Chapter XIII
# Contemporary Information Systems Alternative Models to TAM:
## A Theoretical Perspective

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## ABSTRACT

*Based on the theory of reasoned action, the technology acceptance model (TAM) has been one of the most widely used theories in management information systems research. This chapter proposes several alternative theories from the literature to TAM. Four theories are showcased that actually reveal a reverse relationship in contrast to the traditional attitude-behavior relationship in TAM. These four theories are theory of cognitive dissonance, social judgment theory, theory of passive learning, and self-perception theory. Other alternatives to TAM and other popular theories are flow theory, cognitive load theory, capacity information processing theory, and information processing theory. These theories are applicable in e-commerce, online consumer behavior, online shopping, immersive gaming, virtual social interactions, and cognitive research. Pragmatic examples are shown for the theories.*

## INTRODUCTION AND BACKGROUND

The technology acceptance model or TAM (Davis, 1989; Davis et al., 1989) has been one of the most popular theories utilized in IS research. TAM adoption has been in countless areas, beyond the initial intended application of the theory, technology adoption in organizations. Over 700 citations have been made of the Davis's et al. (1989) article (Bagozzi, 2007). An entire special issue of the *Journal of the Association for Information Systems* (JAIS) in April 2007 was dedicated to TAM, recounting the vast impact of the theory,

as well as its shortcomings, such as its simplicity (Bagozzi, 2007; Benbasat and Barki, 2007; Hirschheim, 2007).

This research proposes several alternative theories from the literature to TAM. Instead of the traditional attitude-behavior relationship in TAM, four theories are included to show how the reverse of the relationship, behavior-attitude, is possible: theory of cognitive dissonance, social judgment theory, theory of passive learning, and self-perception theory. TAM (Davis, 1989; Davis et al., 1989) is based on the theory of reasoned action or TRA (Fishbein, 1967; Fishbein and Ajzen, 1975), which was later extended to the theory of planned behavior or TPB (Ajzen, 1991). Table 1 shows a list of attitude-behavior link theories and their reverse link counterparts (Assael, 1998; Davis, 1989; Davis et al., 1989).

Other alternative theories to TAM are flow theory, cognitive load theory, capacity information processing theory, and information processing theory. These theories are relevant in multiple areas in IS, including ecommerce, online consumer behavior, online shopping, immersive gaming, virtual social interactions, and cognitive research. Examples of implementations of the theories are also discussed.

Hence, the objectives of this paper are to provide the following:

- Suggest several alternative theories to TAM from the literature for IS research.
- Propose, specifically, theories that exhibit a reverse relationship to the traditional attitude-behavior link in TAM.

- Discuss more alternative theories, especially flow theory.
- Apply these theories with a discussion and examples.

## TAM, THEORIES OF REASONED ACTION, AND PLANNED BEHAVIOR

TAM is based on TRA (Fishbein, 1967; Fishbein and Ajzen, 1975). TRA tries to explain the linkage between attitude and behavior. The influence of attitude towards an actual behavior happens as consciously intended (Davis et al., 1989) or *reasoned* action through the mediating effect of behavioral intention. This mediating effect between attitude and behavior is also called the *sufficiency assumption* (Bettman, 1986). It is more significant to consider users' attitude towards purchasing or using a product than their attitude towards the object or brand itself in predicting their behavior of purchase intention (Fishbein, 1967; Fishbein and Ajzen, 1975). For example, a customer may have a favorable attitude towards a very powerful Dell computer system but an unfavorable attitude toward purchasing it due to cost. The theory was later modified to incorporate beliefs (evaluations of action) and social norms (Fishbein, 1967; Fishbein and Ajzen, 1975). Evaluations of action are a person's beliefs about perceived consequences of one's actions. Social norms are a combination of normative beliefs (perceived expectations of one's family and peers) and motivation to comply with these expectations (Fishbein, 1967; Fishbein and Ajzen, 1975).

*Table 1. Attitude-behavior vs. behavior-attitude theories*

| Attitude-Behavior Theories | Behavior-Attitude Theories |
| --- | --- |
| Theory of Reasoned Action | Cognitive Dissonance Theory |
| Theory of Planned Behavior | Social Judgment Theory |
| Technology Acceptance Model | Theory of Passive Learning |
|  | Self-Perception Theory |

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