

# Woman at Work: Can Self-Efficacy Enhance Perceived Career Advancement Opportunity? The Boundary Role of Work Volition

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## ABSTRACT

Despite increased participation in the workforce, women continue to report constrained access to career advancement opportunities. This study examines how self-efficacy (SE) beliefs in women influence their perceived career advancement opportunity (PCAO) and the underlying role of career aspiration (CAS), as well as the boundary condition of Work Volition (WV) on the SE-PCAO relationship. The study gathered responses from 392 women employees in the Information Technology Enabled Services (ITeS) sector in the country's northern region (Delhi and NCR + Chandigarh). The study tested the measurement model (validity and reliability) and the structural model (path coefficients) using Smart-PLS Version 3.0. Results showed that women with higher scores on SE reported stronger perceptions of career advancement opportunity and that CAS partially mediates this relationship. Furthermore, WV emerged as a significant boundary condition. The paper examined socio-psychological variables relevant for understanding women's perceptions of career advancement opportunity in the ITeS sector, adding to the limited literature on socio-psychological antecedents of women's perceived career advancement opportunity in emerging economy contexts. The findings of the current research bear strong theoretical and practical implications for behavioural studies and for career management practices addressing gender inequality, respectively. As the study centres on perceptual appraisals, further studies could explore how these perceptions eventually translate into actual outcomes.

**Keywords:** women employees, self-efficacy, career aspiration, perceived career advancement opportunity, work volition

**JEL Classification:** M14, M12

## INTRODUCTION

The women's perceived career advancement opportunity (PCAO) has long been a concern. Despite considerable global strides, women still lag behind men in terms of employment rates and upward career mobility (Niler et al., 2020; Noteboom et al., 2022; Schmad-er, 2022). Moreover, the widespread disruption caused by the COVID-19 pandemic has reversed the positive trend of these perceived appraisals, engraving a worrying picture in reports on gender inequality. As is apparent, women often perceive fewer opportunities for advancement and recognition within organizational structures (fewer rewards, lower salary hikes, delayed promotion, etc.) than men in their careers (Darouei & Pluut, 2018; McKelway, 2019) and once a female employee approaches a specific mid-leadership level, it becomes quite challenging for them to transcend the mobility pathways (Liu et al., 2020; Nasurdin et al., 2004). This eventually results in perceiving their organizational environment as unsupportive of their career advancement opportunities. Therefore, women remain underrepresented in senior decision-making roles (Triana & Asri, 2017).

Mostly, the reason for such inequality in appraisals has been associated with sur- face-level factors such as the existence of stereotypes (Gupta, 2017; Kaushik et al., 2014; Shin et al., 2019), perceived absence of help (Grosswirth Kachtan, 2019) and inadequate precedents for women who make progress toward and strike a balance between a pro- fession and a family (Chan et al., 2017). However, research investigating socio-cognitive factors and psychological resources (such as SE, objective expectation, interest, outcome control, goals assumptions, and expectations) has attributed the key reason being rooted in beliefs in abilities (Bandura & Bandura, 2006; Bandura & Jourden, 1991; Lent et al., 2022; Mone, 1994; Multon et al., 1991).

The belief in abilities is referred to as SE in a socio-cognitive context. The literature exploring SE testifies to its role in influencing whether and how individuals aspire to ac- cess mobility channels in their careers (Bhatia et al., 2023; Gbadamosi et al., 2019; Wang et al., 2022). Boosting SE may strengthen women's confidence in navigating organizational career systems and perceiving advancement opportunities (Robinson et al., 2022; Shin et al., 2019).

Bandura (2000) further suggested that low SE drives an individual to shun ac- tivities that could encourage favourable perception of organizational opportunities, and women's CAS is impeded due to negative convictions about their abilities, which has been referred to as one of the significant indicators of PCAO (Schoon & Polek, 2011). Addition- ally, the theoretical model portrayed in Social Cognitive Career Theory (SCCT; Lent et al., 1994; Lent & Brown, 2008) predicts that SE (beliefs about personal capabilities) advances favourable outcomes expectations (beliefs about the outcomes of one's actions), career interests and aspirations, which, in turn, generate favourable career decisions shaping per- ceptions of advancement opportunity. Hence, CAS may act as a bridge in linking SE and PCAO.

Implicit in the SCCT is a notion of volition, that people can make professional choices (WV). Evidence suggests that SE may relate more strongly to career goals when people expect their efforts to be supported in the organization's climate and eventually has an impact on the outcome (Lim et al., 2016; Ngo et al., 2017; Song & Lee, 2023). Addition- ally, the theory of the psychology of working framework (PWF; Blustein, 2008) presents an intersectional approach, suggesting that a person's will over career choice (WV) can ei- ther directly or indirectly impact their perception of accomplishment (Duffy et al., 2020).

Duffy et al., (2012), asserted that the influence of WV on predictors of SE and PCAO is such that even greater SE could lower PCAO due to low volition.

Although both theories, SCCT and PWF, have been independently applied in prior studies, dual integration of the former for CAS and the latter for WV within a single empirical framework is unknown. The theoretical contribution of this paper is thus in this unique dual integration (SCCT -PWF), accounting for both self-driven mechanisms (SE–CAS-PCAO) and context-sensitive mechanisms (WV on the SE–PCAO link), to capture the complexity in perception of mobility channels of women’s careers in a structurally challenging & gendered sector like ITeS, where both individual drive and external freedom jointly determine advancement. Such combined work is largely absent in existing career research, which mostly focuses on STEM (Science, Technology, Engineering, and Mathematics) fields or academia, rather than the corporate context, and the scant availability of literature in the Indian context that investigates such linkages leaves a gap. The only study (to the researcher's knowledge) that directly examined the perceived career advancement construct with SE was Abele & Spurk (2009), and there is scant availability of literature in the Indian context that investigates such linkages.

This paper addresses this gap, focusing on women in the Indian ITeS sector, a cohort that faces challenges such as altered work schedules, global time zone shifts, accelerated transitions, rapid technology obsolescence, high turnover, and gender-biased structures (Murthy & Antony, 2025; B. Sarkar, 2024). Therefore, the paper departs from traditional SCCT models by incorporating WV (Blustein, 2008; Grosswirth Kachtan, 2019), based on the view that women’s PCAO will depend on their internal attributes or actions in conjunction with the constraints and opportunities provided by the work environment. The study contributes to both theory by integrating SCCT and PWF and practice by providing empirical evidence for HR practitioners to design workplace policies that strengthen women’s perceptions of fair and accessible advancement opportunities in a gendered and rapidly changing ITeS sector. Further, rather than comparing women’s outcomes with those of men, this study focuses on explaining variation in career aspirations and perceived advancement opportunities within women.

The study posits the following three research questions:

- (1) Does SE bear a significant impact on PCAO?
- (2) Does CAS mediate the relationship between SE on PCAO?
- (3) Does WV moderate the relationship between SE on PCAO?

From the background in Section 1, the paper presents a review of literature, theoretical foundation, and hypothesis so developed in Section 2, then explains the methodology adopted for conducting the research in Section 3, subsequent outcomes of data analysis in Section 4, then discussion with implications and limitations followed by the scope of future research in Section 5 and lastly winding up with a brief conclusion in Section 6.

