



Examination of the Critical Individual and Formal Factors on Women's Empowerment and Innovative Behavior

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ABSTRACT

In today's pricey economic environment, women make up a sizable share of the state's potential labor, promoting economic growth for themselves and the state. However, many women in Pakistan face various challenges and may need more commercial support for women's empowerment. Hence, the current study analyzes the elements influencing women's empowerment in Pakistan. The deductive technique was used in this study, and data on women's empowerment were acquired using a well-developed questionnaire. A total of 161 responses were gathered from women operating the business in Pakistan's Punjab Province (Table 1). The study found that Perceived Access Capital (PCC) and Women Empowerment (WE) have a substantial and positive influence ($B=.479$, $P=.000$), pro-innovative climate (PIC), and innovative behavior (IB) have a positive effect ($B=.533$, $P=.000$), related knowledge to experience (RKE) has a significant effect on Women Empowerment (WE) ($B=.344$, $P=.000$), and Women Empowerment (WE) has a positive effect on innovative behavior (IB) ($B=.188$, $P=.037$) (Table 5). The results also showed that innovation behavior (IB) is not moderated. Empowering women mediates innovative behavior, perceived access to financing, and commercial backing.

Keywords: *Women empowerment; Innovative behavior; Technology, Creativity*

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INTRODUCTION

Women are a very important part of the social structure in every nation, but despite this fact, they frequently have a difficult time achieving the fundamental rights to which they are entitled, whether they are trying to do so in their own homes, in their communities, or the workplace. This is something that has been covered in a previous section. Using data from the 2017 list, we can determine that Pakistan has a total population of 207.77 million and 101.323 million females. This indicates that around half of the population of Pakistan consists of females (Yaqoob, 2020). There are around 101.32 million females in Pakistan, 64.89 million of whom reside in rural areas and 36.43 billion in urban areas. Therefore, efforts to improve the status of women in rural areas might have useful results.

The Saudi male engagement percentage in recent-stage entrepreneurial activity (TEA) was 12.9% to the Global Entrepreneurship Monitor in 2016, while the Saudi female rate was 9.7% (Bonyadi & Sarreshtehdari, 2021). Recent years have witnessed a rapid surge in the number of mostly women entrepreneurs. But in many developing nations, women face significant obstacles in pursuing their business goals (Tulus, 2009). It shows the ideal scenario of struggling with active modernization, extraction, and dependency difficulties. Female entrepreneurs in this country and other developing nations are disadvantaged and have different opportunities than males (Panda, 2018).

Most of the time, women are seen to be "homemakers" rather than providers. They are counseled to remain in their homes and avoid engaging in such pursuits. However, a very limited population can undertake entrepreneurial endeavors motivated by social goals (Syed et al., 2021). For them, the complexity of the backdrop presents both facilitators and limits that are unavoidable when it comes to growing a company in their own country. The formation and management of clusters are successful in large and formal businesses in developed nations. As a result, this success should positively impact small and medium-sized enterprises (SMEs) operating in the informal sector in developing nations and, more specifically, women working in the formal sector (Dau & Cuervo-Cazurra, 2014).

According to the institutional theory, the outside world and the institutional environment, which includes things like rules, beliefs, cultures, common understandings, norms, and social expectations, have a significant impact on the organizational attitudes and activities that take place within an organization (Chandran & Aleidi, 2019). There still needs to be coherence in the body of research on the opportunities available to women in the reality of

entrepreneurship (Liu et al., 2019). Three distinct kinds compose institutional theories. Cognitive, normative, and regulatory constraints restrict thoughts and activities pertinent to the discussion (Siqueira et al., 2016).

Women can effectively manage their job and overcome obstacles when confronted with a challenging scenario (Abukhait et al., 2019). According to Amorós et al. (2019), policymakers are concentrating on eliminating the social and economic barriers preventing women from successfully participating in entrepreneurial endeavors. This is done to offer women the resources and incentives necessary to do so. The government should check women's connected financial resources, their way and attitude publicly and in their households, and their appreciation for finding solutions to problems in their families. These are some of the proposals for improving the situation for women. The following are the major objectives of the current research:

1. to investigate the direct and indirect effects of informal factors and creative behavior through women's empowerment.
2. to investigate the direct and indirect effects of formal factors and innovative behaviors by women's empowerment.
3. to investigate the moderating effect of an innovative climate on women's empowerment and innovative behavior.

