Confidence in Understanding and the Subjective Norm's Ability to Predict Behavioral Intention

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Abstract
The subjective norm has been an inconsistent predictor of behavioral intention in the theory of reasoned action model. This analysis examined an explanation found within health communication research, testing it in a consumer behavioral context.
The current study examined whether confidence in perceptions influences the utility of the normative measure as a predictor of purchase intention. Respondents were asked to consider two purchase decisions. Results indicate that the level of confidence people have in their understanding of normative beliefs influences their use of the subjective norm as a predictor of purchase intention. Differing from previous studies that suggest behavior is either attitudinally or normatively directed, the subsequent analysis found purchase decisions to be attitudinal when confidence in perceptions of relevant others is low, and normative when confidence in perceptions of relevant others is high
Key Words: *Theory of Reasoned Action; Theory of Planned Behavior; Subjective Norm; Purchase Intention.*

Introduction!

The goal of many social science experiments is to predict behavior. With this in mind, models have been developed to organize potential behavioral predictors. Perhaps the most widely used model in this area in the last thirty years is the theory of reasoned action (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980), which has also provided the basis for other behavioral models such as the theory of planned behavior (Ajzen, 1991), and the technology acceptance model (Davis, 1989). The theory of reasoned action (TRA) is based on the idea that one's attitudes and subjective norm can predict a person's behavioral intention, which, in turn, is posited to forecast one's behavior. Because researchers cannot have subjects physically carry out every behavior they wish to research, intended behavior is measured.

Attitude considers the individual's evaluation of a behavior (Fishbein & Ajzen, 1975). When considered in conjunction with the subjective norm, attitude is often a stronger predictor of behavioral intention, (e.g., Ajzen & Fishbein, 1980; Triandis, 1994), and the two predictors generally explain thirty to fifty percent of behavioral intention (Sheeran & Taylor, 1999). Ajzen (1991) noted that the strength of attitude and the subjective norm as predictors of behavioral intention will depend on the behavior in question and the situation. The utility of attitudes and the subjective norm as predictors of behavioral intention will also vary by person, with Trafimow and Finlay (1996) noting that some people's decision making processes weigh their attitudes to a greater extent, and other people consider decisions more normatively. While most people weigh their attitudes more heavily than normative influences, Trafimow and Finlay found that a small percentage of the population in non-collectivist cultures largely base their behaviors on normative influences. Cross-cultural analysis conducted by Park (2000) suggests that subjective norms were considered more when the theory of reasoned action was applied in collectivist cultures in Asia.

Normative social influence is defined as: "the influence of other people that leads us to conform in order to be liked and accepted by them" (Aronson, et al., 2002, p. 264). The subjective norm measure has been defined as "an individual's beliefs about what significant others think s/he should do" (Cooke & Sheeran, 2004, p. 159). Research on in-groups and out-groups (e.g., Wilder, 1990; Jetten, et al., 1996) has examined the normative influences considered and those that are not. Not surprisingly, friends and family are considered the most credible information sources when making purchase decisions (Loda, 2011). The work of Assael (1992) explains this, noting that consumers fall into membership groups, and will attempt to make purchase decisions that allow them to fit into these groups. Triandis (1980) noted that people internalize a reference group whose opinions they consider when making behavioral decisions.

There is often a high correlation between the attitude and subjective norm measures. While studies have

indicated that the two predictor variables influence each other (Oliver and Bearden, 1985; Shimp and Kavas, 1984), it has also been shown that attitudes can be manipulated without influencing the subjective norm (Trafimow & Fishbein, 1994a; 1994b). An explanation for the high correlation was put forth by Terry and Hogg (1996), who argued that social group membership often requires modification of individual standards and behaviors to accommodate the group. In this way, the subjective norm acts as an influential force on one's attitudes and increases the correlation between normative beliefs and individual attitudes.

