Does supplier development matter for procurement performance in the textile industry? The moderating role of contract management difficulty

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ABSTRACT – REZUMAT

Does supplier development matter for procurement performance in the textile industry? The moderating role of contract management difficulty

The research aims to examine the impact of supplier development on procurement performance, taking into consideration contract management difficulties as a moderating variable. The research method section of the study employs a cross-sectional research design. In this survey technique, a questionnaire is employed to collect primary data from 220 respondents from the purchasing department via Google Forms through an adopted questionnaire. The initial step in our analysis was to clean and analyse the data using SPSS and SmartPLS 3 software, then incorporate structural equation modelling (SEM) to conduct our analysis. The findings confirmed that supplier development affects procurement performance. In addition to this, the contract management difficulties suggested a negative and significant impact on procurement performance. Furthermore, the relationship between supplier development and procurement performance is moderated by contract management difficulty. These unique findings highlight the importance of supplier development and effective contract management in improving procurement performance in the textile industry. The work's implementation of transaction cost theory to analyse how supplier development impacts sourcing capability is recognized as the primary theoretical contribution.

Keywords: *supplier development, contract management difficulty, procurement performance*

Dezvoltarea furnizorilor influențează performanța achizițiilor în industria textilă? Rolul moderator al dificultății de gestionare a contractelor

Studiul își propune să examineze impactul dezvoltării furnizorilor asupra performanței achizițiilor, luând în considerare dificultățile de gestionare a contractelor ca variabilă moderatoare. Secțiunea privind metoda de cercetare a studiului utilizează un design de cercetare transversală. În această tehnică de sondaj, se folosește un chestionar pentru a colecta date primare de la 220 de respondenți din departamentul de achiziții prin intermediul Google Forms printr-un formular adoptat. Pasul inițial al analizei noastre a fost curățarea și analiza datelor folosind software-ul SPSS și SmartPLS 3, apoi încorporarea modelării ecuațiilor structurale (SEM). Constatările au confirmat că dezvoltarea furnizorilor afectează performanța achizițiilor. În plus, dificultățile de gestionare a contractelor au sugerat un impact negativ și semnificativ asupra performanței achizițiilor. În plus, relația dintre dezvoltarea furnizorilor și performanța achizițiilor este moderată de dificultatea de gestionare a contractelor. Aceste constatări unice evidențiază importanța dezvoltării furnizorilor și a gestionării eficiente a contractelor în îmbunătățirea performanței achizițiilor în industria textilă. Implementarea teoriei costurilor de tranzacționare pentru a analiza modul în care dezvoltarea furnizorilor are impact asupra capacității de aprovizionare este recunoscută drept principala contribuție teoretică.

Cuvinte-cheie*: dezvoltarea furnizorilor, dificultăți în gestionarea contractelor, performanța achizițiilor*

INTRODUCTION

Recent indigenous empirical studies point to the fact that the competitiveness of procurement activities is largely reliant on the quality of supplier relations. The various studies showed that the quality of employee relations can make a huge difference in the advantages obtained through the procurement department during operations. With the purpose of cutting expenses, boosting quality and delivery, and promoting innovations, the suppliers of procurement teams should emphasize building sound relationships. Besides supplies like raw materials, products, and services, there are certain other values that, including the experience, knowledge, and assistance from the suppliers, are essential. By nurturing harmonious relationships with their suppliers, firms can get leverage in tapping the value of their supplier network and achieving their business objectives [1]. In the course of performing supplier management tasks, there is a need to think over and introduce the process of supplier development. The term supplier development involves practices such as working with suppliers to increase their capacities, structures, and operational performance [2]. In addition to this, corporations can

do so by spending on what is referred to as supplier development, which aims at improving the quality and reliability of the supply chain and generating long-term value for the companies and the suppliers to which they extend their services. However, the company's investment in setting up and maintaining the institution shows its dedication to its suppliers, which may eventually develop loyalty and trust. Strategic alliances and mutually beneficial terms for both parties may evolve from that in the long run.

The industry requires a supplier for wide range, including the supplies and services obtained to support the textile industry, which includes supplier development, which is a highly crucial factor [3]. To make sure that they buy good and excellent materials at affordable prices, the industry should work closely with their suppliers. Also, supplier development could be the way to develop the textile sector and keep this sector as a partner for textile sector receivers. Therefore, an entity that deals with an industry can resourcefully evaluate its suppliers' effectiveness and efficiency. This can contribute to the process of supplier development programs and also determine the region that needs progress.

