



The Impact of Transformational Leadership Climate on Business Sustainability and New Product Development Process: Moderating Influence of Strategic Flexibility

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Abstract

Transformational leadership is believed to be crucial factor behind an organization's success. Studies have been conducted on leaders' transformational leadership style, but there has been limited research on transformational leadership climate (TLC) in an organization and its effect on new product development process (NPDP) and business sustainability (BS). This study fulfills this gap and it also contributes to the literature by testing the moderating role of strategic flexibility (SF) between TLC and NPDP & BS. The study draws its hypothesis on the basis of contingency theory, upper echelons theory and transformational leadership theory. The authors collected the data from the top managers of private educational institutes affiliated with BISE Multan and used SmartPLS for analyses of data. Based on the analyses of 145 questionnaires, we report that TLC enhances NPDP and BS whereas SF has a significant moderation impact on the relationship between TLC and BS. For the educational institutes, we suggest top management to acknowledge and implement TLC in their organizations for sustaining their performance and for successful launching of new programs/services. Additionally, the importance of resource and coordination flexibility is emphasized for sustainability.

Keywords: transformational leadership climate, new product development process, strategic flexibility, organization sustainability, education institutes.

1. Introduction

There has been broad research on transformational leadership and scholars have reported that it results into various outcomes at individual and organizational levels. For example, some studies revealed that transformational leadership affects innovation (Gui et al., 2024; Zuraik & Kelly, 2019), employee creativity (Al Harbi et al., 2019; Shafi et al., 2020), employee motivation (Chen & Cuervo, 2022; Graves et al., 2013), employee job satisfaction (Chen et al., 2021), and employee performance (Abas et al., 2019; Nasir et al., 2022). While others reported that transformational leaders influence firm performance (Cuevas-Vargas, et al., 2023; Jensen, et al., 2020) and organizational climate in different contexts (Gaviria-Rivera & López-Zapata, 2019; Kim & Park, 2020). However, there has been little research on the effect of TLC on NPDP and BS (Aragón-Correa et al., 2007; Kim & Park, 2020; Muralidharan & Pathak, 2018). Furthermore, studies on this subject are limited in Pakistan's context. The purpose of this study is to fill these research gaps.

Transformational leaders foster employee creativity. Moreover, as they are charismatic and visionary, so they are successful in providing organizations steady development and growth. Thus, it is likely that if an organization has transformational leadership climate, it would facilitate new product development process and upkeep its sustainability. Amidst, related to these arguments is the construct of strategic flexibility. If strategic flexibility is greater, it can be assumed that transformational leaders would use it as a tool to create new products and generate sustainability. For example, they would appreciate and foster employee creativity in generating new products and providing new and innovative ideas. Previously, some scholars studied strategic flexibility as a significant factor affecting firm performance (Awais et al., 2023; Gorondutse et al., 2021). Some studied it as a mediator for certain relationships (Jian et al., 2023; Sen et al., 2023). Certain past researches also studied moderating influence of strategic flexibility for certain relationships (Baikuni et al., 2023; Kamasak et al., 2017). However, there is limited research that analyzed the moderation impact of SF on the association among transformational leadership and organization performance. Thus, this research tests SF's moderating impact on the association among TLC and NPDP & BS.

Further, there have been limited studies on this subject in the context of Pakistan which warrant scientific investigation into this topic. This research thus accomplishes this purpose and for that it selected private educational institutes, specifically, schools and colleges registered with Board of Intermediate and Secondary Education (BISE) Multan. Usually, these private institutions offer variety of programs such as degree programs, certificate courses, diplomas, training, and coaching of various kind and use their infrastructure for multipurpose education. The infrastructure and staff are an institute's resources and the use & deployment of these resources apart from regular morning programs represents resource flexibility that is considered a part of strategic flexibility. Another part of it is coordination flexibility which is the flexibility in staff to assemble and communicate in various ways and exchange information in a manner suitable to make best use of resources and generate new ideas and concepts.