## LITERATURE REVIEW, THEORETICAL FOUNDATION, AND HYPOTHESIS DEVELOPMENT

### **Self-Efficacy and Perceived Career Advancement Opportunity**

Albert Bandura, a highly regarded sociopsychologist, initiated the study of SE in the 1960s. In his Social-Cognitive and SE theory (Bandura, 1977, 1986, 1994), SE was positioned as a prime element in the inception and sustenance of career behaviour, alongside the meagre response consequences of mastery and failure. Previous works in this regard have consistently shown that an employee's efficacy beliefs are typically shaped by how they formulate and pursue their performance goals (Bandura, 1991) and by how they respond when their potential to achieve job-related goals is obstructed (Mone, 1994). SE is the belief in one's own ability to succeed in acting from intention to achievement (Bandura, 1991, 2012; Hechavarria et al., 2012). Indeed, it's a self-mental source driving individual aims (Bandura, 1991) and demonstrates the ability to generate people's overall capacities, representing different purposeful practices. Following Bandura's work, numerous studies on SE have been embarked on, conjoining various aspects of career behaviour, including performance improvement, resilience to stress, and perceptions of career development opportunities etc (Lent et al., 2022; Ran et al., 2022). Since SE is central to career intent, the idea has been used in various career studies. For instance, Charleston & Leon (2016) depicted SE as a mobile construct that could be re-achieved while availing support in the organization climate for the vertical career movement; a longitudinal study of Abele and Spurk (2009) established a positive correlation between SE and PCOA; a meta-analysis of Stajkovic & Luthans (1998) established a strong positive relationship between SE and work performance across industries.

Nevertheless, it should be noted that in some studies, the link between SE and perceived career outcomes is not stable or varies across socio-cultural contexts. For instance, Saks & Ashforth (1997) and Zhao et al. (2005) stated that the influence of SE on career-related outputs can be varied by cultural context, organizational characteristics, and resources available, questioning the consistency of the link. The feminist and intersectional viewpoints further inform the review as gender, class, and cultural norms play important roles in determining women's experiences of SE and agency at work. For example, Crenshaw (2015); Ridgeway (2011); Triana & Asri, (2017) assert that the PCOA of women is shaped not only by personal beliefs but also by structural obstacles and societal expectations that intersect to construe their ability to act or access opportunities.

Studies across national and sectoral evidence indicate that, despite variation in the strength of SE, associations between SE and PCOA transcend cultural or work context boundaries, thereby contributing to generalizability and global relevance. For instance, in a longitudinal sample of German professionals, Abele and Spurk (2009) found that higher SE predicted greater career success indicators over time; Lent et al.(2000) found that SE was a significant correlate of career development among engineering leaders and professionals in the USA ;Wibisono & Thao, (2023) established relevance in ASEAN country context. A few studies in the Indian context across sectors establish SE to perceived career advancement outcomes, e.g. Bhawna et al. (2024) showed a strong influence of SE in aiding commitment to career success in the hospitality industry; Sarkar (2022)'s study on women leaders in the public sector links SE to family and work domains ; Alok et al., (2023)'s work established the vitality of individual belief in career persistence of women in

Indian ITes.

Women in the Indian ITes sector face a double whammy of structural demands of real-time assignments, global time zone work, and high attrition (Haque, 2024), and gendered barriers like caregiving priority and an ingrained technical competence stereotype. These issues necessitate enhancing SE to sustain itself within the gendered structures and meet the real-time demands of the sector.

Moreover, aside from Abele and Spurk (2009), the researchers to the best of their knowledge did not come across any previous studies that specifically examined the PCAO construct and its relationship with SE.

Following the justification so explained, we assume,

**H1:** Self-efficacy positively relates to perceived career advancement opportunity.

## The Underlying Role of Career Aspiration

As defined by Bourdieu (1989) in 'Bourdieu's theory of social fields', CAS is a 'cluster of needs, motives, and behavioural intentions that individuals articulate concerning different career fields. Previous works have established CAS as a significant measure of the PCAO (Gottfredson, 1981; Holland & Lutz, 1968). CAS is structured by both societal context and internal motivation (McKenzie et al., 2017), and SE is proven to provide the stimulus to key motivational indicators (Multon et al., 1991) like the level of effort, choice of activities, consistency, and persistence (Charleston & Leon, 2016; Zimmerman et al., 2016). Additionally, the Interest model of SCCT (Lent & Brown, 2008) posits that SE and outcome expectation are foundational elements for an individual's career choice and interest development, thereby advancing the understanding of SE's support for CAS in achieving positive cognitive appraisals of outcomes.

Connections between SE and CAS and CAS to perceptual career outcomes have been validated in several cross-cultural and sectoral contexts that contribute to generalizability and global relevance. The association of beliefs with aspirations could be evidenced from the findings of these studies: Wang et al. (2022)'s work on Chinese students, Indarti and Rostiani (2008)'s work on Asia-Pacific students, which asserted positive interplay of SE and CAS for employability. In the Indian context, the study by Bhatia et al. (2023) on female college students, affirmed a significant interplay of SE and CAS with family domain variables. CAS has also been shown to relate to perceptions of advancement opportunity and career development outcomes, job satisfaction, employee behaviours, and leadership development (Webster & Beehr, 2013). The Bandura (1991)'s framework of self-regulation asserts that the interaction of an individual's aspirations with contextual factors influences how they direct their cognition, affect, motivation, and career behaviour. Additionally, SCCT (Brown & Lent, 2013; Lent & Brown, 2008) posits that the desire for advancement serves as a link between individual agency and perceived career opportunities. Empirical evidence can be obtained from the work of Liu et al. (2019, 2020) on Chinese women in the hospitality sector, which shows that employee aspirations and values significantly influence their career goals, and those with significant levels of aspiration have noteworthy impact on favourable PCAO. In the Indian context, studies on such interplay are scarce, necessitating research on the role of CAS in the SE to PCAO link.

Nevertheless, the relationships between SE and CAS, and between CAS career and PCAO, have not been linear across socio-cultural settings. For instance, Sheu and

Lent (2007) demonstrated cultural variations in the SE–CAS relation. Similarly, Creed and Hughes (2013) found that socio-cultural factors may interfere with the pathway from aspirations to favourable perceptions of outcomes, resulting in variation across groups. The feminist and intersectional viewpoints enrich the insights by illustrating how the intersection of women’s agency with factors like gender, class, and culture can both limit and promote CAS and perceived access to organizational channels (Acker, 2006; Cotter et al., 2001).

Drawing from the literature, we propose three more hypotheses,

**H2:** Self-efficacy positively relates to career aspiration.

**H3:** Career aspiration positively relates to perceived career advancement opportunity.

**H4:** Career aspiration mediates the relationship between self-efficacy and perceived career advancement opportunity.

## **Work Volition as a Boundary Condition**

The PWF proposed by (Blustein, 2008) , posits that contextual constraints significantly impact an individual’s autonomy in making career decisions, which in turn aligns with their career interests. Stressing the relevance of these ‘control over career choice or decision’, Duffy, Diemer, and Jadidian, (2012) introduced the concept of “WV”. WV is defined as one’s perceived freedom of future work choice, despite constraints (Duffy, Diemer, Perry, et al., 2012) or as a perceived capacity to make career/vocational/occupational choices, despite hurdles (Ngo et al., 2017). Also, WV signifies a ‘perception of control’ and has been shown to predict positive career outcomes. Individuals who perceive greater work volition are more likely to be satisfied and engaged in their current careers, as they believe in their ability to pursue desired outcomes.