Similarly, the industry will develop partnerships with vendors that are based on mutual respect and trust and survive for a long time. Changing "Industry will develop partnerships with vendors that are based on mutual respect and trust and survives for a long time" to "Industry will create relationships with vendors that are built on respect and trust, which will last long". Several other options, like favourable prices and favourable terms, could be experienced, and we can lower the conveyance costs of a product in the case where it is sourced from local suppliers. The industry would also have to ensure the suppliers follow the quality and security standards by having a watchful eye on the performance of the latter. These possible aids acknowledge any issues and produce ways to improve. While the buyer gets the best experience, the providers should also create an environment which pushes the suppliers to thrive. Lastly, industries can foster better supplier performance, encourage innovation, develop long-term relationships, and reinforce supply chain stability by developing interventions related to suppliers' development [4].

Numerous studies have been conducted related to supplier development in procurement performance regarding the service sector [5, 6]. A recent study showed how a particular vendor development programme affected the supply chain resilience and the organization's performance [7]. Supplier development in various forms might strengthen the supply chain medium and enhance workers' integrity. The impact of supplier development on productivity in the Bangladeshi apparel industry was similarly conducted by Afshan and Motwani [8]. The findings of these studies confirmed that, among others, it is possible to enhance the productivity of supply with the help of supplier development programmes, which also yield beneficial effects along the whole supply chain. Encouraged by the conceptual model [9], the paper proceeded to explore the reasons and consequences of positive supplier development. Research indicates that some factors have a higher focus than others; these include the way the supplier is resourced, how strong the relationship between the supplier and the buyer is, and the supplier development plan structure. Aside from this, the researchers also looked at whether the involvement of suppliers in the development process had impacted the supply chain performance and whether or not the type of suppliers mattered. The studies showed that supplier development has both positive and negative effects on the supply chain [10, 11]. Besides, the effect is greater for strategic suppliers, and this one is more noticeable than that for transactional suppliers. In the Malaysian automotive sector, particular emphasis is given to how certain strategies, such as supplier development, can result in higher supplier performance and broader customer satisfaction. Supplier development as a strategy has been a key issue, especially when supplier performance needs to be enhanced. This also improves both buyer and supplier satisfaction.

A study conducted recently traces the imbalance in supplier development and procurement performance among service industries, particularly in countries with economies faced with the challenge of development. To confirm if client-supplier management affected buying performance, the researchers surveyed purchasing managers. They suggested that we should explore the faces of purchasing managers of these industries and other developing country respondents who will support our assertions [12]. Therefore, this study aims to examine the direct effect of supplier development on procurement performance in Pakistan's textile industry. However, the moderating role of contract management difficulties has not yet to previously worked together regarding the textile industry of Pakistan.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Theoretical framework

As transaction cost economics (TCE) states, firms factor the minimization of transaction costs into decision-making [13]. In particular, supplier development can be a synonym for a buying company putting much effort towards transaction cost reduction, concerned with the suppliers' low performance, low-quality products or delay in delivery. The problem of contract management, providing a moderating variable, describes the supplier development effectiveness by changing the difficulty of the buyer-supplier relationship management [14]. In contrast, the moderating variable describes the effectiveness of supplier development efforts by changing the complexity of buyer-supplier relationship management.

Furthermore, the resource-based view (RBV) postulated that those companies that are able to gain a competitive advantage are those that harness their special resources and put them into practice [15]. In this sense, supplier development can be treated as

one of the beneficial resources for the buyers, which contributes to their capability by improving strategic procurement components such as supplier selection, relationship management, and knowledge sharing. Moderating the relationship between supplier development and procurement performance, no less than the contract management difficulty, affects the purchaser's capability of implementing well and capitalizing on the developed suppliers' resources. Secondly, the origin of agency theory is when a party is delegated to act on behalf of another within a principal-agent relationship wherein there is potential for information asymmetry and opportunistic behaviour [16]. Supplier development, on the other hand, can be regarded as an instrument that helps to fill some gaps between the interests of the buyer and supplier, reduces information asymmetry, and cuts conflict of interest. In addition to this, contract management difficulty, as a moderating factor, standing between the success of supplier development and the clarity of term contract structure, accountability by monitoring mechanism, and the buyer's choice to ensure performance are the reasons.