The management in these institutes is supposed to cultivate transformational leadership climate majorly by being role models (idealized influence), outlining the responsibilities for the staff, channelizing their efforts, and meeting their expectations (inspirational motivation), stimulating their creative thinking (intellectual stimulation), and providing personal care and consideration to all employees (individual consideration). As private institutes are profit driven as well, so they need to embrace market changes and monitor trends to keep up with the competition. Thus transformational leadership climate is important for them. By being vigilant, the management comes up with new programs which would attract student community in their institute. Thus new product development is their strategic goal. Through this, they manage their cash flows and are in a position to maintain sustainability. This research collects empirical evidence on the topic and assesses how these private institutes cultivate TLC and how does and to what extent SF plays its moderating role and supports TLC in these institutes in creating new products/offering in them and how does the interaction between TLC and SF impacts sustainability of these institutes.

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2. Literature Review

2.1. Effect of Transformational Leadership Climate on New Product Development Process

Transformational leadership climate concerns with making transformation and positive changes mainly through involving all the organizational members (Moon, 2016). TLC is about cultivating an encouraging environment so that employees would feel empowered and show creativity in their work. It has been reported by previous studies that TLC results into high employee task performance behavior, organization citizenship behavior and employee engagement (Menges et al., 2011; Winasis et al., 2021).

In recent times, NPD has become significant factor for a firm's success. With the eminence of new brands the scholars from various fields including marketing and engineering have become encouraged to research NPDP strategies and methods (Tzokas et al., 2004). In order to gain success, firms are normally required to meet two challenges: delivering new products that could provide customer value and minimizing cost and time to market. NPDP normally involves certain steps such as idea creation and evaluation, strategic analysis, production, test marketing, and final launch (Chang, 2019; Tzokas et al., 2004). The process might also vary depending upon type of product, industry/sector, and whether the product is breakthrough invention or just addresses incremental improvements. For educational institutes, NPDP is parallel to that of manufacturing sector. Educational institutes need to keep monitoring student needs as well as market trends and competition (Durkin et al., 2016). In ideal conditions, industry plays a significant role in designing new courses and syllabus since it identifies the required skills and capabilities crucial for organization success. Thus, they are designed keeping in view the market requirements. The ongoing technological advancements also play key role in that. An institute's efficiency and success lies in aligning the curriculum with the technological advancements going on and skill sets needed by organizations in the target markets (Durkin et al., 2016)

NPDP is normally fostered through TLC as transformational leaders greatly impact learning and innovation which ultimately could result into new products (Sattayaraksa & Boon-itt, 2016). Other than inspiring followers and stimulating their creative thinking, transformational leaders are supposed to create an organizational environment where employees feel pushed to generate new ideas. Leaders who are themselves open to change are likely to create a climate that supports innovation and new product development. Importantly, NPDP could be fostered in an organization which is learning continuously from its stakeholders and the employees are eager to learn and make improvements (Fernández-Pérez et al., 2016). Taneja et al. (2016) argue that organizations require skills, resources, and proficient leaders who acknowledge innovation and utilize their creative abilities to transform knowledge into new offerings for organizational and societal benefit.

Certain past studies have gathered some evidence on the impact of transformational leadership on various outcomes. For instance, Minhaj et al. (2019) reported that for Pakistan based organizations (mainly telecom companies), transformational leadership contributes to employee engagement which fosters innovativeness in those organizations. Further, in the telecom sector, study of Busari et al. (2019) reported that transformational leadership style was positively associated with employees' participation, trust in management, and the frequency of change. In another research for manufacturing companies in Pakistan, Nazar (2022) reported that transformational as well as servant leadership both were important for innovation. Both styles influenced innovation through climate for inclusion. Further, transformational leadership was more influential than servant leadership. Thus, on the basis of the presented arguments, H1 is developed as:

H1: TLC has a significant impact on NPDP

2.2. Effect of Transformational Leadership Climate on Business Sustainability

Business sustainability is about firms' ability to pursue their short-term financial goals without compromising their own capability as well as others' ability to attain future goals. Social, economic, and environmental dimensions are considered as three main aspects of sustainability (Chopra et al., 2021). Safety and environment protection are considered critical for business sustainability and carry competitive weightage to innovation and financial situation of an enterprise (Mangundjaya, 2019). Governments and societies have a growing concern over the actions of the organizations and require that they make environmentally safe products and acknowledge the consequences of their actions on people and society. Sustainability requires that leaders must be fair and transparent in their actions, inspire others towards attaining sustainability goals, and recognize the importance of all stakeholders in that process. Organizations nowadays are acknowledging the importance of sustainability for making their present and future competitive. Scholars suggest that leadership is one of main factors in motivating employees as well as influencing organizational policies, culture, and strategies (Liao et al., 2019). As top managers are behind strategic decisions, so if they are caring for innovation and sustainability then employees would have to follow them in that process as their role models (Burawat, 2019).

