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CHAMPIONING FOR SUSTAINABILITY: PERSUADING GEN X TO ADOPT GREEN FINTECH

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Abstract

As the world moves rapidly towards sustainable solutions, and with fintech influencing the business canvas on a large scale, it becomes imperative for decision-makers to adopt innovative fintech for improved sustainability. Millennials readily adopt such products and services as they are adept at using digital technology for their everyday requirements. However, their previous generation, Gen X, many of whom now work in senior decision-making roles within organizations, may not be as oriented towards fintech adoption. Hence there is a need to be persuaded to adopt green fintech. This study aimed to understand the nature of emotional or rationale based persuasion that would be more effective in persuading Gen X to adopt sustainable fintech. The elaboration likelihood model was used to explore the peripheral and central routes of persuasion. 329 responses from a survey of the national capital region of India were analyzed using SPSS and SmartPLS4. Findings suggest both routes as significant for green fintech adoption by Gen X. However, the peripheral route had a stronger influence on the perceived usefulness of fintech innovations leading to sustainability, as compared to the central route. Thus, in emerging economies, leveraging social connections to persuade Gen X members emotionally toward sustainability, is recommended as an effective approach in this study. The current research examines the ELM theory in an untested research domain-green fintech adoption. The findings provide insights to policymakers and marketers to engage Gen X in green fintech adoption. This will enable larger quantum of capital flow into sustainable investments thereby accelerating development of innovative clean technologies and sustainable fintech practices.

Keywords: Green Fintech Adoption, Fintech Innovation, ELM Theory, Argument Quality, Source Credibility, Perceived Usefulness.

1. INTRODUCTION

Global warming and ecological issues pose critical worldwide challenges, as increasing greenhouse gas emissions worsen sustainability. Severe weather patterns and rise in ocean levels endanger both economic systems and communities (Zaid et al., 2024). Nations are now incorporating sustainability into their strategic planning. Environmental considerations need to be weaved into financial analysis and choices, directing capital toward projects that enhance ecological outcomes (Hidayat-ur-rehman and Hossain, 2024). Environment-conscious financing has become crucial for harmonizing economic and technological advancement with ecological protection, helping achieve Paris Agreement targets (Al-Hakimi et al, 2024). The pursuit of sustainable development requires carefully balancing financial growth, attitudinal change, and technological advancements.

The adoption of technology products and services across generations has been widely studied in the literature. In this study, the adoption of green fintech by Gen X is explored, as members of this generation, especially in emerging economies, are now in decision making positions in organizations. The elaboration likelihood model (ELM) is used to explore how Gen X may be persuaded to adopt green fintech, to enable a wider impact of sustainability and sensitivity towards the environment. The ELM demonstrates two alternate paths of persuasion, the direct

or rationale-based one, and the other the indirect or emotion-based one. The contributions of this study include an understanding of the route that is more effective in improving the perceived usefulness of green fintech adoption by Gen X in emerging economies. Being in corporate leadership positions, they could influence capital flows toward innovative renewable energy and conservation projects, as well as improved environmental impact metrics. Another key contribution of this study is testing ELM in the hitherto untried area of green fintech adoption by Gen X.

1.1 Research Gap

Deng et al. (2019) offered evidence that the interweaving impact of fintech on sustainable development appears as a critical issue that requires investigation. This study explores the future research direction as given by Kwong et al. (2023) to understand the impact of fintech innovations. In addition, this study answers the call of Srivastava et al. (2024), who recommended a study of Gen X for the adoption of fintech services. Thus, this study addresses the gap in the literature and examines the degree to which rationale-based persuasion or emotions-based persuasion influences Gen X in emerging economies about the perceived usefulness of sustainable or green fintech, thereby leading to its adoption.

2. REVIEW OF LITERATURE

2.1 Fintech

Udeagha and Ngepah (2023) report that green finance, fintech, and innovation enhance environmental sustainability. Fintech denotes the use of technological advancements to offer financial services to customers (Dwivedi et al., 2021). Scholarly interest in FinTech and sustainability has grown rapidly in recent years (Ellili, 2023). FinTech, a synergistic combination of technology and sustainability, has become a disruptive force in the financial sector (Atayah et al., 2023). Studies have illuminated the potential of FinTech to access credit for environmentally sustainable projects (Dutta et al., 2021), drive financial inclusion (Bayram et al., 2022), reduce carbon emissions (Guang-Wen and Siddik, 2023), and promote renewable energy utilization (Bayram et al., 2022). Arner et al. (2020) reveal that FinTech has a role in supporting the United Nations Sustainable Development Goals (SDGs) through the enhancement of digital financial infrastructure. Several studies conclude that FinTech is a key driver of sustainability (Siddik et al., 2023). Fintech incentivizes users to adopt behaviors that reduce their carbon footprint (Meng and Shaikh, 2023).