Nevertheless, Transaction Cost Economics (TCE) is the guiding theory for this particular work because it applies in cases, has a transaction cost perspective, provides practical implications and now has an empirical basis in procurement practice [17]. The TCE theory establishes how the elements of expertise, receptivity, and opportunity may be used in practitioners' procurement actions. Moreover, it connects the buyer and the seller. It refers to the costs related to this transaction, which is parallel to what we have recorded in the paragraph mentioned above. TCE relies heavily on the concept of transaction costs as the tool through which the economic activity is structured. From a purchase perspective, the transaction costs are not only monetary ones but also include costs of deficient information, opportunistic behaviour of the parties and sunk costs for the relationship-specific investments [18]. This research considers the transaction cost point of view from the purchaser and supplier sides. It thus investigates how supplier development and contract management difficulty influence this transaction cost and then change procurement performance.

Literature review & Hypothesis development

Supplier development

Supplier development programs, as already proven, have been showing a positive realm of performance indicators like punctual delivery, product quality, and process efficiency. For instance, according to a recent study by Gu et al. [19], supplier development initiatives served as capacity building and as a training tool for suppliers and have resulted in higher quality and reliability of delivery. Similarly, the development of supplier programs is characterized by enhanced relationships and effective communication between buyers and suppliers, which cause an internal level of collaboration, trust and mutual understanding [20]. This can lead to better communication, working together and homogeneous relations; thus, the relationship can be elevated to a fulfilling satisfaction level. Furthermore, supplier development is one tool that can be used to address transaction costs by turning uncertainties into regular operations, in some cases into transparency, and minimal opportunistic behaviours. A recent study confirmed that through getting together with their suppliers, developing their skills and setting common goals, buyers are good at decreasing the transaction costs resulting from erroneous supplier performance or interruptions [21]. In addition to this, the implementation of the supplier development programs is associated with the use of the investors' time, effort, and resources from both buyers and suppliers. In enhancement, regarding cost in some cases, it covers training, technology transfer, process improvements and monitoring.

Nevertheless, with the need for more resources to divert and the capacity to execute these strategies, the organizers might find themselves in a complex situation [22]. Besides, some suppliers are flexible, and they are eager and able to contribute to supplier development programs. Differently, small- and medium-sized suppliers may need more means, resources, or abilities to get involved in these activities. This can limit the potential impact of supplier development on procurement performance, especially when the supplier base is diverse. Finally, as another aspect, passing on the benefits of the supplier development programs over time might be a difficult task as well [23]. Suppliers could need help maintaining the newly attained high-performance level even though they seek a trade-off. Hence, alteration of the market conditions, competitive dynamics, or buyer-supplier relationships turn into factors that influence the lengthy-term survival of gains from supplier development. Thus, the following alternative hypothesis is suggested:

H1: SD is positively related to PP.

Moderating role contract management difficulty

Proper contract management invariably brings about a good understanding of duties and responsibilities that make possible improved compliance with contracting conditions [24]. While contracts with clear layouts and meanings get concluded, the performance of the procurement process would probably increase. Existing research has revealed that when it comes to contract clarity, the better it is, the higher procurement performance increases. This increase is visible in such factors as cost savings and supplier performance. In addition to this, risk management for procurement activities can only be performed effectively while contract management is advancing [25]. Since contracts are usually intricate documents that contain various terms, including insufficient risk allocation, unclear performance metrics or too much uncertainty, the parties may face disputes, delays and quality issues, to name a few problems during the implementation of the projects.

Similarly, through efficient contract administration, we can avoid undue performance and integrity issues [26].

The same can be said about contract management's difficulty in obtaining a supplier's report on their performance. When the situations in which contracts are complicated or hard to yield are imposed, it then becomes a task to get the ground of the suppliers and their performance around established metrics. Furthermore, useful contract management practices provide a mechanism for monitoring, and therefore, it makes it easier for buyers to see and act swiftly if implementation deviations occur [27].