Transformational leadership and sustainability performance are structurally related. Certain previous scholars have provided the evidence. For instance, Burawat (2017) reported that transformational leadership was associated with sustainability performance through mediating mechanism of lean manufacturing. Similarly, Çop et al. (2021) suggested that green work engagement and green team resilience could be attained through green transformational leadership. Kura (2016) suggested that a climate for leadership plays an important role in promoting green behavior in organization. Scholars further suggest that subordinates would imitate managers who exhibit green behavior. Environmentally unique transformational management is when leaders would motivate subordinates to attain environmental goals and inspire followers to carry on with highest level of environmental performance (Li et al., 2020). Some research in Pakistan's textile industry presents related evidence. Study by Nasir et al. (2022) reported that transformational leadership significantly affected innovation performance and organization sustainability. Moreover, another research also reported significant effect of transformational leadership on environmental sustainability (Gull et al., 2022).

Concerning educational institutes, Gupta and Singhal (2017) report that these institutes are normally engaged in addressing sustainability issues all over the academic cycle. This starts from developing policies, mission, and vision (institutional), followed by research, curriculum, assessment and grading, on campus experience, collaboration and outreach (processes); and lastly evaluating economic, social, and environmental impacts (output). So it could be assumed that educational institutes make such policies which drive all stakeholders (students and staff) to contribute towards economic, social, and environmental sustainability.

In an educational institute, top managers being leaders would motivate and empower the staff members. They would also care intensely for the wellbeing of teachers in particular as they are social pillars of organization sustainability. Transformational leaders in those institutes would care for conservation of energy (water and electricity) and greener environment. Besides focusing on attaining economic goals, they must also work for society development and growth through producing competent graduates. Thus, on the basis of arguments and discussions made in this section, following hypothesis is developed:

H3: TLC has a significant impact on BS.

2.3. Moderating effect of SF

Generally, strategic flexibility is considered in two terms i.e. resource flexibility and coordination flexibility (Sanchez, 1995). The former is about identification and acquisition of flexible resources that could enable an organization to adopt various courses of action in responding to competition and the environment. While the later is about being flexible in coordinating the use of resources to optimize flexibilities in the resources. Strategic flexibility allows a firm to embrace changes rapidly and successfully. Strategic flexibility is associated with new product development, innovation, and sustainability. Kandemir and Acur (2022) suggest that strategic flexibility plays a key role in competitive markets. It serves as organization’s dynamic capability which enables it to adapt or forecast future new product development needs by assimilating, transforming, and reconfiguring resources. However, for proactive strategic flexibility in NPD, it is essential that organization must continuously upgrade its knowledge base. Gorondutse et al. (2021) argue that firms need to use strategic flexibility to ensure that they attain sustainability and performance targets. Nwachukwu and Vu (2020) focused their research around strategic flexibility, strategic leadership, and sustainability in Nigerian context. They report that strategic leadership and strategic flexibility significantly impacted sustainability of businesses. Certain past studies have analyzed the moderating effect of strategic flexibility for certain relationships. For instance, in a recent study, Baikuni et al. (2023) studied the moderating impact of strategic flexibility in context of microfinance institutions in Indonesia. They have reported that SF weakens intellectual capital’s effect on firm performance while it strengthens the social capital’s effect on firm performance. Further, in context of Turkish firms, Kamasak et al. (2017) found that in highly dynamic markets, effectiveness of knowledge process capabilities for improving innovation performance was dependent over firms’ strategic flexibility. The analysis of strategic flexibility as a moderator for the relationships between TLC and NPDP and BS have not been performed so far which this study accomplishes.