EMPIRICAL STUDIES AND HYPOTHESIS DEVOLVEMENT

It is critical to advance the status of women in today's society because, historically speaking, women have been subject to more restrictive cultural norms, had less access to higher education, and have lived through various periods. The nation's advancement as a whole is inextricably linked to the promotion of women's equality (Singh & Sarkar, 2018). The phrase "by women, for women, and women" describes the purpose of the services provided by self-help group concepts. Self-help groups are eager to cooperate with others who share similar issues. These organizations were formed to achieve ordinary socioeconomic objectives (Pons et al., 2016). This hypothesis establishes a connection between the wider social and political structures and people's overall health and happiness. There is something to be said for empowerment.

H1: The empowerment of women has been shown to have a positive influence on innovative behavior.

This plays a significant part in stimulating activity in the entrepreneurial sector. According to the available research, female entrepreneurs face challenges because of gender disparities in access to funding, which might be adversely related to the decision to establish a business (Ambepitiya & Gao, 2019). Emerging economies can face the need for more financial aid, making the situation more challenging. Women entrepreneurs are a real-world phenomenon widely recognized as contributing to economic indicators of development and job creation and improving the overall quality of life (Al-Shami et al., 2018). Women's entrepreneurial endeavors are also recognized for contributing to a greater range of business models. Recent research (Brush et al., 2017) has demonstrated that understanding the sources of humanitarian support, especially access to money, positively affects entrepreneurial intentions. The financial impact will be more important for firms if they know these sources.

H2: Women's Empowerment (WE) leads to a more innovative atmosphere when there is a good perception that they have access to financial resources (PIC)

H3: Women's Empowerment (WE) is pushed in a direction that is more innovative when there is a behavior that they have access to finance (IB)

Research has shown that women in developing nations are more vulnerable to climate change's effects than males. There is evidence that women in developing nations are more vulnerable to the effects of altitude change than males (Thiruvankadam & Kumar, 2018). As a result of stringent societal norms, women in coastal areas of Bangladesh typically have limited options for evacuating dangerous situations (Oksanych, 2015). The previous day, just one-third of the women in Gabura were given orders to leave (Dhanabhakya, 2022). Behaviorists' arguments back Suarez and her co-authors' claim that women's traditional housework may help advance climate change agreement. According to the evidence, one may predict real-world innovation and creativity using data from weather monitoring (Hamzah et al., 2022). When employees feel safe enough to make bold suggestions, take calculated risks, and test out novel approaches in pursuit of organizational objectives, one has created an atmosphere conducive to innovation. Workplaces, where employees are encouraged to take the initiative, are known to have positive environments (Nasifoglu Elidmir et al., 2020). In addition, this environment helps executives who encourage people to take the initiative and learn new things to achieve their goals (Gross, 2017).

H4: Women's Empowerment (WE) and Skill Development Training (SDT) both benefit from a Pro-Innovative Climate (PIC), as the following hypothesis states:

H5: Women's empowerment (WE) is favorably influenced by skill development training (SDT), which leads to innovative behavior (IB).

H6: Skill development training (SDT) has shown to have a favorable effect on women's empowerment (WE), which in turn leads to an innovative environment (PIC).

The social cognitive process of self-regulation involves the interaction of personal norms, actions, and triadic settings (Ahamad et al., 2016). According to the findings of one investigator, self-regulation is predicated on how well students plan and improve their educational experience (Deka, 2018). Students can improve their educational talents by refreshing their thinking capacities. According to Jabbar and Zaza (2016), SRL is an effective athletic training method. Students regulate their duty performance by drawing on their acquired cognitive experience and the processes they have developed. Studies of SRL were first conducted within the framework of face-to-face and offline training within formal education. Beliefs, behaviors, and emotions that the person generates are all part of self-regulation, which includes planning and adaptation in a circular fashion (Sultana et al., 2017).

H7: Women's empowerment may be positively or adversely influenced through skill development training.