However, the managing of contract relaxations on determined activities, such as lengthy documentation, approval processes, and legal aspects, could be more manageable and bureaucratic for procurement staffers [28]. This may be stealing time from strategic efforts, having them focus on noncore activities, and thus dipping procurement performance below the set targets. It has been noticed that organizations are required to strike a balance between contract management, which is effective in their operations, and the minimalizing of the administrative roles. The high level of the rightness of the contract may be a problem if it does not prosper due to the required flexibility to adjust to the complexities and changes in the market, technological development, or unknown incidents arising. This is not possible because the stability of contractual terms could be detrimental to decision-making, and procurement is rigid and cannot be changed in time when conditions or tenders change. A balance of contract difficulty with the need for flexibility is fundamental and invaluable in the optimization of procurement [29]. Similarly, the complexity of the contract administrations will make the buyer-supplier relationship even more difficult. Lastly, technical complicacy and ambiguities of contracts may result in a lack of clarity, loss of faith and frustration with collaboration. Thus, the following alternative hypothesis is suggested:

H2: CMD is negatively related to PP.

H3: CMD moderates the relationship between SD and PP.

METHODOLOGY

Data collection procedure and sample size

In the present study, 220 employees were working in the purchasing departments of various textile industries in Pakistan. The research used a survey methodology, and the primary data were asked using an adopted questionnaire that was made available on the internet instead of using the paper and pen approach (online). We used a questionnaire, and its validity and reliability were tested through a pretest. Besides, it had questions based on the earlier research. Responses were collected during four weeks, and a space was made up for each week as a whole to complete the questionnaire. The data were scraped for garbage to discard any inaccurate or unavailable data. The reliability and consistency were ensured during the data cleaning stage when the appropriateness of the questions was checked and reviewed. For our first effort, we imported the data into the SPSS and then ran descriptive statistics to compile our findings. The first step was the development of a research hypothesis, which was then tested by analyzing the data of the experimental group separately from the control group using the SmartPLS 3 programme. The received data was processed through structural equation modelling (SEM) by adopting a path analysis approach to demonstrate the results. With the help of the indicators, which are reflective and formative, the research hypotheses were tested, and the model structure and measurement method were confirmed.

Research instrument

The independent variable supplier development was taken from the studies of [14, 30] and research items are "We suggest improvement targets to our suppliers, we provide feedback about performance evaluation to our suppliers, the allocated personnel in managing suppliers enhance suppliers' and Our firm has taken supplier development with supplier X through setting improvement targets".

The moderating variable contract management difficulty is used in the study, and we have adopted this study [14]. Items are "The time and efforts put into developing formal contracts with our suppliers are significant, the costs associated with developing and maintaining formal agreements with our suppliers are significant and ensuring that our contracts adequately represent our evolving relationships with our suppliers requires substantial resources".

The dependent variable procurement performance is taken from the research of Wachiuri [14]. Research items are "We are very satisfied with our suppliers, our complaints to engaged suppliers have reduced significantly if we had to start all over again, we would still choose the same suppliers and we respond to user departments' orders in time".

Tool for data analysis

A standard tool for an assessment of the key dimensions in the structural equation modelling (SEM) approach is the SmartPLS 3 software. Researchers from a variety of departments, such as the social sciences, management, marketing and economics, are using SmartPLS [31]. SmartPLS 3 software offers class features, including the possibility to run very complicated models with high dimensionality, latent variable path models, formative and reflective measurement models, a variety of statistics and latent variable path models.

RESULTS AND DISCUSSION

Common biased method

Cooper et al. [32] argue that the CMV may introduce errors in the measure of study outcomes by using participant-reported data techniques or a single source [32]. However, the likelihood of the reported data showing certain biases is very high, so it could be socially desired bias, response bias or acquiescence bias – which explains the same. With the help

of CMV, a researcher can examine and account for the possible bias related to a specific technology/data source that may have influenced the findings. Therefore, this study may get more authenticity if scientists statistically adjust (=control for) CNNM. Researchers claim that the factor parts of ANOVA will make up at most 50% of the variance [33]. The range is less than 0.45% or less than 0.47% of the current research.

Reliability and validity (Questionnaire)

There needs to be a clear understanding of which data is gathered correctly and which hypotheses are correctly tested; thus, reliability and validity must be ensured [34]. Errors existing in the hypothesis testing may discard the likely facts, while the testing of no reliable and legal data could result in the conclusion of the wrong idea. Hence, a gathering of characteristics, improving the measure of accuracy and precision, should be checked before the faculty of the hypothesizing is accepted. Cronbach's alpha and composite reliability are indicators that are considered to be very reliable for research reliability assessment. For the current research, perfectly determining the reliability of Cronbach's alpha or composite reliability is typically recommended at a threshold value of 0.70 or more [35]. It is thus evident that the homogeneity value provides a tangible indicator of a scale's or item's internal consistency and reliability, as the difference in the response patterns can be unattributed to the measured phenomenon.
Conclusively, this value physicalizes the construct as the phenomenon underlying the occasions of measurement. In this research, all the Cronbach's alpha and composite reliability scores were higher than 0.70, which indicates that the internal consistency and reliability of the measurement scales were appropriate for each construct being examined. Table 1 and figure 1 show the data.