2.2 Fintech Innovation

FinTech innovation encompasses various financial technologies like mobile payment systems, high-frequency trading, crowdfunding, virtual currencies, and blockchains (Aldboush et al., 2023). Fintech firms are utilizing big data, the Internet of Things (IoT), satellite imagery, blockchain, and robo-advisory to gain a competitive advantage in the sustainable finance sector (Almaqtari, 2024). Fintech leverages IoT to compile data on varied usage metrics of water consumption, waste generation, and other resource metrics. These lead to resource efficiency improvement through AI-driven insights and predictive analytics to anticipate demand and optimize service availability (Ugochukwu et al., 2024).

2.3 Green Fintech Adoption

Green Fintech Adoption (GFA) focuses on the adoption of environment-friendly products and processes through the use of green raw materials, eco-design principles, lesser utilization of raw materials, and minimization of emissions. Aboalsamh et al. (2023) suggest that heightened

levels of awareness of green FinTech products lead to an inclination towards sustainable FinTech solutions. Yan et al. (2022) highlighted the link between the adoption of sustainable FinTech practices and sustainability. The adoption of sustainable FinTech solutions offers an array of benefits, such as automating banking operations (Al Momani and Alomari, 2021), reducing strain on resources (Zhu et al., 2024), and introducing new environment-friendly products and services environmentally friendly (Vergara and Agudo, 2021).

2.4 Gen X in Emerging Economies

Calvo-Porral and Pesquiera-Sanchez (2020) stated that while Gen Z have been born with mobile phones and technology devices, millennials or Gen Y engage with technology for entertainment and hedonic purposes, in emerging economies, the Gen X uses technology mostly for utilitarian or information search purposes. Individuals born between the years of 1965 and 1981 are referred to as Gen X. Being in the age group of 43 years to 59 years, they would most likely be in decision-making roles and influence green fintech adoption in organizations.

2.5 Elaboration Likelihood Model

There is a pressing need to change the attitudes of GEN X towards GFA. The idea that certain factors may persuade an individual's attitude toward GFA is the underlying premise of this study. ELM elaborates on the dual process system by which attitude change towards sustainability issues can be achieved. ELM is considered a powerful framework for understanding attitude change and persuasion, as indicated by Manca et al. (2020).

The ELM explains how people process persuasive messages differently based on their level of engagement (Petty, 2002). When information has low personal relevance or when people are minimally engaged (low elaboration), they rely heavily on the source's credibility or attractiveness to quickly accept or reject the message. At moderate engagement levels, these source characteristics influence how deeply someone thinks about the message. When information has high personal relevance, or when people are highly engaged (high elaboration), people focus primarily on the message's actual content and arguments, only considering source factors if they directly relate to the argument's substance or help interpret it. Rather than suggesting that people are consistently thoughtful or thoughtless when evaluating information, the model recognizes that both personal and environmental factors determine how much mental effort someone invests in processing a persuasive message (Petty and Cacioppo, 1984).

ELM explains how an individual accepts a message in a specific communication, and it proposes two routes for individual persuasion: the central route (referred to as route A henceforth) and the peripheral route (referred to as route B henceforth) (El Hedhli, 2022). Route A requires a higher level of elaboration to process information. The attitude change through this route is based on detailed information and a rational or cognitive approach (Chang, 2015). Route B requires a lower level of elaboration. The main drivers of route B are emotions and visual appeal (Srivastava and Saini, 2022). Factors that influence the level of elaboration are the perceived usefulness of the message, the argument quality (AQ), the source credibility (SC), and prior knowledge (PK) about the message.

ELM has mostly been used in the area of marketing (Leong et al., 2019), religious symbols and advertising (Dotson and Hyatt, 2000), psychology (Wang and Yang, 2019), health care (Lee & Koo, 2016), education (Zhang et al., 2021), tourism (Yoo et al., 2017), human resource management (Gregory et al., 2013), and information management (Mendoza-Tello et al., 2018). This model has been used in different contexts in countries like USA, China, Taiwan, Korea, Canada, Autralia, Ukraine, and a few European countries (Shahab et al., 2021). However,

despite the robustness of ELM in explaining persuasion, there has been little effort to extend its theoretical perspective to include areas such as attitude change toward sustainability (Manca et al., 2020). A review of the extant literature shows that, to date, no empirical study has been conducted to understand attitude change among Gen X toward green fintech adoption.

2.6 Argument Quality and Perceived Usefulness

Argument Quality (AQ) determines the ability of the user to judge rationally the content and quality of the message they receive (Bhattacherjee and Sanford, 2006). The degree of influence of a message is determined by the quality of information it provides (Sussman and Siegal, 2003). Recipients only consider messages as informative when the content is relevant, comprehensive and accurate (Moradi and Zihagh, 2022). Individuals with high levels of engagement towards sustainability will scrutinize related information more carefully because the information in the argument is directed toward their rational judgment (Schroeder, 2005). The relevance, authenticity, and content of the argument will influence the perceived usefulness (PU) of the issue central to the argument (Li, 2013). It is therefore hypothesized:

H1: High AQ causes high PU, or AQ is positively correlated to PU.