The readiness of people to test new information technologies is determined by "personal innovativeness in information technology." When seen through the lens of information systems, entrepreneurs place a significant amount of reliance on the progression of technology to develop new technology enterprises and new technologies (Alkawsi et al., 2021). Multiple forms of experimental study have been conducted to investigate the connection between PIIT and individual behavior, which has resulted in the formation of a significant association.

H8: Individual innovativeness in IT (PII) impacts women's empowerment (WE) toward innovative behavior in a positive manner.

H9: Personal innovativeness in IT (PII) affects women's empowerment (WE) toward an innovative atmosphere in a positive manner.

The term "related knowledge and experience" (RKE) refers to the information required while making business decisions using information technology. The more you know about computers, the more you'll think you know about them, which applies to all kinds of different application areas. It has also been suggested that noteworthy occurrences have the potential to shift or undermine the legitimacy of pre-existing institutional systems (Nath & Athinuwat, 2021). Despite this, relatively little systematic attention has been made to how different organizations respond to the variety of logic and their incompatibility (Ghasemi et al., 2021).

H10: Women's empowerment (WE) is positively influenced by women's access to relevant knowledge and experience (RKE), which leads to innovative behavior (IB).

H11: Women's empowerment (WE) is favorably influenced by related knowledge and experience (RKE), which leads to an environment more conducive to innovation.

A variety of different circumstances influence the innovation that occurs in the workplace. Its impact on people's innovative behavior has been studied using various methodological techniques and in various domains. The growth of an individual's creative potential is intimately connected to developing creative work habits. The term "employee creativity" refers to producing original and beneficial ideas about goods, services, processes, and procedures while engaging in innovative work behaviors. In addition, it involves disseminating ideas and their actualization (Mahmoud et al., 2021). The current corpus of research on corporate entrepreneurship acknowledges the crucial part played by bottom-up employee initiatives in bettering organizational circumstances and developing solutions (Rafique et al., 2021). Although innovative behavior and access to corporate archives are not usually prerequisites for entrepreneurship, they are still valuable building stones (Yuan & Ma, 2022).

H12: The link between innovative behavior and formal institutions is mediated by women's empowerment (WE).

H13: Women empowerment (WE) is a mediator in the connection between innovative behaviors (IB) and informal institutions.

The most common and in-depth method for analyzing the structural components of institutions is called an institutional theory. It investigates how social systems, such as patterns, regulations, conventions, and routines, are characterized as authoritative guides to social behavior. Additionally, the theory explains organizational practices and methods that could be more technical (Zhai & Su, 2019). Economic activity is regulated by theory, which determines the game's rules based on production, trade, and distribution. Institutions comprise cultural principles, legal systems, economic values, practices, and history. These things organize cultural activities by limiting and providing justifications for choices and acts (Eijdenberg et al., 2018).

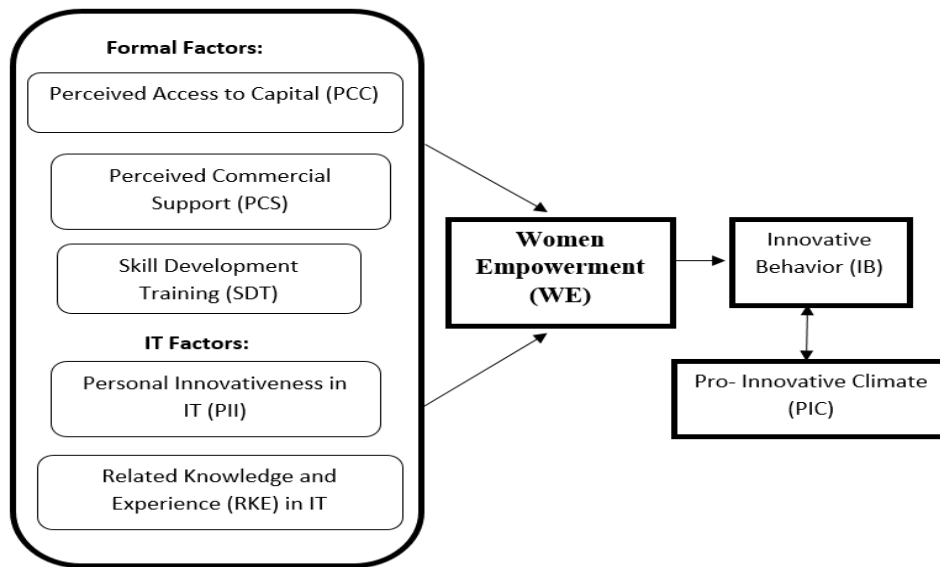


Figure 1: Conceptual Framework

MATERIAL AND METHODS

The deductive approach was one of the research methods we sought to use while developing our theoretical model. In this approach, the ideal way to define a link between variables is for researchers first to gather data and then (through reasoning) decide whether their hypotheses should be accepted or rejected (Saunders et al., 2012).