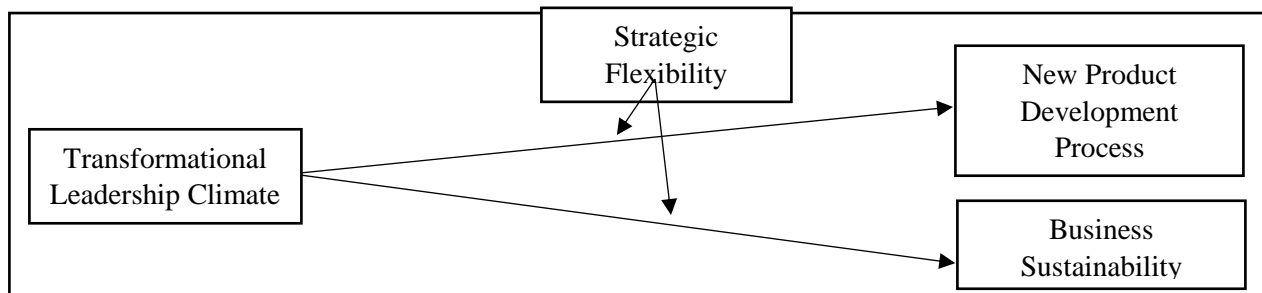
Private educational institutes’ resource & coordination flexibility could have important influence on institutes’ sustainability and the extent/breadth of their offerings. Further, it could be hypothesized that NPDP and BS would be improved through TLC particularly if SF is greater. Thus, the two hypotheses for the moderation impact of SF are developed as follows.

H2: SF moderates the relationship among TLC and NPDP.

H4: SF moderates the relationship among TLC and BS.

The research framework is presented in figure 1 below.

Figure 1: Research framework



3. Methodology

3.1. Population, Sample, Questionnaire Distribution

This study used quantitative research design and was cross-sectional in nature since the objective was to test the hypothesized model using data collected at a particular point in time. The unit of analysis was organization (private educational institute) and the population comprised of all private institutes registered with BISE Multan. The population frame was made using list of institutes available on the official website of BISE Multan. Public institutes (government owned) were not the subject of this study as all decisions are taken by the government and the faculty are not empowered enough to bring transformation and strategic flexibility in curricula and institutes’ resources. In contrast, management of private institutes can bring transformation and generate strategic flexibility because of autonomy of decision making. Private institutes need to emphasize maximum utilization of their infrastructure and resources and therefore, they offer different programs at different times of the day. They are profit oriented and thus face competition from their counterparts. They could offer variety of courses, degree programs, certificate programs, test preparation, and trainings to earn more profit. For this, they need to have transformational leadership climate and instill strategic flexibility to be able to offer such portfolio of products and generate business sustainability. Thus, data collection was made from the private institutes which offered variety of programs in their campus in different timings. The respondents were from the top management such as director or principal.

As per BISE Multan sources, 681 private institutes (high school, higher secondary school, and college) were registered at the time of data collection. They operated in 13 cities where institutes need to register with BISE Multan. 250 questionnaires (28 items) were

dispersed, out of which 145 were responded (58% response rate). The response was considered adequate as it was more than five times of the total number of items ($28 \times 5 = 140 < 145$) (Coakes et al., 2008).

3.2. Questionnaire Construction

The questionnaire asked about institution’s basic details as well as secured responses for the items of all the constructs. Since a nine point Likert type scale is more revealing and sensitive, therefore responses were recorded on a 9-point scale for conducting further analyses. At the level of organization, TLC is the extent to which leaders overall exhibit and present the four behavioral aspects towards their subordinates i.e. idealized influence (II), inspirational motivation (IM), intellectual stimulation (IS), and individualized consideration (IC) (Moon, 2016). The items (four) for TLC were adapted from Oberfield (2014). SF had two aspects i.e. resource flexibility and coordination flexibility. The items for this construct (nine) were developed from the work of Sanchez (1995) and were thus adapted in this research. The items (nine) for NPDP were adapted from the studies of Kahn et al. (2012), and Cooper and Kleinschmidt (2007). Finally, the items (six) for BS were adapted from Elkington (1998).

4. Findings and Conclusions

The data analyses was accomplished using SmartPLS 3. Initially, the data were checked for any missing values and no missing values were discovered. Variables’ descriptive were obtained and they were checked for various characteristics such as normality. For the data to have normal distribution, the Skewness should be within ± 2 while kurtosis should be with ± 7 (Byrne, 2010; Hair et al., 2010). The analysis revealed that these ranges for skewness and kurtosis were met and the data were considered normal.

