmental policies (Manzo & Weinstien, 1987; Edwards and Oskamp, 1992; Stern et al., 1995). There is very sparse amount of research exploring direct relationship between environmental activism and satisfaction with life perceptions among consumers. Environmental activeness is also a source of one's satisfaction with life. Individuals playing active role for environmental protection perceive themselves as contributor towards society for ensuring safe and healthy community. Particularly in the context of increasing natural disasters in the recent years, the world is becoming more vulnerable to such disasters including Tsunami's and resulting earthquakes. Dono et al. (2010) associated environmental activeness to individual's social identity. Research in happiness and well-being suggests that environmental quality is in-evitable for higher satisfaction with life. Welsch (2005) and Levinson (2009) described environmental conditions as one of the determinant for satisfaction with life among people. Frey et al. (2009) associated individual's and well-being satisfaction with life with improvement of environmental conditions. Silva et al. (2012) also asserted that individual's satisfaction with life perceptions are linked with environmental conditions directly and indirectly. Higher the individuals participate in environmental protection activates higher will be the satisfaction with life perceptions among individuals, as well as consumers. Based on these theoretical arguments, this study proposes the following hypothesis.

H2: Consumer satisfaction with life can be enhanced by consumer's environmental activism.

1.3 Sustainable Consumption Behavior and Satisfaction with Life

Studies in happiness and well-being research propose that satisfaction with life can be bought through money, although the way is bit tricky. One can increase his satisfaction with life by sacrificing ones wishes and spending on others welfare. For instance, Dunn et al. (2008) indicated that pro-social spending on other e.g. charity donations increases satisfaction with life than spending for oneself. This affirms that self-sacrifice is very critical for improving ones satisfaction with life. Consumers purchasing sustainable products also pay higher and thus sacrifice their recourses for the betterment of environment and community. This sacrifice feelings promotes sense of self-recognition among consumers and hence satisfaction with life. Franzen (2003) noted that consumers in economically developed countries

shows more concern towards global environmental issues than people from poor countries. Struwig (2010) associated environmental attitude with higher income level and education. Brown and Kasser (2005) also reported higher well-being level among ecologically conscious consumers. Jaccob et al. (2009) also reported statistically significant relationship subjective well-being perceptions and sustainable consumer attitude. Another stream of research states that merely financial resources do not guarantee higher level of satisfaction with life. For instance Kahneman and Krueger (2006) also propose that mere economic development do not increase satisfaction with life. If we combine both approaches towards achieving higher satisfaction in life, it states that satisfaction with life can be enhanced if more focus is given on non-financial means of attaining satisfaction for instance spending money on others welfare, which can be achieved better by purchasing green products on premium prices. Xiao and Lin (2011) associated sustainable consumption with life satisfaction in the context of Chinese consumers. Based on this theoretical discussion we propose the following hypothesis.

H3: Consumer satisfaction with life can be enhanced by adopting sustainable consumption behavior.

2. Material and Methods

Research Design

2.1.1 Sample

This is an exploratory study supported by primary data. The data is collected through structured close ended questionnaires. The self administered survey technique is adopted to collect data from consumers in this study. A total of 500 questionnaires (n = 500) were distributed in five major cities of Saudi Arabia including Riyadh, Jeddah, Mecca, Medina, and Dammam. A total of 364 usable questionnaires were returned with a response rate of 73%.

2.1.2 Measures

There are three research variables in this study, consumer environmental activeness; sustainable consumption behavior and consumers satisfaction with life perceptions. The variable of principal investigation in this study is satisfaction with life – the dependent variable and the independent variables are consumer environmental activeness, sustainable consumption behavior. The instrument to measure satisfaction with life perceptions is adopted form Diener et al. (1985). The instrument contains 5 items measured on 5 point Likert scale, where 1 for very dissatisfied and 5 for very satisfied. The instrument to measure consumer environmental activeness is adopted form Seguin et al. (1998) and used by Dono et al. (2010). The instrument of sustainable consumption is adopted from Xiao and Li (2011). The instrument consists of five items, measuring the green life intentions, green purchase intentions, and green purchase behavior measured on 5 point Likert scale 1 for strongly disagree and 5 for strongly agree.