Sampling and Data Collection

The participants in this research are all female company owners who have launched their enterprises from scratch and are responsible for their day-to-day operations. The sampling framework comprises women who are sole proprietors of their enterprises, and samples are collected from this group. The women who manage their salons, schools, boutiques, or gyms, and any other women who started their businesses after receiving entrepreneurship training, were asked to participate in this survey as respondents.

The researcher used a non-probability sampling technique for collecting data from respondents. It is necessary to research to collect relevant information about this study variable and the survey methods often used in quantitative research. The questionnaire is an important instrument for obtaining and collecting relevant data (Chigada et al., 2019). In this study, two hundred questionnaires were sent out to female entrepreneurs. Their respondents successfully filled out one hundred sixty-one of the possible 200 questionnaires. These statistics were gathered from a distinct location in the province of Punjab in Pakistan (Table 1).

Table1: Demographic Analysis

	Personal Information	Frequency	Percentage %
Age	19-24	66	40.99
	25-30	86	53.41
	30 Above	9	0.05
Marital Status	Single	36	22.23
	Married	115	71.42
	Others	10	0.062
Education	Intermediate	30	18.63
	Bachelor	80	49.68
	Master	40	24.84
	Above Master	11	6.83
Experience	Less than 5 years	61	37.88
	Between 6 to10 Years	89	55.27
	Above 10 Years	11	0.06
City Name	Multan	40	24.84
	Bahawalpur	21	13.04
	Sahiwal	20	12.42
	Lahore	80	49.68

Table 1 shows that most respondents fall between the ages of 25-30 (53.14%). The majority of the respondents were married (71.42%), obtained a bachelor's education (49.68 %), and had between 6 and 10 years of experience (55.27%). In addition, the maximum number of responses was collected from (49.68) in Lahore City, Punjab, Pakistan.

DATA ANALYSIS

After doing some research and calculations in the SPSS, we decided to use PLS-SEM (partial least square method). This SEM approach has an established and validated association with multiple equations and social sciences research. It can be formed in an arrangement using PLS-SEM tourists utilize it as a multivariate equation. The next was factor analysis, and then we used the regression approach for the first stage. The structural equation modeling (SEM) approach was a helpful method for determining the relationships and causes of effects between variables. The second stage we referred to as CFA (confirmatory factor analysis) and structural equation modeling.

Table 2: Reliability Analysis

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
IB	0.811	0.861	0.816	0.551
PCC	0.818	0.851	0.815	0.598
PCS	0.842	0.856	0.822	0.601
PIC	0.824	0.815	0.886	0.681
PII	0.802	0.842	0.852	0.557
RKE	0.852	0.881	0.851	0.716
SDT	0.719	0.721	0.715	0.627
WE	0.726	0.739	0.791	0.539

Table 2 shows all of the reliability indicators for the variables are more than the minimum required value of 0.70, including Cronbach's Alpha, rho A, and Composite Reliability. The findings also demonstrated that the average variance extracted variance is greater than 5, indicating that the instrument is trustworthy for future analysis.

Table 3: Discriminant Validity

	IB	PCC	PCS	PIC	PII	RKE	SDT	WE
IB								
PCC	0.349							
PCS	0.313	0.51						
PIC	0.373	0.484	0.456					
PII	0.31	0.308	0.428	0.384				
RKE	0.296	0.304	0.292	0.3	0.203			
SDT	0.199	0.206	0.211	0.241	0.199	0.111		
WE	0.155	0.192	0.182	0.189	0.167	0.101	0.109	

Table 3 indicates the HTMT result, a discriminant validity measure. It shows the values are between 0.51 and 0.109, indicating discriminant validity.