4.1. Respondent Demographics

Concerning respondents’ demographic details, the highlights are as follows. It revealed that out of 145 respondents, 80 were males and 65 were females. Concerning experience, most of the respondents (43) had experience from 11 to 15 years (30%) followed by 38 respondents who had experience from 6 to 10 years (26%). Regarding qualifications, most of the respondents (77) had master level degrees (53%). This was followed by MPhil/MS degree holders who were 51 (35%). 10 respondents were PhD degree holders (7%).

4.2. Measurement Model and Assessment of Validity and Reliability

Before hypotheses testing, measurement model was drawn in line with the research framework given in figure 1. All constructs were unidimensional and their items were adapted from previous studies as noted earlier in section 3. Strategic flexibility had two aspects but it was treated as unidimensional including both resource flexibility and coordination flexibility which was in line with work of Li et al. (2016). The interaction terms were generated in SmartPLS in order to analyze moderation effect. Initially, item loadings were analyzed and the threshold for the loadings was considered as 0.5 (Hair et al., 2010). For TLC, two items were removed and two were retained. For NPDP, six items were retained and three were removed. For BS, four items were retained and two were removed. For SF, seven items were retained and two were removed. Consider table 1 for construct validity and reliability.

Table 1: Construct Validity and Reliability

	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Transformational Leadership Climate	0.450	0.656	0.535
Business Sustainability	0.731	0.808	0.521
Strategic Flexibility	0.684	0.783	0.342
New Product Development Process	0.634	0.768	0.357

Composite reliability was used to assess constructs’ reliability as it is considered better measure of reliability than Cronbach’s alpha. It is presented in table 1 that composite reliability of all the constructs was higher than 0.6 and was thus considered satisfactory (Bagozzi & Yi, 1988). Next, convergent validity was analyzed using AVE, composite reliability, and item loadings. It has been noted earlier that the item loadings were satisfactory and weaker items were removed from the model. Further table 1 notes that the composite reliability for all constructs was more than 0.6. Some researchers are of the view that the convergent validity is established when the composite reliability for a variable exceeds 0.6 even if its AVE is lower than 0.5 (Fornell & Larcker, 1981; Lam, 2012). Hence, these statistics do not show that convergent validity was an issue in this research. Furthermore, the discriminant validity was analyzed. It can be accomplished using HTMT ratios, cross loadings, and Fornell and Larcker (1981) criterion. The statistics for Fornell and Larcker criterion are shown in table 2. For satisfactory discriminant validity, the relationships among various constructs should be less than the specified square root of AVE value. Table 2 depicts satisfactory statistics for discriminant validity and thus it was established in this research.