2.1.3 Procedure

The statistical techniques used in this study includes, reliability and validity analysis. Reliability is computed by Cronbach's Alpha to examine the soundness of data through SPSS. Validity of measurement instrument is also computed by Confirmatory Factor Analysis (CFA) through AMOS. Correlation is also conducted to analyze the relationship among different variables. Finally, Structural Equation Model (SEM) technique is applied to test hypotheses through AMOS.

3. Results

*3.*1Validity and Reliability

Table 1 describes the Confirmatory Factor Analysis (CFA) is performed in this study to calculate the validity of measurement instrument through factor loading and Cronbach Alpha is also computed to analyze the reliability of the data. . The standard criterion for validity of any items is that the factor loading value should be ≥ 0.40. Nunallay and Bernstein (1978) stated that the value of Cronbach alpha should be higher than 0.5 for acceptable reliability of data. The mode fit indices for CFA also shows good results. The model also yielded good fitness indices (CMIN = 14.61, DF = 4.4, CMIN/DF = 3.3) as Wheaton et al. (1977) proposed that this ratio should be 5 or less than that Marsh and Hocevar (1985) states that this ration should be between 5 to 2. Wheaton et al. (1977) proposed that this ratio should be 5 or less than that Marsh and Hocevar (1985) states that this ration should be between 5 to 2. Some other parameters are also used for measuring model fitness.

Browne and Cudeck (1993) hold that RMSEA can also used to examine model fitness and the RMSEA value must be less than 1 to prove good model fitness, and the value of RMSEA is 0.84 in this study that shows good model fitness. Similarly, Hair et al. (2003) stated that the values of NFI, CFI and GFI should be close to 1 to show good model fit of the model.

The values of NFI, CFI and GFI are 0.92, 0.95 and 0.87 as shown in the end of Table I below; we therefore found our mode fit of CFA for analysis. The factor loading of each item in all three constructs (consumer environmental concern, sustainable

consumption behavior and satisfaction with life perceptions) is also greater than 0.40, which confirm the validity of measurement instruments used in this study. The results of reliability analysis are also satisfactory, as the values of Cronbach alpha for consumer environmental activism, sustainable consumption and consumer satisfaction with life perception are (0.82, 0.77 and 0.72) well above 0.50 – the standard criteria.

Table I: Factor Loading and Reliability Testing

Construct	Factor Loading	Cronbach Alpha
Consumer Environmental Activism		
I participate in events organized by environmental groups	0.92	0.82
I give financial support to an environmental group	1.07	
I circulate petitions demanding an improvement of government policies regarding the environment	0.92	
I participate in protests against current environmental conditions	0.76	
I vote for a government proposing environmentally conscious policies	0.78	
I write letters to firms that manufacture harmful products	0.74	
Sustainable Consumption Behavior		
I avoid environment pollution and no lifestyle of high consumption.	0.79	0.77
No matter what environment pollution is, I live a life of high consumption	0.69	
I choose 'green products' even they are expensive.	0.75	
I choose those less expensive and don't care if they are green or not.	0.68	
I prefer to buy green products.	0.71	
Satisfaction with Life Perceptions		
In most ways my life is close to my ideal.	0.72	0.78
The conditions of my life are excellent.	0.82	
I am satisfied with life.	0.73	
So far I have gotten the important things I want in life.	0.94	
If I could live my life over, I would change almost nothing	0.69	

Note: CFI = 0.92; GFI = 0.95; NFI = 0.88; CMIN, DF, CMIN/DF = 0.95; RMSEA = 0.84

3.2 Hypotheses Testing

Structural equation model (SEM) analysis is performed in this study to test proposed hypotheses. The model also yielded good fitness indices (CMIN = 13.56, DF = 3.4, CMIN/DF = 3.9) as Wheaton et al. (1977) proposed that this ratio should be 5 or less than that Marsh and Hocevar (1985) states that this ration should be between 5 to 2. Some other parameters are also used for measuring model fitness. Browne and Cudeck (1993) hold that RMSEA can also used to examine model fitness and the RMSEA value must be less than 1 to prove good model fitness, and the value of RMSEA is 0.89 in this study that shows good model fitness. Similarly, Hair et al. (2003) stated that the values of NFI, CFI and GFI should be close to 1 to show good model fit of the model. The values of NFI, CFI and GFI are 0.87, 0.92 and 0.82 as shown in Table II below; we therefore found our mode fit for analysis.