Empirical studies substantiate positive correlations of volition with perception of career outcomes such as meaningful work, locus of control, work engagement, work satisfaction, and life satisfaction, and socio-cognitive constructs like career decision SE, interests, etc., and negatively correlated with career barriers such as withdrawal intention and job instability (Duffy et al., 2014; Lan et al., 2023). Furthermore, WV has been shown to moderate the effects of several individual agencies in career studies. For instance, Duffy et al. (2016) reported the moderation of WV in barrier perception to adaptability, indicating the mitigation of the detriments of constraints on adaptive career behaviour. A few studies report that WV’s impact on perceptual career outcomes may be conditional, offering a contrasting viewpoint. For instance, Hai et al. (2022) reported that the negative relation between economic constraints and WV was less strong for individuals who possessed lower levels of a certain cultural thinking style; Su et al. (2023) found that the indirect effect of contextual constraints on decent work through WV was less pronounced for persons with higher levels of career adaptability. Also, there are feminist and intersectional studies on WV that could enrich the understanding of both women’s agency and their perception of career outcomes. For instance, Flores et al. (2021) illuminates the prevalence of a sociopolitical order on women’s WV; England et al. (2020) confirm restriction of personal choice due to social hierarchies; Kim et al. (2022) document how the intersections of race and gender promote unique constraints on work volition and access to decent jobs in the US.

Notwithstanding the findings from global studies that statistically establish the

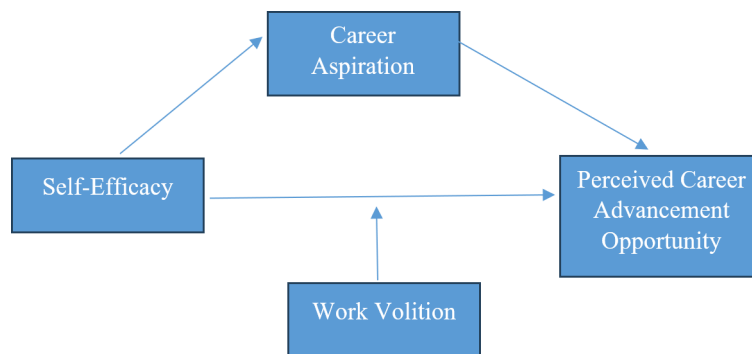
role of WV as a significant predictor and moderator of perceived evaluations of career opportunities, the literature in an Indian setting is surprisingly underrepresented. The present study aims to fill this gap by examining the boundary condition of WV on the SE–PCAO link in order to better understand women’s perceived advancement opportunities in the Indian ITeS sector, where multilayered socio-cultural and economic constraints interact with a high-pressure and rapidly transitioning work structure.

Derived from the PWF (Blustein, 2008) and the work of Duffy, Diemer, and Jadidian, (2012), we hypothesize that volition might moderate the relation of SE to PCAO. Stated as,

**H5:** Work Volition moderates the relationship between self-efficacy and perceived career advancement opportunity.

## The Conceptual Model

People develop perceptions of PCAO by building enduring positive beliefs in SE through engaging in activities connected to their interests and recognizing the link between effort and outcomes. As CAS form, individuals set professional goals and regulate their actions toward perceived advancement opportunities, with WV, the freedom and will over career choice, reinforcing their ability to achieve these goals. The novelty of this study lies in the dual integration of SCCT (Brown & Lent, 2013; Lent & Brown, 2008) to explain the role of CAS and the PWF (Blustein, 2008) in WV, creating a unified empirical model (Figure 1). This integration enables the examination of both individual (SE influencing PCAO through CAS) and contextual factors (WV as a moderator) in shaping women’s PCAO, particularly in the structurally constrained and gendered environment of Indian ITeS providing a comprehensive rationale for perceived career advancement opportunity in such contexts.



**Figure 1. Hypothesized Model (Framework integrating Self-efficacy, Career Aspiration, Perceived Career Advancement opportunity and Work Volition).**

## RESEARCH METHODOLOGY

### Participants and Procedure

The ITeS sector makes a significant contribution to female workforce employment, representing approximately 51% of women hired (NASSCOM, 2023), yet only 23% women are

represented in leadership roles (B. Sarkar, 2024). This disparity, though not unique to ITeS, is pronounced due to the structural barriers posed by characteristic features of the sector like project-based structures, real-time demand, client-driven work, rapid technological obsolescence, and a male-skewed career ladder. This makes the sector a relevant context for studying the socio-psychological factors (SE, CAS, WV) that have a proven role in generating and persisting proactive career behaviours in women, which help overcome these challenges.

The survey was based on the Northern part of the country, mainly the organizations located in the Delhi-NCR and Chandigarh region, as they form the main hub of the ITeS in the region. These regions offer a diverse population mix of cultures and socio-demographic backgrounds; a varied firm composition comprising domestic, multinational, medium-sized, and start-up companies; and proximity to government offices and networks in the capital region, ensuring data richness.

A non-random sampling technique was employed for access to corporate respondents and to ensure employee participation through internal distribution of the questionnaire, which is often considered in organizational studies for examination of a specific group (Etikan, 2016). Women working in the ITeS sector were the study population; hence, a non-random purposive sampling approach was used to access them, but it might restrict generalizability to other settings, as generalisations are possible for populations that have similar features to the sample. Additionally, the selection of participants was through set criteria, not randomly generated, which may lead to sampling bias by the over- or under-representation of specific subgroups.

A cross-sectional research design (data collection conducted at a particular time) was chosen to collect responses from companies that met the following criteria: registered website on professional platforms (authenticity), relevance to ITeS, and employee strength of more than 100 (stable HR). They were emailed to participate in the study, of which eight organizations responded. Then their employees were contacted to participate in the study. The respondent criteria were: age  $\geq 18$  years, full-time employee with tenure  $\geq 6$  months (for a better understanding of work dynamics), and provided informed consent. We contacted 430 respondents, of whom 411 responses were received, and for data analysis purposes, 392 responses were deemed eligible. Table 1 displays the socio-demographic profile of these respondents. The study, being a cross-sectional one, limits the ability to make causal inferences about the identified associations. Any association identified is interpreted as a correlation, rather than as evidence of cause-and-effect. Hence, we interpret the findings with the acknowledgement that directionality cannot be definitively determined in this design.

In line with recommended procedural remedies for common method variance (CMV), the Podsakoff et al. (2003)'s recommendation was adhered to avoid the issue of respondent bias (defined as the tendency of respondents to provide untruthful answers) and to reduce measurement error. The cover letter emphasized that all information provided would remain strictly confidential and anonymous, and questionnaire items were randomized to reduce priming effects, with no correct or incorrect options to questions, and a declaration that responses would be used exclusively for academic purposes and never for any commercial purpose, with the objective of the study clearly stated. These design features were intended to reduce the likelihood of method bias in our self-report data. Further, to test for CMV, Harman's single-factor test was conducted, and the single factor explained 38% of the variation, indicating the absence of common method bias. Following

Kock (2015), full collinearity variance inflation factors (VIFs) were examined to assess potential common method bias. All VIF values were below the recommended threshold of 3.3, indicating that common method variance is unlikely to be a serious concern.