Table 2: Discriminant Validity through Fornell and Larcker criterion

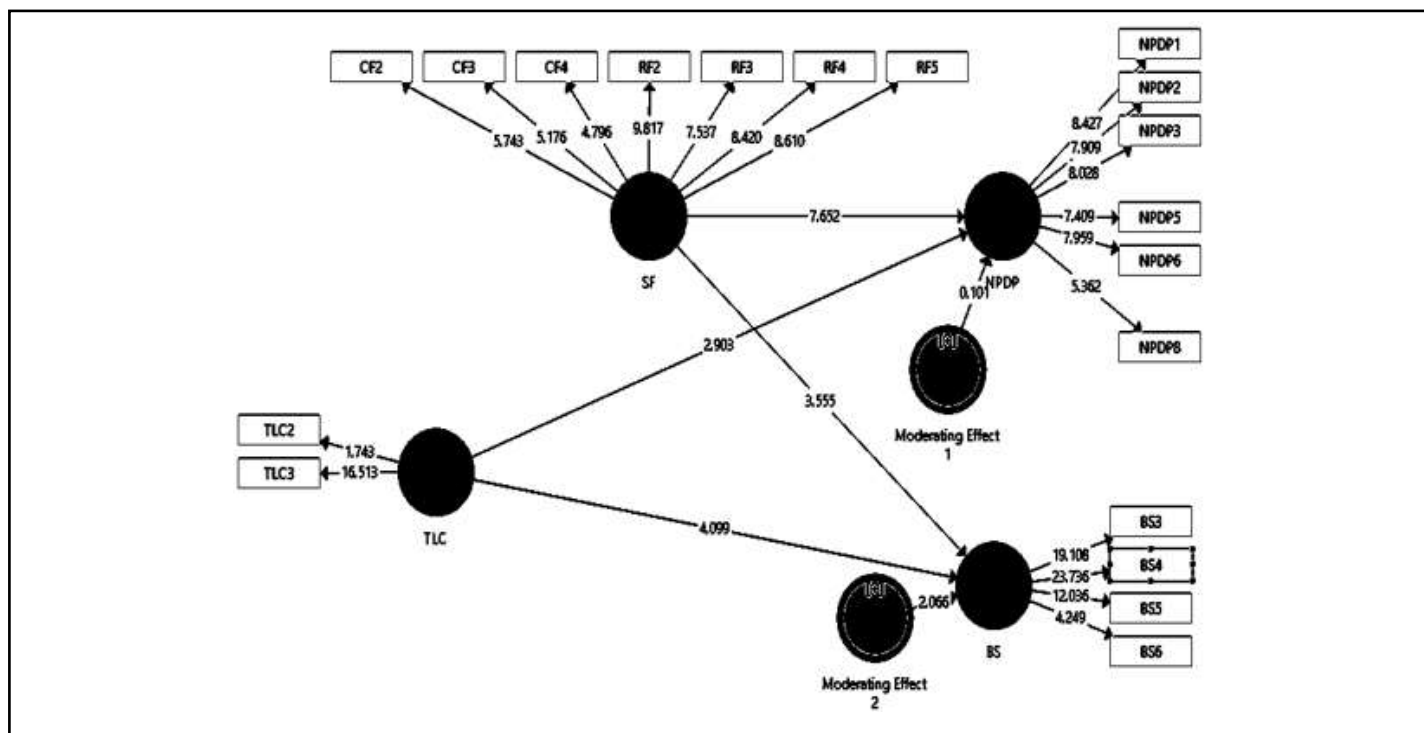
Construct	Business Sustainability	New Product Development Process	Strategic Flexibility	Transformational Leadership Climate
Business Sustainability	0.722			
New Product Development Process	0.305	0.598		
Strategic Flexibility	0.332	0.522	0.585	
Transformational Leadership Climate	0.379	0.270	0.121	0.731

Additionally, multicollinearity was assessed as high multicollinearity among variables distorts the findings of the study. It was assessed using VIF (Variance Inflation Factor) which must be less than 4 (Garson, 2016). The analysis of VIF revealed that it was less than 4 for all the variables, hence considered satisfactory. Finally, SRMR of the model was 0.091 which is also considered acceptable for a satisfactory model fit (Garson, 2016).

4.3. Hypotheses Testing and Findings

This section presents the findings of the hypotheses testing. As noted earlier, a moderated model was tested in this study where TLC was independent variable, NPDP and BS were dependent, and SF was moderating variables. The structural model (figure 2) was drawn keeping in view the requirement of the test. The interaction terms were generated using the available option in SmartPLS. Initially, PLS algorithm was run and later bootstrapping was done as suggested using 500 subsamples (Danielsson et al., 2001). Bootstrapping was conducted using 2-tailed test at 95% significance level.

Figure 2: Structural Model



Initially, for H1, the impact of TLC was analyzed on NPDP. The results are presented in table 3. Table 3 shows that TLC had significant impact on NPDP (t-value: 2.903, p-value: 0.004). The confidence intervals (0.075 & 0.351) also point towards the significance of the result. Hence, H1 was accepted. Further the beta coefficient was also positive (0.221), therefore it implies that greater is TLC in an institute, more are the outcomes in terms of new programs, courses, and trainings offered with respect to market needs.

Table 3: Hypothesis Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation	p-value	t-value	2.5%	97.5%
TLC→NPDP	0.210	0.221	0.072	0.004	2.903	0.075	0.351
TLC→BS	0.349	0.355	0.085	0.000	4.099	0.175	0.509
SF→NPDP	0.497	0.518	0.065	0.000	7.652	0.391	0.645
TLCxSF→NPDP	-0.006	-0.014	0.059	0.919	0.101	-0.148	0.088
SF→BS	0.290	0.295	0.081	0.000	3.555	0.128	0.440
TLCxSF→BS	0.126	0.128	0.061	0.039	2.066	0.008	0.242

