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GENERAL AND CARBON RELATED ENVIRONMENTAL KNOWLEDGE, ATTITUDES AND BEHAVIOR: A STRUCTURAL EQUATION MODELING APPROACH

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SUMMARY

Global warming has gained global acceptance as an issue that needs to be addressed. While firms can reduce the amount of carbon they produce, they can also offset their production of carbon, by purchasing savings in other areas, that result in a “measurable avoidance, reduction or sequestration” of carbon or greenhouse gases (Ramsauer 2007, p. 1). Firms can also purchase carbon offsets, and at present there are a multitude of alternative offset providers and offset programs available (Clean Air-Cool Planet 2006). These programs can be highly complex, which can lead to consumer confusion (Majoras 2008; ACCC 2008).

Consumer environmental knowledge and attitudes have been researched for over 40 years in an attempt to provide insight and understanding into pro-environmental behavior. The aim of this research is to examine the relationship between general and carbon specific knowledge, attitude toward the environment, and their general and carbon specific behaviors for a sample of consumers in the United States.

Hypotheses

Attitude toward the environment has been commonly found to be an antecedent to pro-environmental behavior (Moloney and Ward 1973; Lynne and Rola 1988; Kaiser, Wolfling, and Fuhrer 1999). Allport (1935, p. 810) stated that “an attitude is a mental and neutral state of readiness, organized through experience, exerting a directive or dynamic influence on individual’s response to all objects and situations with which it is related.” Attitudes are generally introduced as a mediating variable (Davies, Foxall, and Pallister 2002) in measuring the relationship between knowledge and behavior. Therefore, we propose that:

H1a: General environmental knowledge is positively related to attitude toward the environment.

H1b: Carbon offset knowledge is positively related to attitude toward the environment.

Behavior has been known to stem from consumer attitudes. Bohlen, Schlegelmilch and Diamantopoulos (1993) found a strong positive relationship between attitudes about the environment and purchasing behavior. Environmental issues cover a wide range of topics and thus environmentally-focused consumers can be motivated based on a range of factors (Stone, Barnes, and Montgomery 1995). However, someone who is active in one set of environmental behaviors may not necessarily be equally activated in others (Kahn 2007). As such we explore whether there are links between general knowledge and actions, as well as specific carbon knowledge and carbon actions using environmental attitude as a mediating variable. However, as was previously mentioned, behavioral intentions may not necessarily result in actual environmental behavior (Davies, Foxall, and Pallister 2002). Based on the TRA, we propose:

H2a: Attitude toward the environment is positively related to general pro-environmental behaviors.

H2b: Attitude toward the environment is positively related to carbon offset related behaviors.

Method

An online survey was administered to a random sample of Australian grocery shoppers, using a for-profit panel. The target sample was 350 respondents; 395 responses were received of which 352 were deemed usable. An SEM modeling was undertaken to explore the impact of general and carbon offset knowledge through attitudes on general and carbon related behaviors.

Results

The SEM model confirmed the relationships between general environmental knowledge, attitudes and behavior. The links where found to hold between attitudes and both general and specific (i.e., carbon related) behavior. This suggests that the TRA appears to hold in regards to both general and specific environmental knowledge for U.S. consumers. One would therefore anticipate that as consumers become more knowledgeable they in turn will change their attitudes and behaviors. References are available upon request.
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