Table 4. Structural Equation Model and Hypothesis Testing

Hypothesis	Relationship	S.Mean	S.D	T Statistics (O/STDEV)	P. Values	Findings
H1	Moderating Effect 1 -> IB	-0.016	0.080	0.153	0.878	Unsupported
H2	PCC -> IB	0.107	0.072	1.397	0.163	Unsupported
H3	PCC -> WE	0.479	0.100	4.992	0.000	Supported
H4	PCS -> IB	0.053	0.066	0.834	0.405	Unsupported
H5	PCS -> WE	-0.129	0.076	1.847	0.065	Supported
H6	PIC -> IB	0.533	0.104	4.935	0.000	Supported
H7	PII -> IB	0.061	0.090	0.815	0.415	Unsupported
H8	PII -> WE	-0.010	0.095	0.338	0.736	Unsupported
H9	RKE -> IB	0.036	0.108	0.618	0.537	Unsupported
H10	RKE -> WE	0.344	0.088	3.792	0.000	Supported
H11	SDT -> IB	0.075	0.068	1.114	0.266	Unsupported
H12	SDT -> WE	0.045	0.071	0.639	0.523	Unsupported
H13	WE -> IB	0.188	0.085	2.094	0.037	Supported

Table 4 indicated that PCC and WE have a significant and positive effect ($B=.479$, $P=.000$). Further table indicated that PCS and WE have a significant and negative effect on WE ($B=.479$, $P=.000$). The further findings revealed that PIC and IB have a significant and positive effect ($B=.533$, $P=.000$). RKE has a significant effect on WE ($B=.344$, $P=.000$) and WE have a significant and positive effect on IB ($B=.188$, $P=.037$). The results further revealed that there is an insignificant moderating effect on IB.