2.7 Source Credibility and Perceived Usefulness

Source credibility (SC) refers to characteristics that make one a believable source of information in the eyes of receivers, including trustworthiness, expertise and attractiveness (Cheung and Thadani, 2012). These three dimensions are all found to play key roles in influencing attitudes and behaviors. As per the elaboration likelihood model (ELM), SC is considered a peripheral cue for an individual in a case of low elaboration (Briñol et al., 2011). Brewer and Ley (2013) studied the SC of sustainability related campaigns and found that credibility of the information is directly proportional to the degree of confidence in that source. SC has a significant influence on audiences, whether countering or supporting an argument (Sussman and Siegal, 2023). Opinion leadership is an effective way of influencing an audience as such leaders have high levels of social recognition (Harrigan et al., 2021). Therefore, it is hypothesized that:

H2: SC has a positive impact on the PU of a message.

2.8 Perceived Usefulness and Green Fintech Adoption

The extent to which a receiver believes that the information provided, whether through route A or route B, is useful, is known as PU (Davis, 1989). This also indicates an individual's intention to adopt a change, which is linked to attitude change and further leads to behavioral change (Sheppard et al., 1988). Attitude is the generalized pre-disposition of an individual to evaluate objects, issues, or any person either favorably or unfavorably (Briñol et al., 2011).

Attitude change can occur at any time and the change can be from neutral to positive, positive to negative, neutral to negative, or negative to positive. Petty et al. (2002) conceptualized a dual process approach to attitude change: attitude can be modified passively, with very low effort, through mere exposure or it may require high levels of mental effort in making judgments about an issue, an object, or a person, which usually involves a cognitive response and dissonance processes. It is therefore hypothesized:

H3: Individuals experiencing higher PU for GFA will assume a higher degree of attitude change.

2.9 Prior knowledge

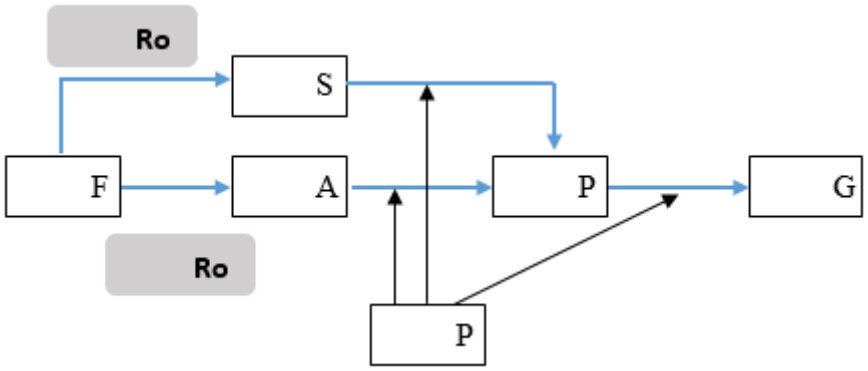
Prior knowledge determines how Gen X perceive new information. A study was conducted to understand the attitude towards the EU fishery policy, and it was found that those with prior knowledge were able to recall more information as compared to those who lacked any prior knowledge (Machiels-Bongaerts et al., 1995). Prior knowledge plays a role in 'stage setting' and enhances the understanding and learning of new information (Wetzels et al., 2011). Prior knowledge is considered to moderate the positive effects of elaboration in relation to the PU of information (Willoughby et al., 1993), and the following hypotheses were formulated:

H4a: Prior knowledge influences the effect of AQ on PU

H4b: Prior knowledge influences the effect of SC on PU

H4c: Prior knowledge influences the effect of PU on GFA

In this research, we investigate the moderating effect of prior knowledge on the links between argument quality (AQ) to perceived usefulness (PU) and source credibility (SC) to perceived usefulness (PU) among Gen X in relation to GFA. We use a survey method to minimize the discrepancies in results arising out of the interview method (Malhotra et al., 2006). Based on our analysis, we propose an integrated conceptual model that interprets the factors responsible for attitude change among Gen X regarding GFA.



Legend: Finn=Fintech Innovation; AQ=Argument Quality; SC=Source Credibility; PU=Perceived Usefulness; GPA=Green Fintech Adoption; PK=Prior Knowledge

Figure 1: Conceptual Model

3. RESEARCH METHODOLOGY

3.1 Field study research context

The study is operationalized in one of the rapidly growing economies i.e. India, as it has high population of Gen X. India is committed to achieving sustainable development goals (SDGs) by 2030. New Delhi, the capital of India, is one of the most polluted cities of the world (Canton, 2021). The average temperature is expected to rise by 4.4 degrees Celsius over the next 75 years (Gupta et al., 2020) thus, creating the imperative to study sustainability in this region.

