

Research protocol

Moderating Role of Control in the Theory of Planned Behavior:

A Replication and Extension

Francesco La Barbera, University of Naples, Italy

In the theory of planned behavior (TPB - Ajzen, 1991), intentions are posited to predict behavior to the extent that the actor is capable of performing the behavior, i.e., has control over behavioral performance. In the relatively few studies that have examined this proposition, perceived behavioral control (PBC) has been measured as a proxy for actual control (e.g., Armitage & Conner, 2001; Hukkelberg et al., 2014; Yang Wallentin et al., 2004). Perhaps less known, PBC is also said to moderate the effects of attitude toward a behavior (ATT) and of subjective norm (SN) on behavioral intentions (INT). Favorable attitudes and subjective norms should lead to the formation of a favorable intention only to the extent that people also believe that they are capable of carrying out the behavior, i.e., have high self-efficacy (Bandura, 1997) or perceived control over the behavior.

At least one previous study (Yzer & Van Den Putte, 2014) has found evidence for the postulated interactions between ATT and SN on one hand and PBC on the other. More recently, La Barbera (2018) has found an unexpected *negative* effect of PBC on the relation between SN and INT, such that SN influenced intention only when PBC was low. One possible interpretation of these results is that individuals who have a high sense of mastery over a given behavior may be less influenced by social pressure. However, the studies were all conducted with convenience samples in Italy. One major main aim of the proposed study is to replicate these findings in cross-national samples.

A second aim is to examine the moderating role of PBC in relation to the two sub-dimensions of perceived control that have emerged in empirical research. Fishbein and Ajzen

(2010) referred to these dimension as *capacity* – the perceived ability to carry out a behavior – and *autonomy* – the extent to which performance of the behavior is viewed as being under one’s personal control. Recent work with the TPB has also distinguished between two aspects of subjective norm: injunctive and descriptive (see Fishbein & Ajzen, 2010). Injunctive subjective norms refer to the perceived behavioral expectations of important social referents, whereas descriptive subjective norms refer to whether these referents are themselves perceived to perform the behavior. The second aim of the proposed research, therefore, is to examine the interactions between ATT and each of the two SN factors on one hand and each of the two PBC dimensions on the other.

Hypotheses

In line with previous studies, we formulate the following hypotheses.

- 1) There is a significant positive interaction between ATT and a composite measure of PBC in affecting intention.
- 2) There is significant negative interaction between a composite measure of SN and a composite measure of PBC in affecting intention.

Absent previous research on the topic, the interactions involving the two SN facets and the two sub-dimensions of control will be studied in an explorative fashion.

Method

Procedure

About 400 participants should be recruited in countries different from Italy (400 participants per nation). Even if not representative of the national population, it would be useful if the samples were comparable in composition to the main national demographic characteristics (age, sex, income, education).

Measures

Relying on the guidelines provided by Fishbein and Ajzen (2010), a small set of items are to measure each of the study variable: Intention, attitude, subjective norm (injunctive and descriptive), perceived behavioral control (autonomy and capacity).

On the basis of previous TPB research, we have chosen exercising and reducing individual energy consumption as target behaviors. Whereas exercising is a classical topic in TPB research, reducing individual energy consumption is quite a novel topic. One previous work (La Barbera and Ajzen, submitted) showed adequate variance in the main TPB constructs, which is required to test for interaction effects (Fishbein and Ajzen, 2010).

Statistical Analyses

Following confirmatory factor analysis to establish the convergent and discriminant validities of the TPB measures, stepwise regression analyses and structural equation modeling (SEM) will be used to test the significance and size of the effect of the TPB constructs (ATT, SN, and PBC) in predicting intention, and the significance and size of the effect of ATT*PBC and SN*PBC on intention. In the regression analyses, factors will be mean-centered before calculating the interaction terms. In SEM, the model fit will be assessed through the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean squared error of approximation (RMSEA). According to conventional rules of thumb (Hu & Bentler, 1999), acceptable and excellent model fit are indicated by CFI and TLI values greater than .90 and .95, respectively, and by RMSEA values smaller than .08 and .06, respectively. The double mean centered unconstrained approach will be used for testing interactions (Lin et al., 2010).

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211. DOI: 10.1016/0749-5978(91)90020-T
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471-499.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Fishbein, M., & Ajzen, I. (2010). *Reasoned action: Predicting and changing behaviour*. New York: Psychology Press.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: a Multidisciplinary Journal*, 6(1), 1-55. DOI: 10.1080/10705519909540118
- Hukkelberg, S. S., Hagtvet, K. A., & Kovac, V. B. (2014). Latent interaction effects in the theory of planned behaviour applied to quitting smoking. *British Journal of Health Psychology*, 19(1), 83-100.
- La Barbera, F. (2018). Control interactions in the Theory of Planned Behavior. *Identifying the Determinants of (Non-)Replicability: The Theory of Planned Behavior, Trier, 17-19 October 2018*. <https://www.psycharchives.org/handle/20.500.12034/726>
- Lin, G. C., Wen, Z., Marsh, H. W., & Lin, H. S. (2010). Structural equation models of latent interactions: Clarification of orthogonalizing and double-mean-centering strategies. *Structural Equation Modeling*, 17(3), 374-391.
- Yang-Wallentin, F., Schmidt, P., Davidov, E., & Bamberg, S. (2004). Is there any interaction effect between intention and perceived behavioral control. *Methods of Psychological Research Online*, 8(2), 127-157.

Yzer, M., & Van Den Putte, B. (2014). Control perceptions moderate attitudinal and normative effects on intention to quit smoking. *Psychology of Addictive Behaviors*, 28(4), 1153.