**Table 1. Socioeconomic measures of the respondents (N=392)**

Socio-Demographic details	Frequency	Percentage (%)
<b>Age</b>		
18- 25 years	23	5.86
26-35 years	124	31.63
36-45 years	128	32.65
46-55 Years	101	25.76
Over 55 years	16	4.08
<b>Qualification</b>		
Graduation	212	54.08
Masters	173	44.13
Ph.D	7	1.78
Diploma	Nil	N.A
Others	Nil	N.A
<b>Work Experience</b>		
Less than 1 year	21	5.35
1 year to 5 years	109	27.8
5 years to 10 years	125	31.88
Over 10 years	137	34.94
<b>Position Level</b>		
Entry-level	85	21.66
Mid-level	240	61.22
Senior-level	67	17.09
<b>Income Level (Monthly)</b>		
Less than ₹ 30,000	48	12.24
₹ 30,000 - 60,000	44	11.22
₹ 60,000 - 90,000	127	32.39
₹ 90,000 – 1,20,000	132	33.67
Above ₹ 1,20,000	41	10.45
N=392		

## Measures

*Self-Efficacy.* Schwarzer and Jerusalem (1995)'s generalized SE scale was used to get a broader view of general belief in abilities for goal accomplishment. The scale comprised ten items with a four-point Likert-type scale ranging from "1" (Not at all true) to "4" (Exactly true). Sample questions include, "I can always manage to solve difficult problems if I try hard enough" and "It is easy for me to stick to my aims and accomplish my goals". The study yielded an acceptable reliability coefficient of 0.904.

*Career Aspiration.* CAS was measured using Gregor and O'brien (2016)'s ten-item CAS scale of a five-point Likert scale ranging from "0" (not at all true of me) to "4" (very true of me). Sample questions include, "I hope to become a leader in my career field" and

“I hope to move up through any organization or business I work in”. The current study yielded a reliability coefficient of 0.919.

*Perceived Career Advancement Opportunity.* PCAO was measured using Jawahar and Hemmasi (2006)’s eleven-item scale, measuring the items on a seven-point Likert scale ranging from ‘1’ (Strongly Disagree) to ‘7’ (Strongly Agree). The scale measures women’s perceptions of organizational support and equality for advancement-related processes such as recruitment, promotion, and career development. Thus, PCAO reflects perceived access to advancement opportunities rather than objective career outcomes. Sample questions include: ‘The employer has equality policies and programs’ and “The employer has no inherent gender bias in recruitment and promotion”. This study obtained a reliability coefficient of 0.894.

*Work Volition.* WV was measured with the Volition subscale in the Work Volition-Student Version (WVS-SV; Duffy, Diemer, and Jadidian, 2012). Although the Work Volition Scale-Student Version (WVS-SV) was originally developed for student populations, its items assess perceived freedom of occupational choice despite constraints and are future-oriented in nature. Given that many respondents in the present study were early- and mid-career women navigating constrained advancement contexts, the scale was deemed appropriate. The item wording was reviewed for relevance to employed respondents, and a pilot test confirmed clarity and applicability. The volition subscale consisted of seven items, with responses ranging from ‘1’ (Strongly disagree) to ‘7’ (Strongly Agree) on a seven-point, Likert-type scale. Sample questions include: “I will be able to change jobs if I want to.” and “I will be able to do the kind of work I want to, despite external barriers”. In this study, a reliability coefficient of 0.901.

## Software and Estimates Used for Analysis

The Smart PLS 3.0 version was used for data analysis, as Likert scales were employed to determine the latent constructs. As affirmed by Hair et al. (2019), the preference for ‘structural equation modelling (SEM) with partial least squares (PLS) algorithm’ over others is owing to its flexibility and reliability for evaluation of complex frameworks even on criteria of smaller sample size, single construct analysis, non-requirement of normality assumption and simultaneous calculation of both measurement and structural model. In the present study, both the measurement model (validity, reliability, etc.) and the structural model (path analysis/multiple regression analysis) were tested using the Smart PLS 3.0 version. Assessment of the measurement model was carried out with indices of Cronbach’s alpha, composite reliability (CR), average variance explained (AVE) for reliability; both CR and AVE and results of outer loadings for convergent validity and Fornell-Larcker Criterion (Fornell & Larcker, 1981) i.e., the square root of AVE is greater than the inter construct correlation for discriminant validity. An assessment of the structural model’s explanatory power and predictive relevance was conducted using standard assessment criteria of  $R^2$ ,  $Q^2$ ,  $F^2$  and path coefficients was done. For testing the hypotheses and examining the statistical significance of the direct and indirect effects, the bootstrapping procedure recommended in PLS-SEM literature was employed using 5,000 resamples (Hair et al., 2019). Moderation was tested within the PLS-SEM framework using the two-stage latent interaction approach recommended for SmartPLS. In the first stage, latent variable scores were estimated for the predictor and moderator constructs. In the second stage, an interaction construct (Self-Efficacy  $\times$  Work Volition) was created using the product of latent

scores. Bootstrapping with 5,000 resamples was used to assess the statistical significance of the interaction effect on perceived career advancement opportunity.

## DATA ANALYSIS AND OUTCOMES

The analysis conducted to determine the authenticity of the hypotheses constructed for the investigation and, consequently and to confirm the accuracy of the suggested model, is covered in this part. (Fig 1). Data gathering was done using a survey approach, and the already mentioned questionnaires have been subjected to analysis. A pilot study with 72 respondents was conducted for scale validation before the final assessment. The data acquired was analysed step-by-step, commencing with determining the model's reliability and validity, subsequently gathering socio-demographic details of the respondents employing descriptive analysis and correlation analysis of the constructs, then hypothesis testing of direct and indirect effects and lastly checking for moderating effect.

### Reliability and Validity

The measurement model was evaluated following contemporary PLS-SEM reporting standards (Hair et al., 2019), including assessment of reliability, convergent validity, and discriminant validity. By the recommendations of Hair et al. (2019), Fornell and Larcker (1981) and Gefen and Straub (2005), the reliability of the measurement model was tested against the accepted threshold estimates. Apparent from Table 2 are the findings of measures, Cronbach's alpha, which is more than 0.7 for all the latent variables, similarly for CR, all more than 0.7, and likewise, AVE greater than 0.5. This establishes the reliability of the measurement model. Convergent validity was established as the outer loadings were found to be more than 0.6 at  $p < 0.01$  significance (Table 3), indicating substantial convergence of each item under each factor, and nothing was deemed valuable enough to delete. At last, discriminant validity was established by applying the Fornell-Larcker Criterion (Fornell & Larcker, 1981), i.e., the square root of AVE of a particular construct is greater than the correlation coefficients of other constructs in its corresponding row and column (Table 6). Discriminant validity was further examined using the heterotrait-monotrait ratio (HTMT) and all HTMT values were below the conservative threshold of 0.85, indicating adequate discriminant validity among the constructs (SE-CAS=0.58, SE-PCAO=0.63, SE-WV=0.60, CAS-PCAO=0.52, CAS-WV=0.56, PCAO-WV=0.59) (Table 10). These findings confirm that each construct captures a distinct conceptual domain. The predictive relevance ( $Q^2$ ) of the suggested structural model is determined using the Smart PLS blindfolding process, and in-sample explanatory power ( $R^2$ ) values of endogenous constructs are used to explain it. Effect sizes ( $f^2$ ) were also calculated to evaluate the contribution of each predictor to the explained variance of endogenous constructs. Predictive relevance ( $q^2$ ) was assessed using the blindfolding procedure in SmartPLS (Table 4 and 5).