3.2 Research instrument

The self-administered structured survey comprised items related to the constructs. Items related to Fintech innovations (Finn) were adapted from Le (2021) and items related to PK were adapted from Bhattacherjee and Sanford (2006). One item related to PK asked the respondents to rate on a 5 point likert scale, their knowledge about sustainability and the second item asked

them to rate their level of knowledgeable about sustainable fintech. AQ and SC were measured using items adapted from a scale developed by (Sussman and Siegal, 2003). PU was measured using a modified version of scale items developed and validated by Davis (1989), and items related to GFA were adapted from Taneja and Ali (2021).

3.3 Data collection

The refined research instrument was administered using Google forms to a sample of 400 respondents from New Delhi-National Capital Region, which truly represents the urban metropolitan population of a developing economy. People from across the country, from different cultures, migrate to this region in search of better livelihoods which makes it a microcosm representative of the entire country. In addition, this region was chosen for its economic significance and high digital penetration. The survey was administered to respondents in the age range of 43 years to 59 years, which is the age range for classifying Gen X members. Of the 355 responses received, 18 were excluded as they were incomplete, and 8 were excluded due to the casualness of responses. Finally, 329 responses were analysed.

3.4 Confirmatory factor analysis (CFA)

Exploratory factor analysis was not deemed necessary as items were taken from scales existing in literature. CFA was used to determine parsimony amongst the measured variables (Haig, 2014; Izquierdo et al., 2014). Item loading was measured for each factor, and the model was tested to assess the model fit using the IBM SPSS. One item was removed from constructs AQ, SC, PU and GFA (Hair et al., 2010) due to their low factor loadings, and to improve the fitness indices of the model. The model fit indices ($\chi2 = 240.018$, $\chi2/df = 3.73$, GFI = 0.912, AGFI = 0.849, CFI = 0.924, RMSEA = 0.07) were a near fit of the recommended threshold ($\chi2/DF < 5.0$, GFI > 0.9, AGFI > 0.8, CFI > 0.9, and RMSEA < 0.1).

Table 1: Measurement Model

Constructs	Lambda	Mean	SD
Fintech Innovation (Fin)	*Ch. Alpha:*	0.748	
Using Fintech service makes it easier to do my online purchasing	0.413	3.67	0.95
Fintech services are better than traditional services in terms of their contribution to sustainability	0.311	3.34	0.71
Fintech service is the first choice to pay for the future	0.243	4.06	0.63
Argument Quality (AQ)	*Ch. Alpha:*	0.891	
I find information provided through these sustainability campaigns are:			
Informative	0.803	3.91	0.81
Helpful	0.827	3.89	0.83
Valuable	0.753	3.62	0.91
Source Credibility (SC)	*Ch. Alpha:*	0.827	
These sustainability campaigns update my knowledge about the sustainability and its consequences	0.619	3.06	0.87
I think the people who are leading these sustainability campaigns are experts in this area	0.641	4.19	0.91
I trust that these sustainability campaigns have a positive motive	0.724	4.27	0.86
Perceived Usefulness (PU)	*Ch. Alpha:*	0.908	
I feel that working together in sustainability campaigns will be effective in bringing change	0.823	4.17	0.93
I feel that sustainability campaigns are useful in bringing a positive change	0.837	4.23	0.89
I feel that sustainability campaigns will affect what the	0.712	3.79	0.91

government does about global warming			
I feel that sustainability campaigns will affect what the corporations does about global warming	0.709	3.82	0.93
Attitude Change towards Green Fintech Adoption (GFA)	*Ch. Alpha:*	0.917	
Using environmentally sustainable services will help reduce pollution due to less usage of paper and energy	0.758	4.19	0.83
Using environmentally sustainable services will help protect the environment	0.817	4.27	0.89
Green financing improves the relationship between the community and stakeholders	0.691	4.46	0.78

3.5 Reliability and validity

The reliability coefficient values for the exogenous variables: Fin, AQ, SC, and PU, were 0.75, 0.89, 0.83, and 0.91 respectively, whereas the reliability of the endogenous dependent variable, attitude change, was found to be 0.92 (Threshold > 0.7), also mean and standard deviation were calculated for each item (see Table 1).

Table 2: Fornell Larkner Validity Criteria

	AQ	Fin	GFA	PK	PU	SC
AQ	0.855					
Fin	0.123	0.774				
GFA	0.611	0.151	0.887			
PK	0.113	-0.145	0.231	0.818		
PU	0.528	0.136	0.551	-0.067	0.875	
SC	0.429	0.016	0.377	0.168	0.447	0.841

The discriminant and convergent validity of the constructs was tested (see Table 2) on the criterion of average variance extracted (AVE), as demonstrated by previous researchers (Fornell & Larcker, 1981). It was observed that AVE values for all constructs were above 0.5, which is considered an acceptable range (Hair et al., 2010).