The present study examines how confidence in understanding one's subjective norm impacts purchase decisions. Within the context of consumer research, the TRA continues to be widely used, with recent research areas including online purchase behavior (e.g., Sorce, et al., 2005; Njite & Parsa, 2005), green technology (Rodriquez-Priego & Porcu, 2012), and adoption of consumption goods (Ngamkroeckjoti, et al., 2011), to name a few areas. The ongoing use of the TRA model for prediction of diverse behaviors is a testament to its flexibility and continued applicability.

Confidence in the Correctness of Perceptions.

The term "confidence in the correctness of their perceptions of normative pressure" (Trafimow, 2001 pg. 49) considers the respondent's understanding of the opinions of relevant others. Triandis (1980) noted that people internalize reference groups. What occurs when consumers are confronted with a purchase decision in which they do not know the attitudes of relevant others? If a person is unsure about the attitudes of relevant others when making a purchase decision, he or she will either need to speculate on these beliefs or make a decision without considering them. As previously noted, attitudes and subjective norms influence each other (Oliver and Bearden, 1985; Shimp and Kavas, 1984). This study puts forth a new approach to measuring the normative influence that may better distinguish the predictors of behavioral intent. It is believed that the subjective norm's strength as a predictor is dependent on the respondent's confidence in their understanding of normative beliefs. More formally,

H1: Confidence in understanding normative beliefs will improve the subjective norm's utility as a predictor in the TRA model.

Over many studies, the attitude has been established as the more significant predictor of behavioral intent (e.g., Trafimow & Fishbein, 1994 a,b; Terry & Hogg, 1996; Finlay & Trafimow, 1998). When considering normative versus attitudinal influence on behavioral intent, in an analysis of 30 behavioral decisions, Trafimow and Finlay (1996) found only one to be normatively controlled. When looking at individual respondents, they found 21% of the respondents to weigh subjective norms more heavily than attitudes when arriving at behavioral intent. The Trafimow and Finlay (1996; 2001) analyses suggest that differences in the individual or the decision itself may cause a respondent to weigh decisions more normatively or attitudinally.

Trafimow (1994; 2001) studied confidence in understanding the wishes of one's sexual partner when determining condom use intentions. For respondents expressing a high level of confidence in understanding his or her partner's wishes, the decision was largely normative. In contrast, for those who were not confident in understanding his or her partner's wishes, the decision was attitudinal. While one's attitude is always available when developing behavioral intent, an understanding of the attitudes of relevant others may not be. Because purchase decisions are often visible to others, normative forces may influence purchase intent. With so many potential purchase decisions however, the awareness of normative beliefs for all purchase scenarios is not tenable. This study will distinguish respondents based on confidence in their understanding their subjective norm, and questions:

RQ: Are attitudinal and normative decision making processes dependent on confidence in understanding normative beliefs?

Methodology

Design

To allow for comparison across studies, the current study was structured around the work of Trafimow (2001). This study used a survey research design in which respondents were directed to an online research utility to fill out a questionnaire. The subjects were recruited by an offer of extra credit.

Stimulus Materials

The TRA model has previously been used when studying purchase intentions. Favorable responses have been recorded when the theory has been used in this context, as "not only does the model appear to predict consumer intentions and behavior quite well, it also provides a relatively simple basis for identifying where and how to target consumers" (Sheppard, et al., 1988, p. 325).

Several factors were weighed in the selection of the two purchase scenarios. A primary concern was the process one goes through in the making of purchase decisions. Ray (1973) considered marketing communication messages in terms of involvement and suggested that the decision making process will differ depending on the situation. For low-risk purchase decisions such as soft drinks (Beatty & Kahle, 1988), soup (Wansink & Ray, 1992) or fast food (Bagozzi et al., 2000), past behavior strongly predicted purchase intention. In contrast, more expensive purchases elicit greater cognitive processing. With this in mind, the two purchase decisions selected were thought to be both relevant to the intended audience and high in cognitive processing.