Table 1

RELIABILITY AND VALIDITY (QUESTIONNAIRE)					
Factors	**Item SPSS coding**	**Items loading**	**Cronbach alpha value**	**Composite reliability**	**Average Variance Extraction (AVE)**
Supplier development	SD1	0.800	0.903	0.933	0.778
	SD2	0.930			
	SD3	0.910			
	SD4	0.882			
Contract management difficulty	CMD1	0.867	0.844	0.906	0.763
	CMD2	0.879			
	CMD3	0.873			
Procurement performance	PP1	0.872	0.903	0.932	0.774
	PP2	0.885			
	PP3	0.849			
	PP4	0.913			

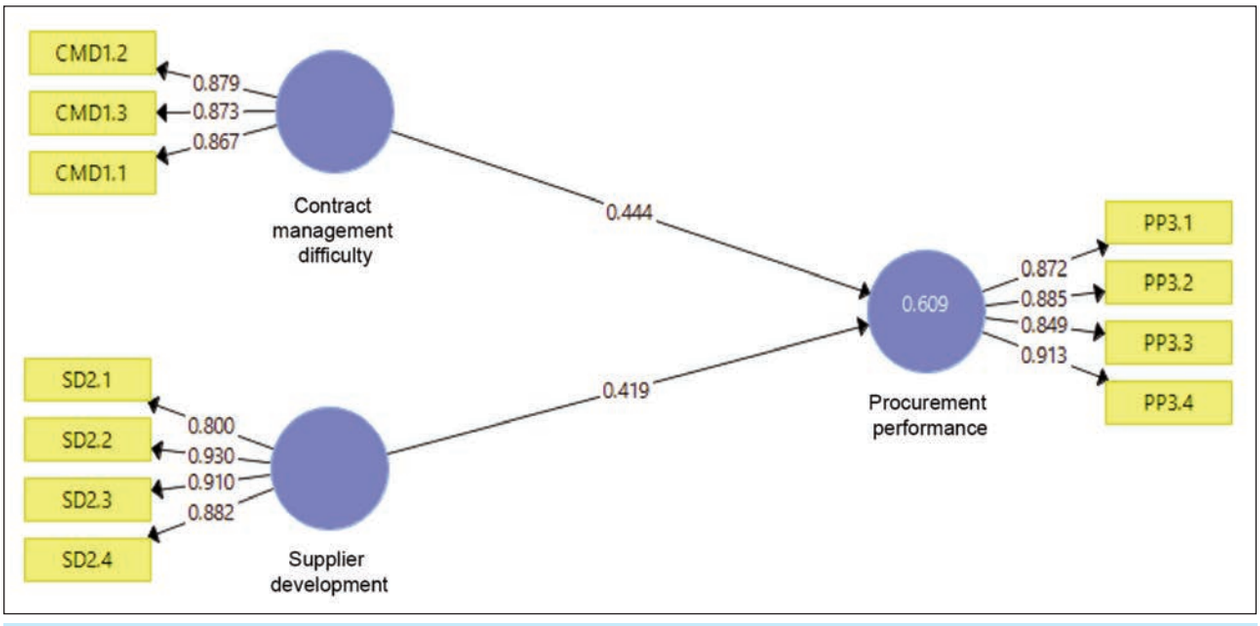

Fig. 1. Model fitness

In structural equation modelling (SEM), average variance extracted (AVE) is a prominent statistic for the estimation of the convergent validity of a measurement model. What we do is take the squaring of the correlation between the indicators of the construct to obtain a squared correlation and then average the squared correlations of the overall indicators of the construct, and the AVE is computed. The range of the AVE Index equals or above 0.5, which means that the indicators explain about half of the variance for the concept. Employing the average variance extracted (AVE) techniques for this study, we can see that the items measuring each of the constructs have AVE values that are higher than 0.50, meaning that the indicators used for each construct can explain at least 50% of the entire construct's variability [36]. The measurement model has convergent validity to a great extent, as the measurement error does not influence the variance of each construct but has a great relationship with its indicator (table 1 and figure 1).