**Table 2. Reliability and validity**

Variables	Composite Reliability	Average Variance Explained	Cronbach Alpha
SE	0.960	0.708	0.904
CA	0.966	0.741	0.919

PCAO	0.967	0.732	0.894
WV	0.948	0.726	0.901

**Table 3. Factor Loadings and cross loadings**

	Self-Efficacy	Career Aspiration	PCAO	Work Volition
SE1	<b>0.876</b>	0.282	0.216	0.241
SE2	<b>0.898</b>	0.298	0.296	0.256
SE3	<b>0.812</b>	0.124	0.238	0.208
SE4	<b>0.862</b>	0.236	0.286	0.117
SE5	<b>0.809</b>	0.234	0.193	0.262
SE6	<b>0.79</b>	0.221	0.278	0.28
SE7	<b>0.866</b>	0.197	0.15	0.11
SE8	<b>0.791</b>	0.245	0.158	0.192
SE9	<b>0.835</b>	0.477	0.161	0.106
SE10	<b>0.873</b>	0.193	0.163	0.246
CAS1	0.223	<b>0.799</b>	0.102	0.153
CAS2	0.287	<b>0.867</b>	0.247	0.242
CAS3	0.284	<b>0.889</b>	0.268	0.252
CAS4	0.218	<b>0.835</b>	0.253	0.266
CAS5	0.257	<b>0.916</b>	0.154	0.103
CAS6	0.166	<b>0.929</b>	0.114	0.263
CAS7	0.152	<b>0.828</b>	0.209	0.213
CAS8	0.258	<b>0.892</b>	0.211	0.119
CAS9	0.108	<b>0.768</b>	0.155	0.248
CAS10	0.265	<b>0.871</b>	0.113	0.253
PCAO1	0.171	0.202	<b>0.882</b>	0.107
PCAO2	0.283	0.281	<b>0.829</b>	0.205
PCAO3	0.26	0.264	<b>0.928</b>	0.239
PCAO4	0.217	0.238	<b>0.852</b>	0.218
PCAO5	0.118	0.108	<b>0.742</b>	0.115
PCAO6	0.191	0.112	<b>0.763</b>	0.232
PCAO7	0.132	0.206	<b>0.891</b>	0.204
PCAO8	0.201	0.172	<b>0.929</b>	0.212
PCAO9	0.282	0.235	<b>0.903</b>	0.283
PCAO10	0.14	0.267	<b>0.827</b>	0.116
PCAO11	0.199	0.24	<b>0.839</b>	0.266
WV1	0.215	0.148	0.214	<b>0.928</b>
WV2	0.237	0.297	0.203	<b>0.815</b>
WV3	0.176	0.291	0.236	<b>0.823</b>
WV4	0.216	0.207	0.109	<b>0.792</b>
WV5	0.289	0.243	0.219	<b>0.916</b>
WV6	0.146	0.167	0.234	<b>0.827</b>
WV7	0.267	0.139	0.145	<b>0.856</b>

**Table 4. Results of R<sup>2</sup> and predictive relevance Q<sup>2</sup>**

Endogenous Latent Constructs	R <sup>2</sup>	Q <sup>2</sup>
Career Aspiration	0.36	0.24
Perceived Career Advancement Opportunity	0.612	0.315

*Note:* Assessment of predictive relevance (Q<sup>2</sup>); Value (Effect Size)- 0.02 (Small), 0.15 (Medium), 0.35 (Large)

**Table 5. Structural model effect sizes and predictive relevance**

Predictors	Endogenous Variables	f <sup>2</sup>	q <sup>2</sup>
SE	CAS	0.237	0.168
SE	PCAO	0.292	0.301
CAS	PCAO	0.274	0.296
WV	PCAO	0.130	0.296

## Descriptive Statistics and Correlations

The demographic information of respondents chosen for data analysis is shown in Table 1. As indicated in the table, most respondents were of the age group '26-35 years' (31.63%) and '36-45' (32.65%) years representing middle-aged respondents, with Graduation as the prime educational qualification (54.08%). Dominant work experience in the sample was in the range of '5 years to 10 years' (31.88 %) and 'over 10 years' (34.94%). A substantial amount of 240 respondents were at the midlevel of the hierarchy amounting to 61.22 % while income level at 'Rs.60,000 - 90,000' (32.39%) and 'Rs.90,000 - 1,20,000' (33.67%). To attach preliminary support for the hypothesis so developed for the model, the correlation was determined. From the depiction in Table 6, the values of correlation coefficients establish significant correlations amongst the constructs of the model. To state, SE was positively correlated with CAS ( $r = 0.417$ ,  $p < 0.01$ ), PCAO ( $r = 0.528$ ,  $p < 0.01$ ), and WV ( $r = 0.519$ ,  $p < 0.01$ ). Similarly, CAS with PCAO ( $r = 0.394$ ,  $p < 0.01$ ) and WV ( $r = 0.427$ ,  $p < 0.01$ ). Likewise, WV and PCAO ( $r = 0.542$ ,  $p < 0.01$ ). As all effect sizes of combinations are within the range of 0.30 to 0.75, the strength of the correlation is moderate for all the combinations (Pearson, 1909).

**Table 6. Correlation matrix of all constructs**

	1	2	3	4
1. SE	<b>0.84</b>			
2. CA	0.417**	<b>0.86</b>		
3. PCAO	0.528**	0.394**	<b>0.85</b>	
4. WV	0.519**	0.427**	0.542**	<b>0.85</b>

*Note:* N=392; Significant at \* $p < .05$  and \*\* $p < .01$  (two-tailed).

The bold values in the diagonal represent the square root of AVE of each construct.

Discriminant validity was assessed using both the Fornell-Larcker criterion and HTMT ratio.

## Hypothesis Testing

In keeping with the results of in-sample explanatory power (R<sup>2</sup>) and predictive relevance (Q<sup>2</sup>) values (Table 4) and significant f<sup>2</sup> and q<sup>2</sup> effect size of the inter-relationship of constructs (Table 5) and the significant effects of direct relation as depicted in Table 7, the first three hypotheses H1, H2, H3 were determined to be statistically significant ( $p$ -value  $< .01$ ), as indicated in Fig 3. Supporting Hypotheses 1, 2, and 3, we affirm that:

**H1 Supported:** SE had a positive influence on PCAO ( $\beta = 0.429, t = 8.411, p = 0.001$ )

**H2 Supported:** SE had a positive influence on CAS ( $\beta = 0.468, t = 6.410, p = 0.000$ )

**H3 Supported:** CAS was positively related to PCAO ( $\beta = 0.536, t = 11.166, p = 0.002$ )

**Table 7. Direct effects among study variables (without mediation model)**

Hypothesis	IV → DV	Coefficient				Hypothesis Result
		Effect	SE	T	p-value	
H1	Self-Efficacy → PCAO	0.429	0.051	8.411**	0.001	Supported
H2	Self-Efficacy → Career Aspiration	0.468	0.073	6.410**	0	Supported
H3	Career Aspiration → PCAO	0.536	0.048	11.166**	0.002	Supported

*Note:* t statistic value at \*95% and \*\*99% significance level. IV: independent variable; DV: dependent variable.