Participants

Participants were college students enrolled at a school in the northeastern United States and recruited from 100-level communication courses. Two purchase decisions that were thought to be relevant to the study's population were provided. Students could select to answer questions on one or both purchase decisions. The first decision regarded the purchase of a computer and returned 265 responses. The second decision pertained to taking a trip and returned 309 responses. No restrictions were placed on who participated in the study, with survey links sent by email to all students enrolled in the participating courses. Participants were 58.9% male and 41.1% female.

Measures

Attitude

The subject's attitude towards the purchase decision was measured using six items. Participants responded on a seven-point semantic differential scale. The six-item attitude scale provided an alpha reliability of .86 for the attitude towards a trip measure and .89 for the attitude towards a computer purchase measure.

Subjective Norm

The subjective norm measure for each purchase decision was also measured using six items, and a seven-point semantic differential scale. The subjective norm measure for the trip provided an alpha reliability of .82, while the measure produced an alpha reliability of .87 for the computer purchase decision.

Behavioral Intention

Behavioral intention towards the two decisions was measured using a four-item seven-point semantic differential scale. Behavioral intention towards taking a trip provided an alpha reliability of .85 while behavioral intention towards purchasing a computer produced an alpha reliability of .86.

Confidence in Correctness of Perception of Normative Pressure

Friends and family members have been considered the best indicators of the subjective norm for purchase decisions (Loda, 2011). In an effort to determine confidence in the understanding of the subjective norm, for both purchase decisions, the respondents were asked via a seven-point Likert-style scale the level to which they were confident in their understanding of the perceptions of their friends and family regarding this purchase decision, with a variable created from their responses. The trip purchase decision returned an alpha reliability of .71 while the computer purchase decision returned an alpha reliability of .80.

Results

Hypothesis one predicted that the level of confidence in understanding normative beliefs would improve its utility as a predictor of purchase intention. Interaction terms were created that included the confidence measure and the subjective norm measure. A high score for the new term would suggest that the respondent had both a strong understanding of the beliefs of significant others, and was factoring these beliefs into his or her behavioral decision. Alternatively, a low score would suggest the respondent did not know the beliefs of significant others and would thus not consider them when making a behavioral decision. Regression analysis was used to test both purchase decisions.

The trip purchase decision proved to be normative, with attitude (β = .139, ns) not improving the variance explained in the original model. While unexpected, this was illustrative when testing this hypothesis. The first analysis examined the TRA model as it has been previously use, with an attitude not significant (β = .139, ns) while the subjective norm (β = .364, $p<.001$) explained 23.2% of the variance. To test the hypothesis, a second regression was conducted using the subjective norm*confidence term. In this analysis, both attitude (β = .330, $p<.001$) and the subjective norm*confidence terms (β = .368, $p<.001$) were significant predictors of behavioral intent, with the variance explained improving to 31.5%

In the computer purchase decision, a primary analysis examined the traditional TRA model with both attitude (β = .375, $p<.001$) and the subjective norm (β = .311, $p<.01$) significant predictors of behavioral intent, explaining 43.9% of the variance. A second regression using the subjective norm*confidence interaction term found attitude (β = .526, $p<.001$) and the interaction term (β = .362, $p<.001$) to significantly predict behavior intent and explained 53.5% of the variance. For both the trip and the computer purchase scenarios, the subjective norm*confidence interaction term was a stronger predictor of behavioral intent than the traditional normative measure, and also improved the variance explained in the overall model, supporting the hypothesis.

Research question one examined the influence of understanding of normative beliefs across four quartiles. A reason for pursuing this inquiry the widespread use of linear regression modeling. A potential problem with linear modeling is that significant predictors will go undetected unless they create a linear pattern across the spectrum measured. For a predictor like the subjective norm, the variable may offer no predictive power for people lacking confidence in their understanding, while maybe a very useful predictor if they are confident. For this reason, linear models may not capture the extent of normative influence at high levels of confidence.