Testing of hypothesis – Supplier development

The data was confirmed with a beta value of 0.391 and a t-value of 5.536. This indicates that supplier development clearly showed a positive and significant impact on procurement performance. The higher value showed more surveys, the result will be statistically significant, and if there is more t-value, it means more impact on beta. Thus, supplier improvement has played a crucial role in helping enhance procurement (table 2 and figure 2).

The moderating effect of contract management difficulty

However, the report hypotheses H2 and H3, focusing on earlier research, explore the moderating influence of contract management difficulty in Pakistan's textile industry. Looking at the results, we got a t-value of 4.265 and a negative beta value of (–) 0.097, which was significant. This, therefore, means that the contract management difficulty negatively supports the performance of buyer-supplier development as well as procurement (table 2 and figure 2).

Discussion on results

H1, the empirical result reveals that there exists a strong and meaningful link between supplier development and procurement performance ($\beta = 0.391$, $p < 0.001$). This implies that as companies are involved in supplier development activities like training, capability building, and working partnerships, procurement results will get better. The positive sign showed that supplier development is stronger in preference, which leads to improved procurement performance. This outcome, in the same way as other research, shows how supplier development has financial benefits through the improvement of performance,

Table 2

MODERATING EFFECT			
Paths	**Value of Beta**	**T-Value**	**Remarks**
Supplier Development -> Procurement Performance	0.391	5.536	Supported
Contract Management Difficulty -> Procurement Performance	0.403	6.805	Supported
Moderating Effect 1 (Supplier Development* Contract Management Difficulty)	–0.097	4.265	Supported

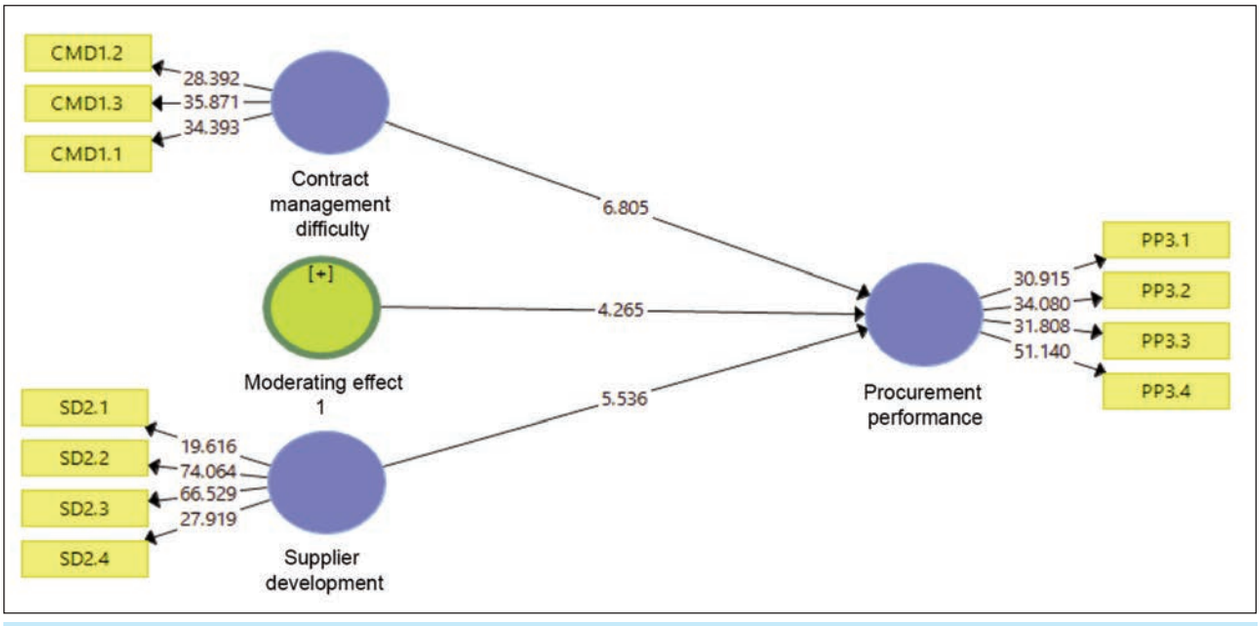

Fig. 2. Moderating effect of contract management difficulty

the enrichment of relationships and the reduction of transaction costs [37, 19]. The evidence points towards the direction of manufacturing companies in the textile industry in that they can attain good procurement results by actively partaking in supplier development programs.