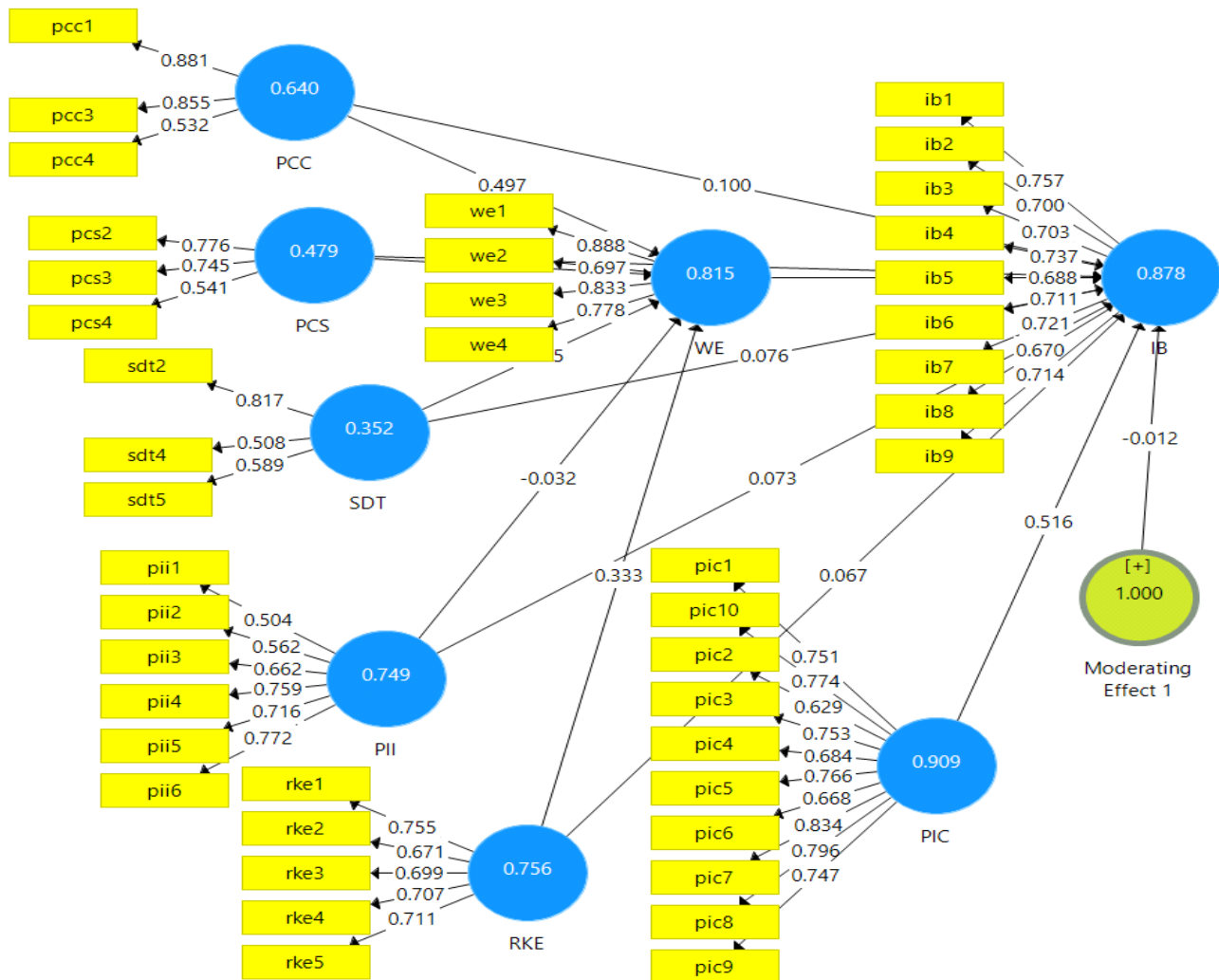


Figure 2: Structure Equation Model

In addition, the finding demonstrates that women's empowerment is a major mediator between innovative behavior, perceived access to finance, and the backing of the commercial, with a significant p-value of 0.000 and a t-value of 4.992. It signifies that the capability and effectiveness of women's empowerment strongly mediate between perceived access to capital, personal innovativeness in IT, cultural support, relevant knowledge to experience, and skill development training.

DISCUSSION AND CONCLUSION

This research revealed that women's empowerment and innovative behavior were encouraged by their perceived access to money, an innovative atmosphere, and relevant knowledge and experience. These results also indicate whether or not there is a considerably beneficial and positive relationship between women's empowerment and innovative behavior. By increasing and comprehending to generate new commercial ventures and influence IT-related factors, this research helps innovative behavior and female empowerment. This research aims to assist and equip women with new environments and resources, such as funding, training, and knowledge based on IT, which aid in beginning their company in a successful and efficient manner. The risk of business failure is reduced due to government policies that make it easier to get necessary resources (Abukhait et al., 2019). Therefore, it is possible to conclude that the assistance of the government, the fulfillment of system requirements, and support for establishing businesses are essential components in cultivating a culture of female entrepreneurship.

The consequences of this research recommended that various training sections and workshops may be held to provide more information about the abilities and interests of women. Some studies indicate significance and some partial significance results in the previous studies (Anderson et al., 2019). The study paradigm only encompasses formal and informal institutional elements that may affect the following innovative behavior and factors connected to information technology. Consequently, a rapidly increasing number of independent economies and enterprises are finding it impossible to keep up with the continually more complex network of social, political, and economic entities while also attempting to sustain their growth. This viewpoint emphasizes the need to give rural women

entrepreneurs, who are up against their male counterparts in the race to run local businesses and homes, the regard and attention they deserve. It is necessary to encourage innovative behavior to facilitate the empowerment of women.

The study hypothesized the positive and significant relationship between perceived access to capital and women empowerment. The hypothesis of p value= 0.000, so the results show that the hypothesis is accepted and supports the relation. The study hypothesized an unsupported relationship between perceived government support among women empowerment and innovative behavior. Some outliers fall to make the result insignificant. The study hypothesized that positive and significant relationship between women's empowerment and innovative behavior for skill development training. A hypothesis with p -value SDT \rightarrow IB= 0.266 and SDT \rightarrow WE= 0.523 is not supported, so the hypothesis is not accepted. This study needed to explore skill development training about how to encourage innovative behavior and how to be empowered. The study hypothesized that positive and significant relationship between women's empowerment and innovative behavior. PII \rightarrow IB= 0.415, PII \rightarrow WE= 0.736 is not supported, so the hypothesis is not supported. The study hypothesized and found that positive and significant relation between pro-innovative climate and innovative behavior.

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