To test research question one, respondents were sectioned into four quartiles representing those with a low understanding of the beliefs of their subjective norm, a mid-low understanding, a mid-high understanding, and a high understanding. For the computer purchase decision, when using these parameters, the subjective norm only predicted purchase intention for those with a high understanding of normative beliefs (β =.690, $p<.001$). The attitude was the significant predictor for the remaining three levels of understanding with mid/high (β =.416, $p<.05$), mid/low (β =.484, $p<.05$), and low (β =.552, $p<.01$) all predicting behavioral intention while the subjective norm variable was not significant. An overview of these results can be found as table one in the appendices.

The trip purchase decision produced slightly different results when respondents were divided by their confidence in understanding the subjective norm. While attitude was not a significant predictor of behavioral intention for the overall model, it did predict behavioral intention for the low understanding of the subjective norm group (β =.466, $p<.05$), suggesting that uncertainty about normative beliefs leads to attitudinal decision making. Neither attitude nor the subjective norm measure predicted behavioral intention for the mid/low understanding group, with the subjective norm measure positively predicting behavioral intention for the mid/high (β =.491, $p<.01$), and high (β =.491, $p<.01$) understanding groups. An overview of these results can be found as table two in the appendices.

Discussion

The result of this analysis offers insight as to why the subjective norm has been an inconsistent predictor of

behavioral intention. Meta-analyses have suggested that the subjective norms are a weak predictor of behavioral intention (e.g., Sheppard et al. 1988), yet other studies have detected behaviors that are distinctly normative rather than attitudinal (Trafimow & Finlay, 1996). Furthering an explanation put forth by Trafimow (1994; 2001), this study offers new insight on the normative measure.

As noted previously, attitudes and subjective norms influence each other (Oliver and Bearden, 1985; Shimp and Kavas, 1984). This has been used to explain the often significant correlations between the two predictors of behavioral intent. While it was not expected that the trip purchase scenario tested in hypothesis one would be normative, it illustrates an issue with, and potential improvement in, the measurement the subjective norm. When using the traditional subjective norm variable, the attitude (β =.139, ns) did not significantly predict behavioral intent. The correlation between attitudes towards a trip and the subjective norm measure was .849, a high enough level that it could be argued the two predictors were measuring the same variance. In contrast, attitude towards the trip and the new variable which considered confidence returned a correlation of .309. More importantly, the new variable appeared to better distinguish respondent's attitudes, which was significant (β = .330, $p<.001$) and the subjective norm (β = .368, $p<.001$) which was a stronger predictor than when it alone predicted behavioral intent. The computer purchase decision offered further support for the hypothesis with the normative measure improving from β = .311 to β = .362 when considering confidence. For both scenarios, the normative measure and the overall variance explained were improved. While not hypothesized, it is noteworthy that, for both purchase decisions, the attitude measure was also a stronger predictor of behavioral intent, likely due to the attitude and subjective norm measures being appropriately distinguished.

Research question one examined the role of attitudes and subjective norms in purchase decisions depend on an understanding of normative beliefs. The rationalization for this was the belief that linear models may not detect the level of influence of the subjective norm at all levels of understanding. To illustrate, a low level of understanding of the beliefs of your subjective norm would suggest that normative influence cannot impact your intended behavior. In such a circumstance, your attitude is the only behavioral predictor in the TRA model able to influence your decision. In contrast, a high level of understanding allows a person to factor in both attitudes and normative beliefs to the extent of their choosing when making decisions. What is less clear is how people may consider the subjective norm in instances of moderate understanding. Linear modeling would suggest they would, in turn, factor in their subjective norm moderately. Alternatively, the influence of the subjective norm may be binary, with normative influence only considered if it is believed to be understood.

The results of research question one offer an alternative explanation to the more general belief that behavioral decisions are either normative or attitudinal. Results of this analysis suggest that when normative beliefs are unknown or unclear, the behavioral intent of respondents was based on their attitudes. For both purchase scenarios, the normative influence was evident when the respondent was confident in their understanding of the beliefs of significant others.