To test the mediating role of career aspiration, the indirect effect of self-efficacy on perceived career advancement opportunity through career aspiration was examined using bootstrapping (5,000 resamples). As shown in Table 8, the indirect effect of SE on PCAO through CAS was significant ( $\beta = 0.250, t = 6.944, p = 0.001$ ). The direct effect of SE on PCAO in the presence of the mediator remained significant ( $\beta = 0.305, t = 7.439, p = 0.002$ ). The total effect of SE on PCAO (without the mediator) was  $\beta = 0.429$ . Since both the indirect and direct effects were significant, career aspiration partially mediates the relationship between self-efficacy and perceived career advancement opportunity.

The proportion of mediation was also examined. Using the direct effect ( $\beta = 0.305$ ) and indirect effect ( $\beta = 0.250$ ), the total effect equals  $\beta = 0.429$ . The proportion mediated is calculated as  $IE/TE = 0.250 / 0.429 \approx 0.58$ , indicating that approximately 58% of the association between self-efficacy and perceived career advancement opportunity operates through career aspiration.

Based on that, we affirm that:

**H4 Supported:** CAS partially mediates the relationship of SE to PCAO.

**Table 8. Mediation Results: Indirect Effect of Self-Efficacy on PCAO Through Career Aspiration**

Hypothesis	IV → M → DV	Association	Effect	SE	T	p-value	Mediation Type	Result
H4	SE → PCAO	Direct	0.305	0.04	7.43**	0.002	Partial mediation	Supported
	SE → CAS → PCAO	Indirect	0.25	0.036	6.94**	0.001		
	Total Effect			0.429	0.052	7.78**		

*Note:* t-statistic value at \*95% and \*\*99% significance level. Direct: Direct effect of IV on DV in the presence of mediator; Bootstraps number: 5000, IV: independent variable; M: mediator; DV: dependent variable.

Thus, the outcomes highlighted the existence of a significant link between SE and PCAO and the underlying role (partial mediation) of career aspiration between SE and PCAO.

The moderating role of work volition was examined using a latent interaction approach within SmartPLS. An interaction term (SE  $\times$  WV) was created using the two-stage method and evaluated through bootstrapping with 5,000 resamples. The results indicate that the interaction effect was statistically significant ( $\beta = 0.13$ ,  $t = 2.60$ ,  $p = .009$ , 95% CI [0.03, 0.23]). This indicates that work volition strengthens the positive relationship between self-efficacy and perceived career advancement opportunity. To further interpret the interaction effect, the relationship was visualized using an interaction plot (Figure 2). The interaction plot shows that the positive association between self-efficacy and perceived career advancement opportunity is stronger at higher levels of work volition than at lower levels of work volition (table 9). The effect size of the interaction term was assessed using  $f^2$ , which indicates the contribution of the interaction construct to the explained variance of the dependent variable. The interaction effect produced a small but meaningful effect size ( $f^2 \approx 0.02$ ), suggesting that work volition modestly strengthens the relationship between self-efficacy and perceived career advancement opportunity.

In substantive terms, women who perceive greater volitional control over their work contexts are better able to translate self-efficacy into perceptions of advancement opportunity, whereas under lower volitional conditions, the benefits of self-efficacy for perceived advancement opportunity are comparatively weaker. So, we affirm:

**H5 Supported:** WV moderates the relationship of SE to PCAO.

**Table 9. Moderation Results (PLS-SEM): Interaction of Work Volition on the Self-Efficacy  $\rightarrow$  PCAO Relationship**

Path	$\beta$	SE (boot)	t	p	95% CI (boot)
SE $\rightarrow$ PCAO	0.42	0.05	8.40	<.001	[0.30, 0.54]
WV $\rightarrow$ PCAO	0.21	0.05	4.20	<.001	[0.11, 0.31]
SE $\times$ WV $\rightarrow$ PCAO	0.13	0.05	2.60	<.001	[0.03, 0.23]

*Source:* The authors. Notes: Bootstrap number = 5,000; LLCI = Bias-corrected lower limit at 95% confidence interval; ULCI = 95%, Bias-corrected upper limit at 95% confidence interval

**Table 10. Heterotrait–Monotrait (HTMT) Ratio for Discriminant Validity**

Construct	SE	CAS	WV	PCAO
SE	-	0.58	0.60	0.63
CAS	0.58	-	0.56	0.52
WV	0.60	0.56	-	0.59
PCAO	0.63	0.52	0.59	-

For the robustness check, the study used age, education, and work experience as control variables, and it was observed that the relationships did not change for different values of these. SE was positively associated with CAS ( $b = 0.462$ ) and PCAO ( $b = 0.412$ ). While CAS was also found to be positively associated with PCAO ( $b = 0.524$ ). Also, the indirect effect of SE on PCAO via CAS was also found significant ( $ab = 0.242$ ), indicating partial mediation. Further, the direct effect of SE on PCAO in the presence of the mediator was also found to be significant ( $b = 0.297$ ). In the moderation analysis, the interaction term was found to be significant with no change in the direction, though it was marginal ( $b = 0.083$ ). Thus, indicating that the inclusion of control variables (age, education, and

work experience) did not significantly change the results, as the observed relationships remained consistent.

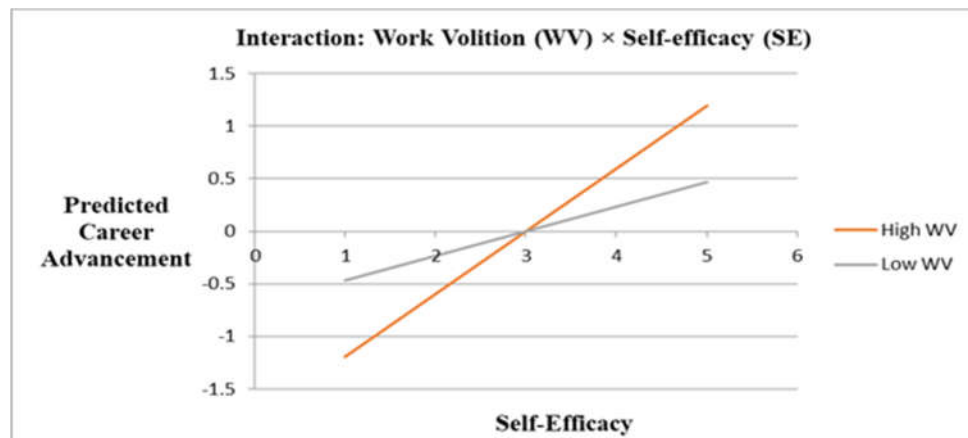


Figure 2. Interaction plot showing the moderating effect of work volition on the relationship between self-efficacy and perceived career advancement opportunity