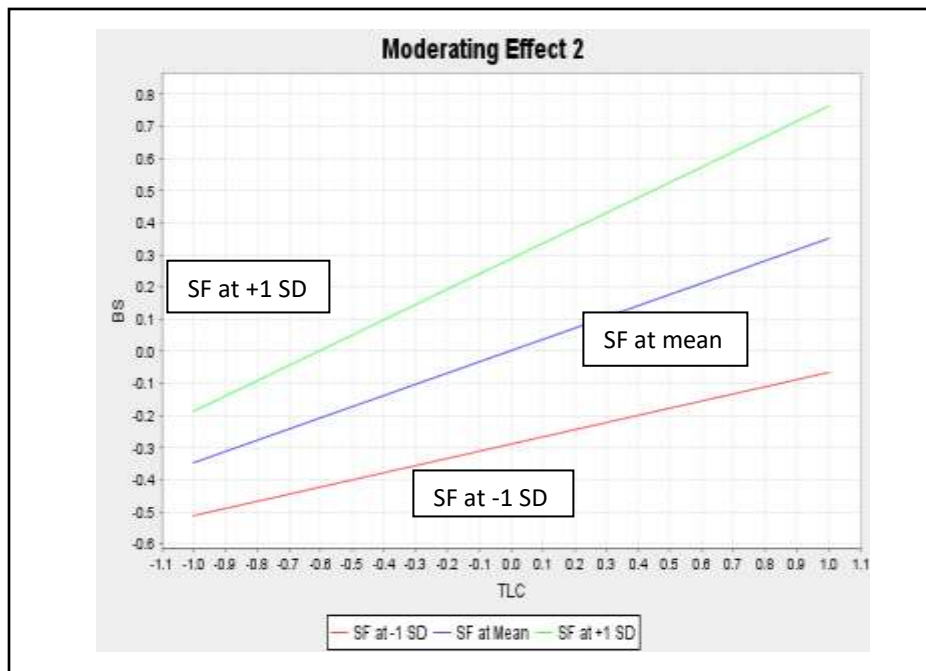
Next, H2 was tested which was about moderating influence of SF on the relationship between TLC and NPDP. It can be seen from the table 3 that the impact of the interaction term (TLCxSF, moderating effect 1 in figure 2) on NPDP was insignificant (t-value: 0.101, p-value: 0.919), thus H2 was rejected. However, the impact of SF on NPDP was significant (t-value: 7.652, p-value: 0.000) and the beta coefficient was positive as well (0.518). Thus, it is concluded that having greater SF in an educational institute leads to higher NPDP. But SF does not interact with TLC to influence NPDP.

Further, for H3, the impact of TLC was analyzed on BS. Table 3 shows that TLC had significant impact on BS (t-value: 4.099, p-value: 0.000). The confidence intervals (0.175 & 0.509) also point towards the significance of the result. Hence, H3 was accepted.

Further the beta coefficient was also positive (0.355), therefore it implies that greater is TLC in an institute, better is its sustainability position.

Lastly, H4 was concerning SF's moderating impact for the relationship among TLC and BS. The findings in table 3 reveal that the interaction term's effect (TLCxSF, moderating effect 2 in figure 2) on BS was significant (t-value: 2.066, p-value: 0.039). Thus, the moderating influence was verified and H4 was accepted. Further, the direct impact of SF on BS was also significant (t-value: 3.555, p-value: 0.000) as well as positive (beta coefficient: 0.295) revealing SF was a quasi-moderator. This leads to the conclusion that strategic flexibility fosters business sustainability. It also interacts with transformational leadership climate in an educational institute to affect sustainability. In order to reveal how this interaction impacts business sustainability, graphs were generated. Figure 3 presents those graphs. The graphs represent relationship between TLC and BS at three different levels of SF. Specifically, it shows that when SF is low (at -1SD), the relationship between TLC and BS is less positive. It goes on increasing as SF becomes higher. At +1SD, therefore, the slope of graph for the association between TLC and BS is more positive. It thus implies that when SF increases in an institute, it better supports transformational leadership climate to generate institute's sustainability.