3.6 Multi-collinearity

Table 3: Variance Inflation Factor Values

	VIF
AQ1	2.206
AQ2	2.403
AQ3	1.489
Fin1	1.044
Fin3	1.044
GFA1	2.169
GFA2	2.248
GFA3	2.259
PK2	1.131
PK3	1.131
PU2	1.826
PU3	2.313
PU4	2.281
SC3	1.228
SC4	1.228

The VIF values given in Table 3 indicate absence of multi-collinearity, as the VIF values were well below acceptable threshold value of 10 (Belsley, Kuh, & Welsch, 1980).

3.7 Path Model (SEM)

SmartPLS 4 was used to develop the integrated path model to test the hypotheses (Figure 2).

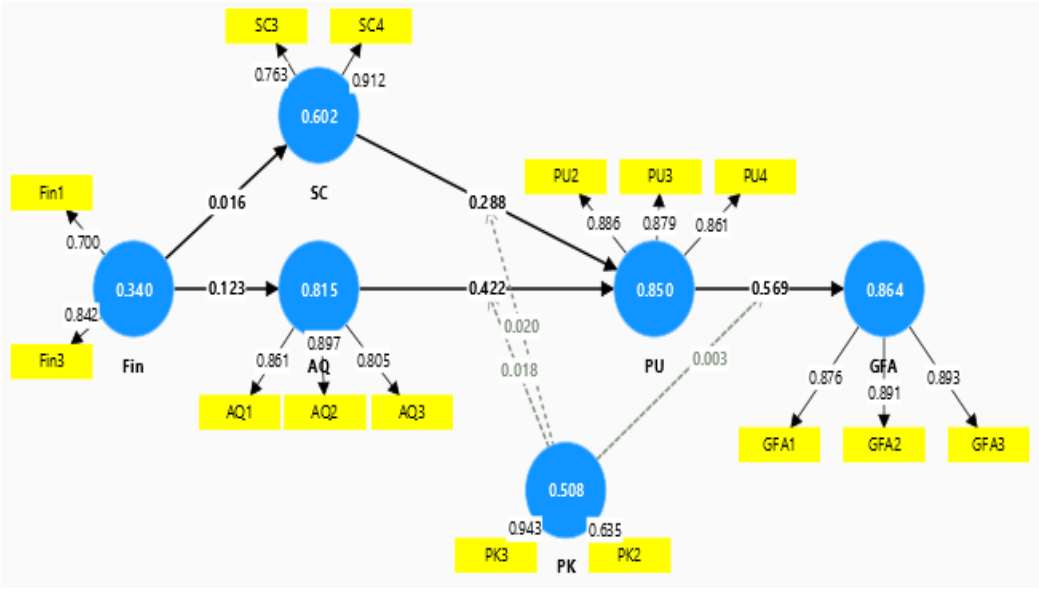


Figure 2: SEM model

Two hypotheses were found to be significant at the level of p val < 0.001 i.e., H1 (AQ → PU, β = 0.293) and H2 (SC → PU, β = 0.491) whereas H3 (PU → GFA, β = 0.606) was significant at p < 0.05 level of significance.

Table 4: Structured Equation Modelling Results

Details	#	B	se	t stat	p val
Direct effects:					
Argument Quality -> Perceived Usefulness	H1	0.293	0.080	2.224	0.026
Source Credibility -> Perceived Usefulness	H2	0.491	0.071	7.269	0
Perceived Usefulness -> Geen Fintech Adoption	H3	0.606	0.041	14.24	0
Indirect effects:					
AQ -> PU -> Geen Fintech Adoption		0.126	0.052	2.026	0.043
SC -> PU -> Green Fintech Adoption		0.341	0.043	7.092	0
Interaction effects (Moderations):					
PK_X_AQ -> Perceived Usefulness	H4a	-0.419	0.102	4.456	0
PK_X_SC -> Perceived Usefulness	H4b	0.372	0.086	3.815	0
PK_X_PU -> Geen Fintech Adoption	H4c	-0.071	0.081	0.904	0.366
Mediated moderation:					
PK_X_SC -> PU -> Geen Fintech Adoption		0.171	0.051	3.757	0
PK_X_AQ -> PU -> Geen Fintech Adoption		-0.216	0.062	4.325	0

The indirect effects of AQ on GFA via PU (β = 0.126, p val < 0.05), and SC on GFA via PU (β = 0.341, p val < 0.001), were found significant. The interaction effect or moderating effect of PK on the relationship between AQ with PU (β = -0.419, p-val < 0.01), the moderating effect of PK on the relationship between SC and PU (β = 0.372, p-val < 0.01) were found significant.