## DISCUSSION AND IMPLICATIONS

The worldwide attention to the limited participation of women of females in the economic market is a broadly debated matter. The issue is pronounced in India, where only 28.3% of women are reported in the workforce (World Bank, 2023) . The findings of empirical studies in the Indian ITes context reveal the existence of mid-hierarchy constraints reflected in perceived stagnation, discontinuity, and limited advancement opportunities due to gendered norms, work urgency, caregiving responsibilities (Alok et al., 2023) that lower SE in women while navigating advancement pathways (Sarkar, 2022). Evidence could also be drawn from socio-demographic details of respondents of the current study, wherein the majority of women (61.22%) were in ‘mid-level’, with a substantial percentage having work experience over five years (31.88%) and ten years (34.94 %) and income level of ‘Rs.60,000 - 90,000’, confirming mid-hierarchy constraints in women’s perceived access to advancement opportunities. Hence, by situating the study findings in the Indian ITes (precisely the Northern part of the country) context, the paper has made a stride to address the challenges surrounding women’s perceived access to career advancement opportunities by asserting the criticality of psychological resources (SE, aspiration and volition) to navigate structural and gendered constraints in shaping perceptions of advancement opportunity. The findings adequately respond to the research questions that were posed at its outset. Firstly, SE was found to positively influence PCAO, attaching evidence to the literature of SE as a driving force in a career (Abele & Spurk, 2009) and fitting well with SCCT. From a social cognitive career perspective, self-efficacy shapes how women perceive organizational signals related to fairness, opportunity, and advancement pathways. In constrained work contexts such as ITes, perception towards career advancement opportunities is often ambiguous and contingent on informal evaluations. Women with higher self-efficacy may be more likely to perceive such environments as navigable rather than exclusionary, thereby reporting stronger perceptions of advancement opportunities.

Secondly, the intervening role of CAS on SE to PCAO was found to be partially mediating, resulting in harmony with the findings of the empirical literature on both SE

and CAS (Hartman & Barber, 2020) and CAS and PCAO (Chan et al., 2017; Liu et al., 2020). Aspirations function as a motivational translation mechanism between belief and perceived opportunity. While self-efficacy provides confidence in capability, aspiration reflects the willingness to invest that confidence toward building stronger perceptions of upward mobility opportunities. This helps explain why efficacy alone is insufficient for such perceptions unless accompanied by a desire to pursue higher roles. Specifically, self-efficacy enhances women's career aspirations, which in turn strengthens their perceptions of career advancement opportunity. Thus, career aspiration functions as a motivational mechanism through which self-efficacy is translated into stronger perceptions of advancement opportunity. Women with higher self-efficacy are more likely to develop stronger career aspirations, and these aspirations subsequently shape how they perceive available advancement pathways within organizational contexts. Finally, the boundary condition of WV was examined on SE to PCAO, which was found to be significant, confirming PWF and reinforcing WV facilitates the translation of SE into PCAO. The data profile reports higher WV in women at 'senior-level' in firms with flexible schedules and lower WV in women at 'entry-level' in firms with fixed schedules. This emphasises autonomy/choice in work schedule and structure in ITeS because if employees feel they can choose shifts or roles, even within constraints, they are more likely to act on their confidence and perceive stronger perceived opportunities for advancement. Drawing on the psychology of working framework, work volition represents perceived choice under constraint. Even highly efficacious women may be unable to translate confidence into perceived advancement opportunity if they experience limited control over shifts, assignments, or role mobility. Thus, volition conditions whether self-belief is experienced as actionable or merely aspirational.

The study findings have broader relevance beyond the ITeS in gendered service-sector environments like banking, health care, and education, where women also face similar systemic constraints as a result of gendered structures, such as stereotyping, work-life issues, and inflexible work structures (Koekemoer et al., 2023). SE, CAS, and WV may shape how women interpret perceived advancement opportunities within organizational systems because of their sector-wide application. Specifically, promoting SE, CAS, and WV through inclusive policies and flexible training allows women to perceive stronger pathways for advancement within organizational systems to move beyond mid-level roles, strengthening women's perceptions of fair and accessible advancement pathways within organizational systems.

Also, the results are of cross-cultural relevance, though the article focuses on the Indian ITeS sector, the structural barriers influencing perceived advancement opportunities that emerge as gendered in the organization's setting (caregiving responsibilities, gender stereotyping and lack of autonomy) are prevalent across societies. For example, in economies of South Asia, Africa and Latin America, female counterparts face similar challenges because of gendered social norms of caregiving and women's role in the family (Hamzah et al., 2022; Njogu et al., 2025); in Western societies, despite an increasing number of women joining the workforce, hierarchical obstacles persist in mid-level positions for female employees who seek to integrate family responsibilities and career goals (Glass, 2004). The applicability of work volition (WV) and flexibility is detailed in the results. Research demonstrates that when women have control over their work schedules, they are better able to accommodate family responsibilities and this control increases self-efficacy and perceived occupational opportunities. The relevance of autonomy and freedom

of choice is a universal issue in working life, which clearly demonstrates the urgency for companies to create an environment that supports work flexibility in order to strengthen women's perceived access to advancement opportunities internationally. The model illustrating the connections between the psychological resources, viz., SE, CAS and WV, provides a more comprehensive theoretical perspective of women's perceived career opportunities. It renders a means to address gender-linked barriers in similar organizational settings, which could aid in facilitating women's perceptions of accessible managerial advancement pathways irrespective of sector and cultural environment, thereby substantially contributing to the Indian as well as international perspective.

In a nutshell, the research contributed a novel space to the construct of perceived career advancement opportunity (PCAO) by presenting a well-integrated framework of some psychological resources viz., SE, CAS, and WV with a clear depiction of their interrelationships (relying on both SCCT and PWF), all within the bounds of the purpose established at the beginning of the study (Fig.1). The overall findings lay vital implications and open avenues for further studies.

## Theoretical Implications

This study contributes to understanding how women form perceptions of career advancement opportunity under conditions of efficacy, aspiration, and volitional constraint. The research framework was designed to replenish the inconsistencies in the career literature of women concerning the role of SE, aspirations and volition, anchored on the theoretical foundation of SCCT and PWF. For instance, some research suggests a strong relationship between work SE and CAS in women (Hartman & Barber, 2020; Lent & Brown, 2008), while others report situational influence (Gregor & Weigold, 2022). Likewise, although the initial focus of SCCT research was on agency and SE (Hackett & Betz, 1981), subsequent research reported that external barriers undermine these socio-cognitive factors relative to women in gendered structures (Gregor & Weigold, 2022). By combining SCCT's emphasis on inner psychological factors and PWF's emphasis on will and constraints into a single framework, this study attempted to provide a comprehensive model for better understanding women's perceived career advancement opportunities in Indian ITeS, a setting in which confidence in ability (SE), career aspiration (CAS), and work volition (WV) converge within a constrained mid-hierarchy, arising from strict performance targets, shift schedules, caregiving responsibilities, and plateau effects (Tran et al., 2025).

The psychological sources examined in the paper substantiate their viability in addressing disparities in perceived career advancement opportunity among women employees. The substantial role of SE in PCAO (Abele & Spurk, 2009) has implications for studies on perceived career advancement processes to incorporate the constructs in designing mentorship, coaching, and learning experiences to provide direct support to women employees for a continuous and consistent enhancement of women's competence. Also, the experimental and empirical studies assessing the effectiveness of any intervention aimed at strengthening women's perceptions of organizational support, fairness, and perceived advancement opportunity (Hartman & Barber, 2020) could embed these socio-cognitive constructs to assess if the intervention is working on its objective of yielding meaningful improvements in perceived advancement opportunity.