Table II: Model Fitness of Structural Equation Model

NFI	CFI	GFI	CMIN	DF	CMIN/DF	RMSEA
0.87	0.92	0.82	13.56	3.4	3.9	0.89

The results of structural equation model are presented in Figure I. The first hypothesis in this study posits that higher consumer environmental activism leads to sustainable consumption behavior. The result shows significantly positive relationship between these variables at 0.01 levels, we therefore accept our H1. The result implies that higher level of environmental activism among consumers promotes higher sustainable consumptions, which is very logical and important finding of this study. The second hypothesis posits that consumer environmental activism promotes satisfaction with life perceptions among consumers. The SEM result also shows positive association between these variables at 0.05 significance levels, leaving our H2 accepted as well. The third hypothesis in this study proposes that higher sustainable consumption behavior leads to higher satisfaction with life among consumers'. The SEM result presented in Figure I also confirms positive association between sustainable consumption behavior leads to higher satisfaction with life among consumers' at 0.01 significance levels, we therefore accept our H3 as well.

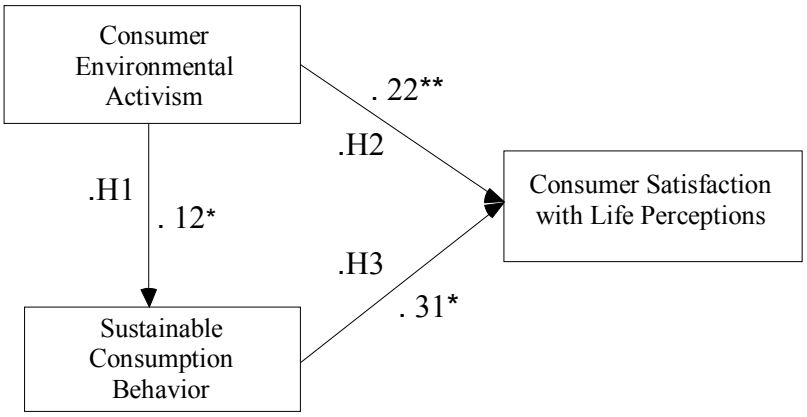

Figure I: Structural Equation Model
* Significant at 0.01 level.
** Significant at 0.05 level.

The results of this study confirm the findings of many previous researches. For instance, Brown and Kasser (2005) found higher level of well-being perceptions among ecologically conscious consumers. Dunn et al. (2008) describes pro-social spending as a measure to increases satisfaction with life. Jaccob et al. (2009) reported statistically significant linkage among subjective well-being perceptions and sustainable consumer attitude. Xiao and Li (2011) document significant linkage between consumer sustainable consumption behavior and satisfaction with life among Chinese consumers. Similarly Welsch (2005) and Levinson (2009) noted better environmental conditions as an important factor for increasing satisfaction with life. Frey et al. (2009) believe well-being and satisfaction with life can be enhanced by improving environmental conditions. Likewise, Silva et al. (2012) indicates that individual's satisfaction with life perceptions are linked with environmental conditions directly and indirectly.

4. Discussions

This research examined the relationship between environmental activism and sustainable consumption behavior and satisfaction with life among consumers in Saudi Arabia. The findings of this research indicate that consumers having higher level of environmental activism adopt sustainable consumption behavior in their daily life. The study also found that higher level of satisfaction with life can be achieved by active participation in environmental protection activities and adopting sustainable consumption pattern in routine life. The findings of this study provide useful information to researchers; business community and policy makers interested in promotion of sustainable development. The findings of this study have special implications for Saudi consumers having relatively higher purchasing power as compare to consumers in many of other countries across the world. An increased focus among Saudi consumer towards sustainable consumption will compel corporations to pay more focus on producing green products and doing well for the betterment of community and environment to gain attention of such environmental active consumers. This will instigate a culture of social responsibility not only among corporations but also among other non-profit organization and other members of the society in Saudi Arabia. This is also very important in the context of increasing vulnerability of world especially coastal areas towards natural disasters becoming more frequent in recent years.

