NEGATIVE BIAS AND RISK PERCEPTION IN MODERN TECH ADOPTION: THE IMPACT ON PEOPLE WITH DISABILITIES IN CONSUMER BEHAVIOR

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Abstract

In recent years, technology has assumed a pivotal role in bolstering people with disabilities (PwDs) empowerment and autonomy. Despite the manifold advantages that new technologies afford to PwDs in their daily lives, the precise psychological barrier that negativity biases may impose, distorting perceptions of new technology adoption, remains opaque. This disparity becomes even more pronounced when considering various disabilities, each necessitating individualized interventions, including those facilitated by technology. Therefore, this study aims to elucidate the role of negativity biases in shaping PwDs' new technologies adoption decisions through a synthesis of cognitive psychology theories, namely valence theory and two-factor theory, and with innovation adoption frameworks, including the evolution of Technology Acceptance Model (TAM3) and innovation resistance theory. To achieve this, a conceptual model from a preceding study, which explicates the distinct impact of negativity biases on PwDs' adoption of technology through a serial chain of consumers' risk perceptions and confidence in the technology, is adapted into an enabling version and subsequently tested. This purpose is anchored in a conceptual model built upon two distinct studies. Study 1 seeks to delineate the primary impact of the negativity biases affecting technology acceptance among PwDs. Then, Study 2 aims to substantiate the findings of study 1 by examining the sequential relationship between PwDs' perceptions of risk and their subsequent trust in modern technology. The data analysis for both studies adopted a quantitative methodology, utilizing the structural equation modeling technique (PLS-SEM) in conjunction with Smart PLS 4 software.

Keyword: People with Disabilities (PwDs); Valence Theory; Two-factor Theory; Technology Acceptance Model (TAM3); Innovation Resistance Theory; Quantitative Methodology.

INTRODUCTION

In the prevailing scientific and contemporary discourse, there persists an immediate necessity to advocate for the accessibility and inclusion of People with disabilities (PwDs) to foster their empowerment and autonomy, enhancing their well-being and quality of life (Blichfeldt and Nicolaisen, 2011; Darcy and Buhalis, 2010; Lyu, 2017; Rubio-Escuderos et al., 2021; Zhang and Cole, 2016).

PwDs are defined by APA as those who have "a long-term physical, mental, intellectual, or sensory impairment that, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others" (APA Dictionary of Psychology). Additionally, the World Health Organization (WHO) adds that disability pertains to the interaction between various health conditions and a spectrum of environmental and personal factors. These factors encompass abuse, stigma, and discrimination in all facets of life, impacting both physical and mental health. Furthermore, laws and policies may deny individuals with disabilities the right to make autonomous decisions. Other contributing elements include poverty, exclusion from educational opportunities, lack of professional knowledge, and negative attitudes and discriminatory practices by healthcare providers (WHO). Consequently, it is essential that both society and the scientific community acknowledge and dismantle the physical, social, and cultural barriers that obstruct the full participation of PwDs in everyday life, all while safeguarding their inherent right to a dignified and participatory existence (Blichfeldt & Nicolaisen, 2011; Darcy & Buhalis, 2010; Lyu, 2017; Rubio-Escuderos et al., 2021; Zhang and Cole, 2016). This matter assumes increased significance when considering the considerable proportion of PwDs within the global population. The WHO estimates that approximately 1.3 billion people, constituting roughly 16 percent of the world's population, are presently affected by significant disabilities. Unfortunately, however, the WHO stated also that these figures are on an upward trajectory, attributed in part to an aging population and the rising prevalence of noncommunicable diseases. Furthermore, considering the definition and the significant numbers involved, it is crucial to acknowledge that disability is not a monolithic condition but rather encompasses a diverse array of biases necessitating individualized approaches tailored to various types of disabilities (Kalargyrou et al., 2018; Liu et al., 2024). This engagement is essential, as it recognizes the unique challenges and needs of PwDs, paving the way for more effective and inclusive interventions. Such tailored strategies can significantly contribute to the empowerment and autonomy of PwDs, fostering a sense of independence and self-efficacy (Ali et al., 2024; Rubio-Escuderos et al., 2021; Darcy & Buhalis, 2011; Buhalis & Michopoulou, 2010).

Given the significant representation of PwDs, it is unsurprising that they have garnered extensive scientific interest across various disciplines. Notably, academic domains such as biotechnology, psychology, and management have consistently recognized the main position of technology in promoting the inclusion and autonomy of PwDs (Buhalis & Sinarta, 2019; Kabadayi et al., 2019; Tsatsou, 2021). By integrating technology, PwDs are afforded the opportunity to overcome societal barriers and inequalities, thereby enhancing their emotional and psychological well-

being (Boys, 2014; Chib & Jiang, 2014; Pullin, 2009). Indeed, empirical evidence demonstrates that technology can significantly bolster feelings of belonging, enjoyment, competence, autonomy, and self-esteem (Bannon et al., 2015; Chadwick & Fullwood, 2018; Chib & Jiang, 2014; Dobransky & Hargittai, 2016). Despite the numerous benefits attributed to technology, studies such as those by Lewis & Lewis (1998), a notion subsequently revisited by Javdan et al. (2023), propose that PwDs may experience psychological impediments such as perceived complexity and uncertainty when engaging with novel technological advancements.