However, the interaction effect of PK on the relationship of PU with GFA (β = -0.071, p-val > 0.05) is not significant. The mediated moderation effect of PK x AQ -> PU -> GFA (β = -0.216, p-val < 0.01), and of PK x SC ->PU -> GFA (β = 0.171, p-val < 0.01) were found significant.

3.8 Simple Slope Analysis

To understand the interaction effect of prior knowledge on the relationship between argument quality and perceived usefulness, as well as on the relationship between source credibility and perceived usefulness, a simple slope analysis was conducted in SmartPLS4.

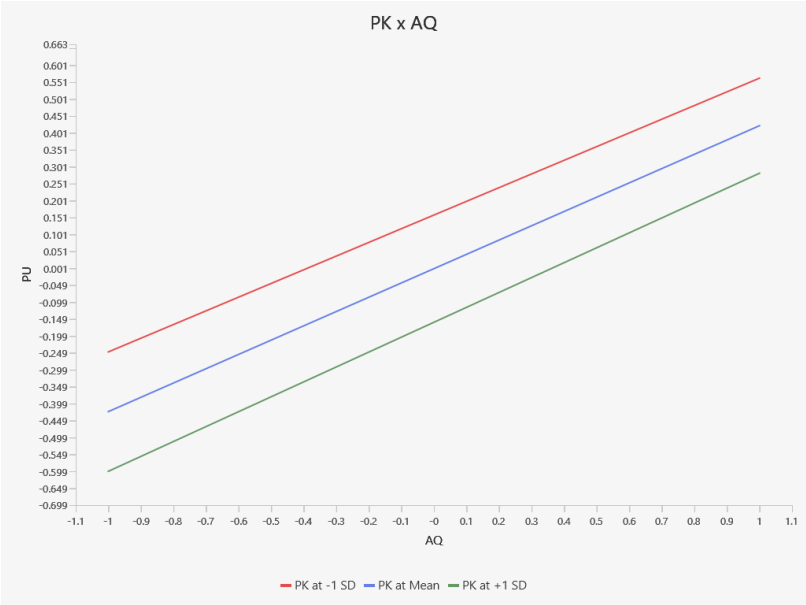


Figure 3: Interaction Effect of PK on AQ x PU

Figure 3 shows a positive slope between AQ and PU when PK is at mean value. With +1 increase in PK, the relationship between AQ and PU increases at a lower slope as compared to lower values of PK.

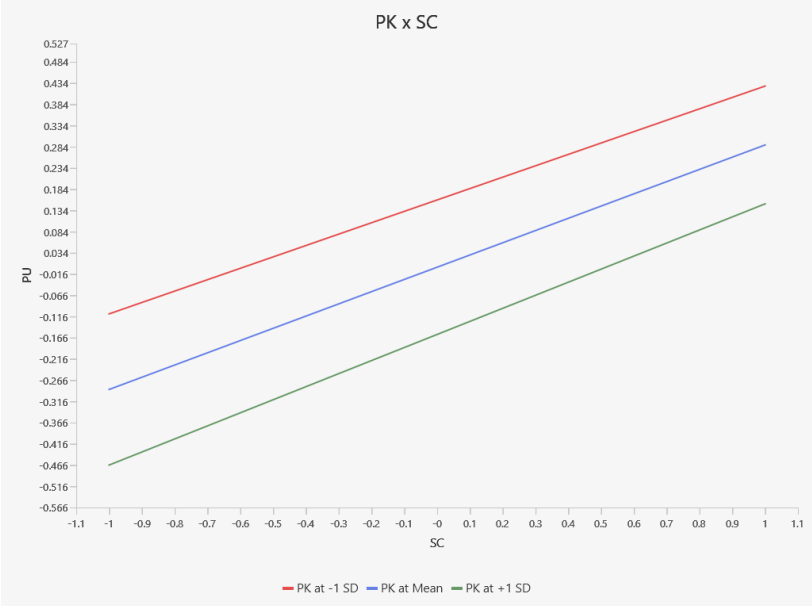


Figure 4: Interaction Effect of PK on SC x PU

Though the impact of PK on the relationship between SC and PU is similarly positive, however, as compared to AQ, the impact of SC is larger when influenced by PK (see Figure 4 in comparison to Figure 3).