H2, the correlation analysis shows that contract management difficulty and procurement performance are negatively correlated ($\beta = -0.0403$, $p < 0.001$). Thus, we can deduce that procurement performance worsens with an increase in the complexity of contract management. The minus sign indicates that contract management issues, such as complexity, vagueness, and extra-administrative burden, hinder procurement performance. The result confirms the previous studies that explain every one of the contract management categories, which are the mitigation of risks to the organisations, enforcement of compliance and performance evaluation [14, 38]. Furthermore, assessment has brought the realization that there is a need for organisations to put contract management practices in place for more enhanced procurement performance.

H3, the analysis showed that contract management difficulty performs a moderating effect on the supplier development – procurement performance relationship ($\beta = -0.097$, $p < 0.001$). Quite obviously, the level of contract management difficulty used is a determinant of how supplier development interacts with and affects procurement performance. It is the negative correlation which implies that the better the supplier development efforts get, the more difficult the contract management is. Lastly, it implies that the supply development gain becomes less apparent when commercial management becomes more difficult [39]. This showed that enterprises must bear the responsibility of mitigating suppliers' intricacies to reap full supplier development harvests [40].

CONCLUSION

Through the analysis of the textile industry's primary data, this paper studied the relationship between supplier development, contract management difficulty and procurement performance. Three hypotheses were introduced, and data was analyzed to test them. The conducted analysis came up with a well-ordered tendency link between the development of suppliers and procurement results. In addition to this, the result thus provides an empirical confirmation of the claim that supplier development is positively and respectively linked to procurement performance. Every analysis, in this case, focused on supplier development and contract management's difficult interaction in procurement performance. The findings proved that the results were noticeably moderating role. The result is also evidence which adds up to the assumptions that supplier development will become less effective under a condition where contract management difficulty is present.

The study findings suggest that supplier development positively influences procurement performance in the textile industry. Additionally, higher contract management difficulty is associated with lower procurement performance. Furthermore, contract management difficulty moderates the relationship between supplier development and procurement performance. These unique findings highlight the importance of supplier development and effective contract management in improving procurement performance in Pakistan's textile industry.

Limitations and future research directions

These are some limitations, and they will be addressed as well. The data was filtered from only one data source, with small limitations on how widely we can adapt the results to different textile companies. As for future research, investigators could be encouraged to gather data from multiple sources to improve the validity of this data. In one breath, the fact that the study was conducted in a developing country raises a concern that the results may not be generalised to other nations since other factors may have contributed. For future studies, other countries or different locations would also like to do the same research to obtain similar results. In terms of the approach, it is vital to consider that the type of data utilized was cross-sectional, making it difficult for scholars to identify the cause and effect. The functional relationship between supplier development, contract management and procurement outcomes can be confirmed through the employment of longitudinal or experimental approaches in research. Lastly, the research focused on the textile sector. Researchers might conduct a similar study for service areas, such as education, hotels, and financial industries, to discover how the outcome of such studies fits in varied circumstances.

REFERENCES

[1] Shukor, A.A.A., Newaz, M.S., Rahman, M.K., Taha, A.Z., *Supply chain integration and its impact on supply chain agility and organizational flexibility in manufacturing firms*,In: Int. J. Emerg. Mark., 2021, 16, 8, 1721–1744

[2] Subramaniam, P.L., Iranmanesh, M., Kumar, K.M., Foroughi, B., *The impact of multinational corporations' socially responsible supplier development practices on their corporate reputation and financial performance*, In: Int. J. Phys. Distrib. Logist. Manag., 2020, 50, 1, 3–25

[3] Aldrighetti, R., Zennaro, I., Finco, S., Battini, D., *Healthcare supply chain simulation with disruption considerations: A case study from Northern Italy*, In: Glob. J. Flex. Syst. Manag., 2019, 20, Suppl 1, 81–102

[4] Espino-Rodríguez, T.F., Taha, M.G., *Supplier innovativeness in supply chain integration and sustainable performance in the hotel industry*, In: Int. J. Hosp. Manag., 2022, 100, 103103