This ambiguity between the benefits and possible negative repercussions of technology adoption is referred to as the technology paradox (Johnson et al., 2008; Mick & Fournier, 1998). Recent studies such as Angulo (2023) highlight the paradox of technology, emphasizing its inherently contradictory nature. The scholar expresses that this concept underscores the substantial advantages promised by technological advancements, which, conversely, may also result in unforeseen negative repercussions. Its impact spans across diverse subjects, particularly influencing consumer behavior through their conflicting experiences with technological products. Indeed, Disconzi et al. (2020) contend that consumers encounter a dual-edged reality: the convenience offered by advanced technology against safety concerns. This phenomenon is also particularly relevant for consumers with disabilities. For them, the paradox of technology can simultaneously enhance communication, access to information, and daily life (Kyung & Park, 2020), while also engendering new forms of vulnerability and exacerbating existing inequalities (Wise, 2012). From the reported assertations, it can be inferred that, the negative aspects of technology often overshadow the positive ones in consumer adoption decisions (Frank et al., 2022). This negativity bias profoundly influences consumers' intentions and decisions regarding the adoption of new technologies (Frank et al., 2022). Rozin & Royzman (2001) describe the negativity bias as the disparity in consumer responses towards negative relative to positive valence. Among the influences of these negativity biases, the scientific literature mentions information about the integrity of sellers with respect to technology expertise (Yin et al., 2013), the specificity of negative reviews, their surprise value, and their ability to help consumers avoid losses (Yin et al., 2012). Additionally, other factors such as consumer perception of innovation attributes, media exposure, and socioeconomic variables also play an impact role (Vishwanath & Goldhaber, 2003). Therefore, gaining a deeper understanding of negativity biases associated with modern technologies and how their properties influence PwDs' adoption decisions is crucial for their marketing success, given that digital inclusion practices could unintentionally lead to their marginalization (Setchell et al., 2020).

According to this narrative, this study seeks to support marketers by examining whether the negative adoption effect of modern technologies might impose a psychological barrier that distorts the perceptions of PwDs regarding the inherently conflicting properties of new technologies (Frank et al, 2020). In addition, the research extends to the analysis of perceived risks associated with negativity biases in technology adoption, given that, as reported by Hirunyawipada & Paswan (2006), various types of perceived risks, including social, physical, and financial, influence

consumers' propensity to adopt technology. Studies such as that by Featherman (2001) highlight the ability of perceived risk to inhibit the evaluation and intention to adopt technology. Therefore, to mitigate such risks and improve understanding of new technology adoption, it may be appropriate to include perceived risk in studies of technology adoption (Sarin et al., 2003). By considering a sample that ensures an accessible and inclusive perspective, this research aims to determine if such psychological barriers and their associated perceived risks among PwDs lead to less favorable adoption decisions.

Therefore, to accomplish the aforementioned objective, this study intends to conduct a thorough investigation by synthesizing cognitive psychology theories and established frameworks for innovation adoption. Specifically, it will leverage the valence theory (Lerner & Keltner, 2000) and the two-factor theory (Herzberg et al., 1959), which provide insights into the emotional and motivational dimensions influencing human behavior. Additionally, the research will incorporate the evolution of the technology acceptance model (TAM3) (Venkatesh & Bala, 2008), which elucidates the factors affecting user acceptance of technology, and the theory of innovation resistance (Ram & Sheth, 1989), which explores the barriers to adopting new technologies.

To this end, this research clarifies the impact of negativity biases on the technology adoption process among PwDs through a sequential chain of perceived risk and trust in technology. Specifically, this investigation is attached into two distinct studies. Study 1 is designed to delineate the primary influence of negativity biases on the acceptance of technology by PwDs, providing critical insights into the initial barriers erected by negative perceptions. Study 2 endeavors to corroborate the findings of Study 1 and investigates the sequential relationship between PwDs' perceptions of risk and their subsequent trust in contemporary technology. With an extensive sample size of N=350, analyzed through a quantitative approach using the structural equation modelling technique (PLS-SEM) in combination with (Smart PLS 4), the research accurately examines these dynamics, offering empirical evidence that highlights the pivotal role of perceived risk and trust in shaping technology adoption decisions among PwDs.

Finally, the research findings yield substantial theoretical implications. Firstly, this study significantly advances the understanding of the cognitive and emotional mechanisms underpinning the adoption of technology by PwDs. By delving into the ways in which these mechanisms influence decision-making, the research provides a more comprehensive framework for analyzing technology adoption in this demographic. Secondly, the study delineates for the first time within the scholarly discourse the distinct roles of negativity biases in the adoption of new technologies by PwDs. This dual focus not only illuminates the often overlooked impact of negative biases, but also highlights risk perceptions related to them, offering a balanced view of the psychological barriers and enablers in technology adoption. Moreover, the findings offer practical insights for marketers, highlighting the critical aspects to consider when promoting technology to this demographic. These insights underscore the importance of creating inclusive marketing strategies that include PwDs, ensuring that their specific needs and preferences are addressed, ultimately driving both social impact and business

success. Furthermore, these insights accentuate the dual advantages of inclusive marketing: stimulating significant social impact while concurrently attaining business success.

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