With attitude and subjective norms influencing each other, and the two predictors traditionally have been highly correlated. This study illustrates the benefit of distinguishing by normative understanding and suggests that the predictive power of attitude and the subjective norm may not be best represented in a linear model. While linear modeling provides information about the average predictive utility, normative forces will be under-utilized when consumers are confident in their understanding and over-utilized as predictors of behavioral intention when they do not. Results of the hypothesis and research question suggest that the findings regarding the understanding of normative beliefs found in Trafimow (1994; 2001) can be extended beyond a health behavior context.

Previous research has identified normative forces exerting stronger behavioral influence in collectivist cultures when compared to those that embrace individualism (Park, 2000). Results of the current analysis may suggest that people living in collectivist cultures are more aware of normative beliefs than individualist cultures. Additional research using a sample from a collectivist society might test this hypothesis.

An overall limitation of the current study is its generalizability. The sample used was a convenience sample and, as a student sample, factors including income, time commitments, and a need for computing

equipment may suggest that these results may not reflect purchase decisions found in the general population. Considered differently, because students are often required to make purchase decisions, and these product categories were specifically selected for a student audience, they may be considered an appropriate sample for these specific purchase scenarios.

The measurement of behavioral intention, rather than behavior, may limit the utility of the TRA model. Research on how behavioral intention and actual behaviors relate is mixed, with Newberry, et al., (2003), and Bemmaor (1995) finding strong relationships between behavioral intention and behavior, while Mullett and Karson (1985) and Kalwani and Silk (1982) finding the relationship between the two less consistent. Ideally, future research would pursue consumers in real-world purchase situations so that behavior, rather than behavioral intention is measured.

References

Ajzen, I. (1991). The theory of planned behaviour. Organizational Behaviour and Human Decision Processes, 50, 179–211.

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice Hall.

Aronson, E., Wilson, T.D., & Akert, A.M. (2002). Social Psychology (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Assael, H. (1992). Consumer Behavior and Marketing Action (4th ed.). Boston, MA: PWS-Kent.

Bagozzi, R.P., Baumgartner, J., & Yi, Y. (1989). An Investigation into the Role of Intentions as Mediators of the Attitude-Behavior Relationship. Journal of Economic Psychology 10: 35-62.

Beatty, S.E., Kahle, L.R., & Homer, P.M. (1988). The involvement-commitment model: theory and implications. Journal of Business Research 16(2): 149-167.

Bemmaor, A.C. (1995). Predicting behaviour from intention-to-buy measures: the parametric case.Journal of Marketing Research 32: 176-191.

Cooke, R. & Sheeran, P., (2004). Moderation of cognition-intention and cognition-behaviour relations: A meta-analysis of properties of variables from the theory of planned behavior.British Journal of Social Psychology, 43, 159-186.

Davis, F.D., (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly 13(3): 319-339.

Finlay, K. A., & Trafimow, D. (1998). The relationship between the private self and helping victims of AIDS. Journal of Applied Social Psychology, 28, 1800-1811.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behaviour: An introduction to theory and research. Reading, MA: Addison-Wesley.

Jetten, J., Spears, R., & Manstead, A. S. R. (1996). Intergroup norms and intergroup discrimination: Distinctive self-categorization and social identity effects. Journal of Personality and Social Psychology, 71, 1222–1233.

Kalwani, M.U., & Silk, A.J. (1982). On the reliability and predictive validity of purchase intention measures. Marketing Science 1: 243-287.

Loda, M. (2011). Comparing web sites: an experiment in online tourism marketing. International Journal of Business and Social Science 2(22): 70-78.

Mullett, G.M., & Karson, M.J. (1985). Analysis of purchase intent scales weighted by probability of actual purchase. Journal of Marketing Research 22: 93-96.