Additionally, the mediating role of CAS indicates that self-efficacy influences perceived career advancement opportunity through its effect on career aspiration, highlighting aspiration as a key mechanism in shaping perceptions of professional advancement

opportunity (Chan et al., 2017; Liu et al., 2020). Accordingly, both self-belief and aspiration are important, as aspiration serves to translate efficacy beliefs into stronger perceptions of advancement opportunity. Behavioural studies dealing with designing effective work activities and addressing issues that deter women's engagement with advancement opportunities could gain insights from the findings of the study.

Furthermore, the moderation of volition reassures that work volition enables women to translate their self-beliefs into stronger perceptions of advancement opportunity, even under constrained conditions (Duffy, Diemer, & Jadidian, 2012). Behavioural practitioners can incorporate WV in employees through an emphasis on personal agency (goal clarification, self-awareness, positive reinforcement, setting priorities, etc) to build individual control over career-related choices. Individual autonomy so developed would certainly help in combating contextual and decisional impediments for sustaining belief in one's advancement opportunities within organizational systems.

Finally, the socio-cognitive factors have been proven as established intervention targets, as evidenced by Cognitive Behavioural Therapy (Bhattacharya et al., 2023), which is an intervention to treat anxiety-related disorders. Hence, leveraging the elements of the proposed framework may be beneficial for the female workforce encountering feelings of discouragement arising from perceived constraints from choice-related anxiety, negative affectivity, and interpersonal conflict affectivity and alike (Alola et al., 2019).

## Practical Implications

The study, being a quantitative one in the Indian ITeS context and with most of the respondents at mid-level of job hierarchy (61.2 %) depicting perceived stagnation in advancement opportunities, recommends particulars that can be put into practice for the usage of socio-cognitive factors for behaviours associated with engaging with perceived advancement opportunities.

Firstly, the suggested model and the findings of the analysis yield implications for HR practitioners to consider the deep-rooted psychological factors, like competencies and capabilities of women employees, while designing career development interventions to address the perceived lack of access to decision-making roles (Babic & Hansez, 2021; Moscatelli et al., 2020). Unlike other sectors, wherein career opportunity structures may be qualitative or project-based, ITeS career progression is often evaluated based on quantitative key performance indicators (KPI). Women with high SE may be more likely to perceive roles such as Team Lead or Quality Assurance as attainable when organizations provide transparent advancement signals.

Secondly, women workers who are offered a supportive hierarchical program report stronger perception of organizational support over those who don't get any, as the support offers a moral lift and information to engage with perceived advancement opportunities (Hunt et al., 2019). In ITeS, support could be offered through formal job postings, mentorship and leadership shadowing for role readiness for heightening SE and CAS.

Thirdly, studies reveal that women often report weaker perceptions of advancement opportunity because they cannot sustain confidence while navigating perceived career pathways, signifying the need for reinforcement for nurturing talent (Hartman & Barber, 2020). Such reinforcement could be infused with enhancing WV. Intervention incorporating flexible operation shifts, work roster and equal opportunity to overseas clients could enhance WV in women in ITeS as it provides them greater perceived control over work-related decisions and conditions.

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Fourth, results concerning CAS-PCAO interaction corroborate that the perception of equality of opportunity strengthens women's engagement with perceived advancement opportunities, and hence organisations' performance evaluation should be gender neutral, devoid of any 'masculinity' assumptions (Litzky & Greenhaus, 2007) and culture must be such to ensure a balance between career-related demands and family responsibilities (Zhao et al., 2019). In the ITeS industry, such an approach resonates with equitable roles in project handling and release, client engagement, etc., using gender-neutral evaluation frameworks rather than relying on 'masculinity' assumptions. HR can also conduct anonymous evaluations and frequent bias training among evaluators to ensure an objective evaluation process for gender inclusivity.

To wind up, the feasibility of the model can only be established if it is translated into formal organizational practices by incorporating either sole implementation or augmentation with other existing policies and practices for fostering an environment of fairness and equitable access to advancement opportunities for improving perception. Prior empirical work on women leaders suggests that psychological resources play a critical role in navigating perceived advancement barriers (e.g., Abele & Spurk, 2009; Hartman & Barber, 2020)

## Limitations and Future Studies

Given the context of the research undertaken, it is tied to certain limitations and asserts the need for further work to corroborate the findings. To begin with, the perceptual outcomes generated from the analysis were determined from a sample of female employees from Delhi-NCR and the nearby region only; therefore, they cannot be generalized. Additionally, as the study is cross-sectional, it captures only a snapshot of how the women respondents perceive their organizational opportunities; result variability could be prevented in other designs with a longitudinal viewpoint which could capture how the PCAO evolve over time. Furthermore, since data was gathered through an online survey, the accuracy is largely based on the honesty and willingness of respondents to answer all the questions (detailed instructions were posted on the questionnaire, though).

Also, the use of the student version of the Work Volition Scale may limit comparability with studies using the worker version; however, the strong reliability and conceptual alignment mitigate this concern.

Further, despite procedural remedies and statistical checks, the use of self-reported, single-source data may still be subject to common method variance; therefore, the findings should be interpreted as associational rather than strictly causal.

Moreover, as the mediating effect of CAS on the association of SE to PCAO is partial, it calls for an examination of the existence of additional variables. Finally, future studies may extend current research in different cultural settings, involve a longitudinal design, and include more randomized samples. The intersectionality of demographic and other social variables to nurture means of facilitating the belief system of employees can also be studied in the proposed framework.

## CONCLUSIONS

The study presents a robust evaluation of the proposed framework, integrating the theories SCCT and PWF, and establishing the interrelations among SE, CAS, WV, and PCAO.

The analysis of data statistically confirms the association between SE and PCAO, identifies the partial influence of CAS, and demonstrates the moderating role of WV.

Unlike previous studies, which independently studied the theories, the current study proposed an integrated dual-theoretical framework that integrates both individual agency (SE and CAS) and contextual boundary factors (WV) in understanding the complexity of women's perceived advancement opportunity within India's ITeS sector. It also offers a novel perspective for evaluating the interaction of these theories in explaining perceived career advancement opportunity. The study identified the mediating role of CAS in the SE and PCAO linkage, explaining that women who report stronger beliefs in their capabilities also report stronger perceptions of career advancement opportunity, partly through higher career aspiration. The study also established the moderation of WV, which has hardly been explored in the Indian context. Such conceptualization sets the stage for examination in a variety of cultural and sectoral contexts, with implications for how organizational policies can shape women's perceptions of advancement opportunity by strengthening self-belief, aspirations, and perceived control over career decisions. In the future, an in-depth study is suggested which may extend this work by examining how these perceptual mechanisms translate into actual career outcomes such as promotion, retention, and upward mobility across diverse organizational contexts.

***Declaration of generative AI and AI-assisted technologies in the writing process:***

The author declares use of the Grammarly tool to improve language clarity and readability, and proofreading the document for grammar and punctuation. No AI tools were used for data generation or conceptual framing. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

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