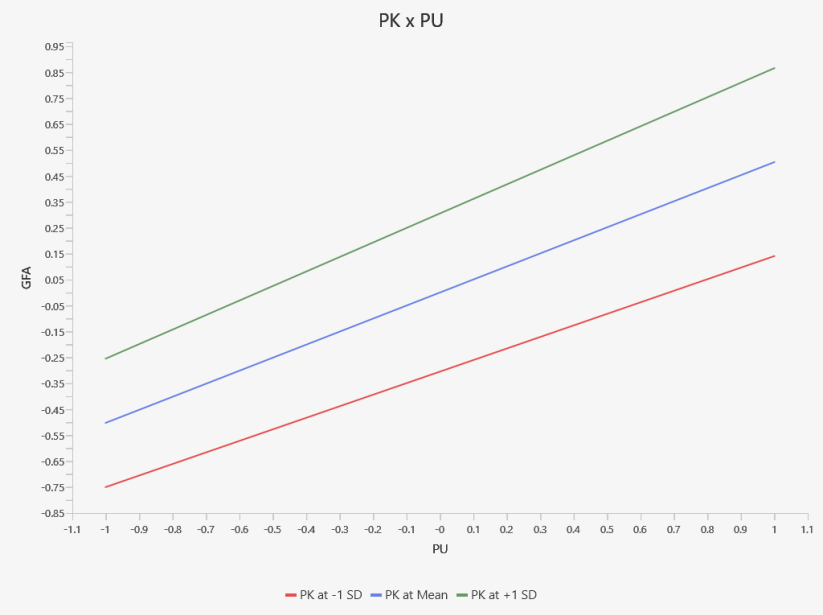


Figure 5: Interaction Effect of PK on PU x GFA

When PK is high, the impact of PK on the relationship between PU and GFA increases at a faster rate compared to when PK is at the mean. Whereas, when PK is lower, the impact of PK on the relationship between PU and GFA increases at a slower rate as compared to when PK is at the mean.

4. DISCUSSION

In this study, the persuasion of Gen X was measured using two routes. The route A was based on the strength of the argument quality presented in the message. This route was based on careful and thoughtful consideration of the issue by Gen X, whereas route B was based on the emotional appeal and attractiveness of the message or the credibility of the source, which led to a change in attitude. (Brinol, 2011).

Both routes were found to be significantly related to PU. A key finding of this study was that route B of persuasion (SC), had a stronger relationship with PU compared to route A of arguments (AQ). This implied that when the Gen X members have less knowledge or information about sustainability, or about how fintech influences sustainability, they tend to act on sustainability and adopt green fintech products when they get information from a credible source. The results highlight that Gen X in India prefers route B for persuasion, to issues regarding sustainability or green fintech adoption. The second finding of this study was the positive relationship between PU and GFA. This indicates that in case the information provided to Gen X whether by route B or route A, is perceived as useful by them, it will lead to an attitude change toward green fintech adoption. Therefore, H1, H2, and H3 were found supported. The study found that prior knowledge moderated the relationship between AQ and SC, with PU. Hypotheses H4a and H4b were found to be supported, but H4c was not as the p value in this case was not significant. Thus, the third finding of this study is that the two indirect effects were moderated by the prior knowledge about green fintech. These findings indicate that when an individual already has some prior knowledge of a topic, it leads to better elaboration and therefore better engagement.

In the case of route B, which considers a lower level of elaboration, individuals evaluate SC higher for issues about which they have some prior knowledge. Familiarity with an issue

increases the level of engagement (Shahab et al., 2021). When Gen X members get information regarding sustainability issues from a reliable source, they find it more useful because personalization minimizes the gap between the individual and the issues related to sustainability and thus enhances the individual's engagement level with that issue. These findings were in line with previous studies by (Vraga et al., 2022) where a positive relationship was found between people who engage in environment-related issues and the efficacy of such activities in bringing about change.

The findings imply that prior knowledge about sustainability impacts the influence of SC to a greater extent as compared to the impact of AQ on PU. Whether Gen X members are already aware of sustainability issues or not, the influence of the AQ may not be impactful, and therefore it may not be perceived as useful. However, the impact of SC is much greater, irrespective of whether the Gen X members are aware of the sustainability issues or not. This finding is reasonable in emerging economies because Gen X members in emerging economies are characterized by a utility-based mindset, price sensitivity, and every day livelihood struggles (Kautish et al., 2019). They tend to be influenced by the emotions and appeals of people they are familiar with. Thus they are more likely to adopt green fintech in case their family and friends are their source of information and influence.

Bostrom et al. (1994) argue that even highly educated individuals have misconceptions regarding sustainability, such as the actual causes of global warming, the inter-factor linkages, and other such elements that restrict the individual's ability to understand sustainability issues correctly. Bulkeley (2000) suggests that the public has insufficient information about sustainability and they lack the criteria by which to measure their knowledge of sustainability issues; hence, such results could be justified. There are no specific criteria by which to measure prior knowledge; hence, each individual has their own concept of prior knowledge. Some consider the scientific aspects, while others consider the social, political, or psychological aspects.