Figure 3: SF casting a positive moderation effect on TLC and BS relationship



5. Discussions and Research Implications

This research has paid genuine contribution in testing the moderation impact of SF on the association among TLC and NPDP & BS for private educational institutes in Pakistan and carries significant implications for the theory and practicing managers. Firstly, it revealed that TLC positively impacted NPDP. These findings are consistent with those of past studies as well (Sattayaraksa & Boonitt, 2016; Zhou et al., 2018). Research by Sattayaraksa and Boonitt (2016) reported that transformational leadership positively impacted organizational learning and innovative culture and would finally result into new products. Similarly, Zhou et al. (2018) also revealed that with the application of green transformational leadership, green product development performance could be enhanced. Theoretically, results support upper echelon's theory (Hambrick & Mason, 1984) stating that decisions made by top managers have important repercussions for a firm. Similarly, they support transformational leadership theory (Bass, 1995) which suggests that transformational leaders would encourage creativity and increase employee motivation that could lead to positive organizational outcomes. The findings guide educational heads to practice transformational leadership as it stimulates teachers and staff to suggest new programs and offerings. It is significant for these institutes as they are supposed to remain self-sufficient and operate without government grants and aids. Offering of new programs and courses as per market needs is significant with the passage of time.

Secondly, this study revealed positive impact of TLC on BS. This is also consistent with those of past studies. For example, in context of Thailand, Burawat (2017) reported that transformational leadership was related with sustainability performance through mediating mechanism of lean manufacturing. In context of Pakistan as well scholars have suggested that transformational leadership has positively influenced innovation performance, environmental sustainability and organization sustainability (Gull et al., 2022; Nasir et al., 2022). Theoretically, these findings also contribute to transformational leadership theory and upper echelon theory. It has been noted earlier that sustainability consists of three aspects that are economic, social, and environmental. It could be concluded here that in educational institutes, prevalence of transformational leadership climate would add towards the three pillars of sustainability as it would involve coordinators, principals, and other staff in making collective efforts towards the goals and the institutes would grow economically, generate a positive image in society and would conduct their operations in environment friendly ways.

Thirdly, this study revealed that SF does not moderate the relationship between TLC and NPDP however, SF had significant direct impact on NPDP. Certain past scholars suggested that resource flexibility could be utilized to increase range of products offered by an organization (Cestone & Fumagalli, 2005). In Chinese context, study of Yin et al. (2023) reported that strategic flexibility affected firm innovation performance. Kandemir and Acur (2022) also suggested that being a dynamic capability, strategic flexibility enables firms to plan for future new product developments. The insignificant moderating effect of SF is contrary to some past studies such as those by Wei et al. (2014) who reported that strategic flexibility positively moderated the association among ambidexterity and NPD performance. One of the possible reason for the insignificant effect of SF could be the nature of organizations, sector, sample size, or other unaccounted external variables. Since, the results could be different for a new population and sample so we recommend future researchers to explore this moderating influence for the same relationship between TLC and NPDP further.

Lastly, SF's moderating impact on the association among TLC and BS was revealed as significant. It supports the contingency theory of management through significant moderation effect (Fiedler, 1994) as well as transformational leadership theory and upper echelon theory. Certain past scholars have also stressed on the importance of strategic flexibility for firm performance and sustainability (Gorondutse et al., 2021; Nwachukwu & Vu, 2020). Baikuni et al. (2023) have suggested significant moderating impact of strategic flexibility on the relationship between intellectual capital, social capital and organization performance. Similarly, Kamasak et al. (2017) suggested that strategic flexibility was significant in order for knowledge resources to enable innovation performance. The findings of this study has important practical implications. In educational institutes, transformational leadership and strategic flexibility work hand in hand for making effective and fuller utilization of resources. Therefore, the institutes which offer variety of courses/programs in different day durations and use their infrastructure including faculty, staff, class rooms, and other facilities for multiple purpose could maintain better sustainability.

6. Limitations and Future Research Directions

This research carries certain limitations. Firstly, the study was only accomplished for the educational institutes and not for the manufacturing sector which is very significant to a country's economy and perhaps equally relevant to the variables of this study. Future studies could accomplish this task and conduct similar investigation for the manufacturing sector if the availability of proper support and time is ensured. Secondly, transformational leadership is a rich construct and for the measurement of transformational leadership climate, more comprehensive instrument should be developed and employed.

This study also collected data for educational institutes registered under BISE Multan. In order to widen the scope of this research, data can be collected in future from educational institutes operating under other boards as well. Some other variables like organization culture and organizational learning could be relevant to this investigation as they are also associated with leadership. Future research could study their role in different perspectives to add to the body of knowledge. This study is replicable to all those international contexts where similar arrangements and priorities hold valid for the private educational institutes.

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