Corporations in Saudi Arabia also understand the significance of sustainable actions to promote congenial relationships with their customers. For instance, Unilever's global pledge for improving the sustainable living in the communities it is operating. In this respect Unilever has signed a memorandum of understanding (MOU) with National Water Company to address the problem of water scarcity in Kingdom of Saudi Arabia. Under this agreement Unilever with educate children's and other households the tips to use water judiciously also how to conserve water for its better utilization. This initiative of Unilever will build a sense of appreciation among Saudi consumers and will motivate them to buy Unilever's products, since Unilever shows its concerns and working to heal community issues in KSA. Moreover, persuading Saudi consumers towards adopting environmentally active and sustainable consumption pattern will not only contribute towards well-being of society but also promotes satisfaction with life among Saudi consumers. The study recommends that corporations operating in KSA should engage actively in

environmental protection and community welfare activities to influence the sustainable consumer's behavior and promote satisfaction with life perceptions among Saudi consumers.

Acknowledgement: The authors are thankful to the Deanship of Scientific Research, King Saud University Riyadh for funding the work through the research Group project No RGP-VPP-280.

Corresponding Author:
Imran Ali
COMSATS Institute of Information Technology Lahore, Pakistan.
E-mail: imranalinim@gmail.com

References

1. Blake, D.E., Guppy, N., & Urmetzer, P. (1997). Canadian public opinion and environmental action: evidence from British Columbia. Journal of political Science, 3, 451-472.
2. Brechin, S.R., & Kempton, W. (1994). Global environmentalism: a challenge to the post materialism thesis? Social Science Quarterly, 75, 245-269.
3. Browne, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. Testing Structural Equation Models, 154, 136-162.
4. Brown, K.W., & Kasser, T. (2005). Are psychological and ecological well-being compatible? The role of values, mindfulness, and life style. Social Indicators Research, 74 (2), 349-368.
5. Brulle, R.J. (1996). Environmental disclosure and social movement organizations: a historical and rhetorical perspective on the development of U.S. environmental organizations. Sociological Inquiry, 66, 58-83.
6. Cohn, M.A., Fredrickson, B.L., Brown, S.L. & Mikels, J.A. (2009). Happiness unpacked: positive emotions increase life satisfaction by building resilience. Emotions, 9(3), 361-368.
7. Crook, S., & Pakulski, J. (1995). Shades of green: public opinion on environmental issues in Australia: Australian Journal of Political Sciences, 30,039-55.
8. D'Ambrosio, C., Frick, J.R., & Jantii, M. (2008). Satisfaction with life and economic well-being: evidence from Germany. Universita di Milano-Bicocca,, and DIW Berlin.
9. Diener, E. (1984). Subjective well-being. Psychological Bulletin, 95(3), 542-575.
10. Diener, E., & Biswas-Diener, R. (1984). Will money increase subjective well-being? Social Indicators Research, 57(2), 119-169.
11. Diener, E. Emmonns, R.A., Larson, R.J., & Griffin, S. (1985). The satisfaction with life scale: a measure of life satisfaction. Journal of Personal Assessment, 49, 1-5.
12. Diener, E. Sandyik, E., & Pavot, W. (1991). Happiness is the frequency, not the intensity of positive versus negative effect. In F. Strack, M. Argyle, & N. Schwarz (Eds.), Subjective well-being: an interdisciplinary perspective. Oxford, England: Pergamon Press.
13. Diener, E. Suh, E. M., Lucas, R.E., & Smith, H.L. (1999). Subjective well-being: Three decades of progress. Psychological Bulletin, 125, 276-302.
14. Diener, E. Lucas, R.E., & Scollon, C.N. (2006). Beyond the hedonic treadmill: revisions to the adaptation theory of well-being. American Psychologist, 61, 305-314.
15. Diener, E. (2007). The well-being of planet earth. Paper presented at the Global Well-Being Forum, Washington, D.C.
16. Dobson, A. (2007). Environmental citizenship: towards sustainable development. Sustainable Development, 15, 276-285.
17. Dono, J., Webb, J., & Richardson, B. (2010). The relationship between environmental activism, pro-environmental behavior and social identity. Journal of Environmental Psychology, 30, 178-186.
18. Dunn, E.W., Aknin, L.B., & Norton, M.L. (2008). Spending money on others promotes happiness. Science, 319, 1687-1688.
19. Edwards, T.C., & Oskamp, S. (1992). Components of antinuclear war activism. Basic and Applied Social Psychology, 13, 217-230.
20. Franzen, A. (2003). Environmental attitudes in international comparison: Analysis of the ISSP surveys 1993 and 2000. Social Science Quarterly, 84(2), 275-294.
21. Frey, B.S., Luechinger, S., & Stutzer, A. (2009). The life satisfaction approach to environmental valuation. IZA DP No. 4478.
22. Hair, J.J., Anderson, R., Tatham, R., & Black, W. (2003). Multivariate data analysis. (5th Ed.) Peasrson Education,India.
23. Jacob, J., Joyic, E., & Brinkerhoff, M. (2009). Personal and planetary well-being: Mindfulness meditation, pro-environmental behavior and personal quality of life in a survey from the social justice and ecological sustainability movement. Social Indicators Research, 93(2), 275-294.