5. IMPLICATIONS, LIMITATIONS, FUTURE RESEARCH

5.1 Theoretical Implications

The first theoretical implication of this research is that the study provides a framework for defining the choice of persuasion strategy for Gen X members in rapidly emerging economies. The findings indicate that Gen X is more persuaded towards sustainability through Route B as compared to Route A. Route B is normally more applicable where the engagement with an issue is low. Thus, it can be concluded that in emerging economies, Gen X is not highly engaged with sustainability issues and hence, route B dominates over Route A in terms of persuasion among Gen X. Secondly, it extends the applicability of ELM by examining it in a hitherto unexplored domain - seeking information on the issue of persuading Gen X towards the issue of sustainability. The proposed model supports findings in the existing ELM literature by explaining that both routes are vital to the PU of sustainability. Thirdly, this study indicates that prior knowledge acts as a moderator in the relationship between the AQ and SC with PU. However, prior knowledge does not moderate the relationship between PU and attitude change to a large extent.

5.2 Practical Implications

For a sensitive issue like sustainability, SC or route B is more critical than AQ or route A for determining the PU that will lead to attitude change among Gen X of developing economies in favor of sustainability. This study thus suggests distinct strategies for practitioners wishing to

optimize the effectiveness of campaigns related to sustainability. The need for sustainability feels more urgent to people when they can see how it directly affects them and their loved ones. To motivate Gen X to adopt sustainable fintech, communications addressing them should emphasize specific impacts on their families, communities, and local areas, rather than abstract global effects. Research shows that when sustainability issues feel personally relevant and concrete rather than distant and vague, people are more likely to take action to address them (Spence, 2012).

Marketers should use social influence as a tool for motivating Gen X. This can be achieved by motivating Gen X members to discuss the issue of sustainability within their social circles. The positive behavior of others also influences Gen X. Activities such as advertisements, banners, and media campaigns that create awareness about sustainability could be organized at clubs or government /private organizations to motivate Gen X towards sustainability. Social media influencers and celebrities who are popular with Gen X can also be used for this purpose. Creating emotionally persuasive slogans will lead Gen X to think rationally about the issue of sustainability and motivate them at a higher elaboration level Mee et al., 2004. Fintech innovation may be leveraged to spur creative solutions and services customized for Gen X thereby increasing GFA. Policymakers, government, and other agencies should focus on promoting the PU of sustainable products and services so that Gen X can become more aware of the importance of such issues. Increased personal adoption of green fintech could translate into institutional adoption. They could act as a bridge between baby boomers and millennials. Their influence as leaders would enable investments to be directed towards clean technology innovations, sustainable investment platforms, accelerating environmental initiatives by companies to attract more investment, garnering interest and liquidity in carbon trading, and improved tracking of environmental impact through more effective metrics. Proactive and innovative fintech practices by banks can provide a competitive advantage and position them as ethical enterprises that attract environmentally sensitive customers and investors (Meiling et al., 2021).

5.3 Limitations and further research

Data was collected from respondents from a specific age group. It is recommended that future researchers study other age groups and generations such as Gen Y, and Gen Z, to conduct a comparative analysis of GFA. The current study considered PK as a moderator. Future scholars may examine the moderating effect of other variables such as age, gender, education, social media usage, and other elements that may influence the relationships between the constructs. It is also recommended that a longitudinal study be conducted using this model, to understand other situational factors which may influence GFA. The present research was in the context of a particular region of India. The elaboration among Gen X in this region towards sustainability issues may be different, from that of Gen X in other regions and countries, which can yield interesting comparisons and understanding.

6. CONCLUSION

This study aimed to examine the route of persuasion that is more effective in green fintech adoption by Gen X. The elaboration likelihood model was used to examine whether route A (AQ) or route B (SC) would have a more significant on the perceived usefulness of sustainability and thereon lead to green fintech adoption by Gen X. A confirmatory factor analysis was used to analyze cross-loadings if any. The reliability was tested using Cronbach's alpha and the validity was examined using the Fornell-Larkner criteria. Multi-collinearity was tested using the variance inflation factor, which was within the acceptable value. The path

model was created using SmartPLS4. A simple slope analysis revealed the interaction effects of PK on AQ with PU, as well as on SC with PU.

When it comes to promoting sustainable practices and green financial technology among Generation X in India, emotions (Route B) prove more effective than direct arguments (Route A). However, regardless of the persuasion method used, Generation X is more likely to change their attitudes toward adopting green financial technology if they find the information valuable. Prior knowledge plays a crucial role in how Generation X processes argument quality and source credibility, and ultimately how useful they find the information and whether they adopt green financial practices.

This research provides valuable insights for developing persuasion strategies targeting Generation X in emerging economies, while also expanding the Elaboration Likelihood Model into new territory. The findings consistently show that indirect persuasion methods are more successful than direct approaches in encouraging sustainable behaviors among Gen X.

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Declaration of Interest statement

The author declares no competing interests.

Data availability

Data will be made available on request.

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Credit Authorship Contribution Statement

Paramjit Singh Lamba: Writing – Visualization, Methodology, Formal analysis.

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Eisha Khan: Writing – Original draft

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