Newberry, C.R., Kleinz, B.R., & Boshoff, C. (2003). Managerial implications of predicting purchase behaviour from purchase intentions: a retail patronage case study. Journal of Services Marketing 17: 609-618.

Ngamkroeckjoti, C., Lou, X.B., & Kijboonchoo, T. (2011). Determinant factors of purchase intention: a case study of imported win in city of Hangzhou. International Conference on Management, Economics and Social Sciences. Bangkok, Thailand. December, 2011.

Njite, D., & Parsa, H.G. (2005). Structural equation modeling of factors that influence consumer Internet purchase intentions of services. Journal of Services Research 5(1): 43-59.

Oliver, R.L., & Bearden, W.O. (1985). Crossober effects in the theory of reasoned action: A moderating influence attempt. Journal of Consumer Research, 12, 324-340.

Park, H.S. (2000). Relationships Among Attitudes and Subjective Norms: Testing the Theory of Reasoned Action Across Cultures. Communication Studies, 51(2) 162-175.

Ray, M. (1973). Marketing Communications and the Hierarch-of-Effects, in New Models for Mass Communications, ed. P. Clarke 147-176. Beverly Hills, CA: Sage Publications.

Rodriquez-Priego, N., & Porcu, L. (2012). Psychological drivers of consumer's preferences for green transportation: an empirical analysis of bikes' rental system at the University of Granada.ICHSS2012 Proceedings 5(103): 103-110.

Sheppard, B. H., Hartwick, J., & Warshaw, P.R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. Journal of Consumer Research, 15, 325-343.

Sheeran,P., & Taylor, S. (1999). Predicting intentions to use condoms: Meta-analysis and comparison of the theories of reasoned action and planned behavior. Journal of Applied Social Psychology, 29, 1624–1675.

Shimp, T.A., & Kavas, A. (1984). The theory of reasoned action applied to coupon usage. Journal of Consumer Research, 11, 795-809.

Sorce, P., Perotti, V., & Widrick, S. (2005). Attitude and age differences in online buying. International Journal of Retail and Distribution Management 33(2): 122-132.

Terry, D. J., & Hogg, M. A. (1996). Group norms and the attitude–behaviour relationship: A role for group identification. Personality and Social Psychology Bulletin, 22, 776–793.

Trafimow, D. (1994). Predicting intentions to use a condom from perceptions of normative pressure and confidence in those perceptions. Journal of Applied Social Psychology, 24, 2151-2163.

Trafimow, D. (2001). Condom use among American students: the importance of confidence in normative and attitudinal perceptions. The Journal of Social Psychology 141: 49-59.

Trafimow, D., & Finlay, K. (1996). The importance of subjective norms for a minority of people. Personality and Social Psychology Bulletin, 22, 820–828.

Trafimow, D., & Finlay, K. A. (2001). The accessibility and importance of group memberships.European Journal of Social Psychology, 31, 37-43.

Trafimow, D., & Fishbein, M. (1994a). The importance of risk in determining the extent to which attitudes affect intentions to wear seat belts. Journal of Applied Social Psychology, 24, 1-11.

Trafimow, D., & Fishbein, M. (1994b). The moderating effect of behavior type on the subjective norm-behavior relationship. Journal of Social Psychology, 124, 755-763.

Triandis, H. C. (1980). Values, attitudes, and interpersonal behavior. In H. Howe & M. Page (Eds.), Nebraska symposium on motivation 1979, 195–295. Lincoln, NE: University of Nebraska Press.

Triandis, H.C. (1994). Culture and social behavior. New York: McGraw-Hill.

Wansink, Brian and Michael L. Ray (1992). Estimating an Advertisement's Impact on One's Consumption of a Brand. Journal of Advertising Research, 26(4), 9-16.

Wilder, D. A. (1990). Some determinants of the persuasive power of ingroups and outgroups: Organization of information and attribution of independence. Journal of Personality and Social Psychology, 59, 1202–1213.