24. Levinson, A.(2009). Valuing public goods using happiness data: the case of air quality. NBER Working Paper No. 15156. National Bureau of Economics Research, Inc.
25. Manzo, L.C., & Weinstien, N.D. (1987). Behavioral commitment to environmental protection: a study of active and non-active members of the sierra club. Environment and Behavior, 19, 673-694.
26. Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: first-and higher order factor models and their invariance across groups. Psychological Bulletin*, 97*(3), 562.
27. Nunally, J., & Bernstein, I. (1978). Psychometric theory. New York, McGraw Hill.
28. Sammer, K., & Wustenhagen, R. (2006). The influence of eco-labeling on consumer behavior – results of a discrete choice analysis for washing machines. Business Society and Environment, 15, 185-199.
29. Seguin, C., Pelletier, L. G., & Hunsley, J. (1998). Towards model of environmental activism. Environment and Behavior, 30, 628-652.
30. Silva, J., Keulenaer, de. F., & Johnstone, N. (2012). Environmental quality and life satisfaction: evidence based on micro-data. OECD Environmental Working Papers, No. 44, OECD Publishing. Retreived, http://dx.doi.org/10.1787/5k9cw678dlr0-en
31. Stern, P.C., Dietz, I., & Ralot, L. (1998). Value orientation, gender and environmental concern. Environment and Behavior, 25, 322-348.
32. Struwig, J. (2010). South African's attitude towards the environment. In B.Roberts, M. Kivilu & Y.D. Davids (Eds), South African social attitudes 2nd Reflections on the age of hope (pp. 148-219). Cape Town: Human Sciences Research Council.
33. Unilever's Press Release January 26, 2012. National Water Company and Unilever sign MOU. Retrieved on March 20, 2012 from http://www.unilever.com/mediacentre/pressreleases/2012/NationalWaterCompanyandUnileverSignMOU.aspx
34. Welsch, H. (2005). Environment and happiness: valuation of air pollution using life satisfaction data. Ecological Economics, 58, 801-813.
35. Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. F. (1977). Assessing reliability and stability in panel models. *Sociological methodology, 8*, 84-136.
36. Xiao, J.J., & Li, H. (2011). Sustainable consumption and satisfaction with life. Social Indicators Research, 104 (2): 323-329.
37. Young, K.W. (2006). Social support and life satisfaction. International Journal of Psychological Rehabilitation. 10 (2), 155-164.
38. Young, W., Hwang, K., McDonalds, S., & Oates, C.J. (2010). Sustainable consumption: green consumer behavior when purchasing. Sustainable Development, 18, 20-31.

4/15/2013