[5] Ağan, Y., Kuzey, C., Acar, M.F., Açıkgöz, A., *The relationships between corporate social responsibility, environmental supplier development, and firm performance*, In: J. Clean. Prod., 2016, 112, 1872–1881
[6] Yawar, S.A., Kauppi, K., *Understanding the adoption of socially responsible supplier development practices using institutional theory: Dairy supply chains in India*, In: J. Purch. Supply Manag., 2018, 24, 2, 164–176
[7] Wieteska, G., *The impact of supplier involvement in product development on supply chain risks and supply chain resilience*, In: Oper. Supply Chain Manag. An Int. J., 2020, 13, 4, 359–374
[8] Debnath, B., et al.., *A grey approach to assess the challenges to adopting sustainable production practices in the apparel manufacturing industry: Implications for sustainability*, In: Results Eng., 2024, 22, 102006
[9] Afshan, N., Motwani, J., A*n investigation of antecedents and consequences of supplier integration: a study in Indian context*, In: Meas. Bus. Excell., 2021, 25, 2, 138–151
[10] Fan, D., Xiao, C., Zhang, X., Guo, Y., *Gaining customer satisfaction through sustainable supplier development: The role of firm reputation and marketing communication*, In: Transp. Res. Part E Logist. Transp. Rev., 2021, 154, 102453
[11] Lo, S.M., Zhang, S., Wang, Z., Zhao, X., *The impact of relationship quality and supplier development on green supply chain integration: A mediation and moderation analysis*, In: J. Clean. Prod., 2018, 202, 524–535
[12] Armoh, M.B., Agyei, P.M., Bossman, A., Gonu, E., Asare-Larbi, M., *Effect of supplier appraisal on firm performance in Ghana: views of employees of selected manufacturing firms*, In: Sci. African, 2023, 21, e01829
[13] Cuypers, I.R.P., Hennart, J.-F., Silverman, B.S., Ertug, G., *Transaction cost theory: Past progress, current challenges, and suggestions for the future*, In: Acad. Manag. Ann., 2021, 15, 1, 111–150
[14] Changalima, I.A., Mchopa, A.D., Ismail, I.J., *Supplier development and public procurement performance: does contract management difficulty matter?*, In: Cogent Bus. Manag., 2022, 9, 1, 2108224
[15] Zahra, S.A., *The resource-based view, resourcefulness, and resource management in startup firms: A proposed research agenda*, In: J. Manage., 2021, 47, 7, 1841–1860
[16] Parker, D.W., Dressel, U., Chevers, D., Zeppetella, L., *Agency theory perspective on public-private-partnerships: International development project*, In: Int. J. Product. Perform. Manag., 2018, 67, 2, 239–259
[17] Canıtez, F., Çelebi, D., *Transaction cost economics of procurement models in public transport: An institutional perspective*, In: Res. Transp. Econ., 2018, 69, 116–125
[18] Celtekligil, K., *Transaction cost theory*, Strateg. Priorities Compet. Environ. Multidimens. Approaches Bus. Success, 2020, 141–154
[19] Gu, V.C., Zhou, B., Cao, Q., Adams, J., *Exploring the relationship between supplier development, big data analytics capability, and firm performance*, In: Ann. Oper. Res., 2021, 302, 151–172
[20] Ganguly, K.K., Roy, S., *Supplier satisfaction in buyer–supplier relationships: Assessment from supplier perspective*, In: J. Business-to-bus. Mark., 2021, 28, 3, 247–264
[21] Alghababsheh, M., Gallear, D., *Socially sustainable supply chain management and suppliers' social performance: The role of social capital*, In: J. Bus. Ethics, 2021, 173, 4, 855–875
[22] Demerouti, E., Bakker, A.B., *Job demands-resources theory in times of crises: New propositions*, In: Organ. Psychol. Rev., 2023, 13, 3, 209–236
[23] Charpin, R., Powell, E.E., Roth, A.V., *The influence of perceived host country political risk on foreign subunits' supplier development strategies*, In: J. Oper. Manag., 2021, 67, 3, 329–359
[24] Briggs, I.T.F., *Contract management and performance of infrastructural projects in Rivers State*, In: Diam. Bridg. Econ. Bus. J., 2022, 2, 2
[25] Huma, S., Ahmed, W., Najmi, A., *Understanding the impact of supply-side decisions and practices on supply risk management*, In: Benchmarking An Int. J., 2020, 27, 5, 1769–1792
[26] Panya, K.O., Awuor, E., *Public procurement reforms in Africa: challenges, constraints and improvement opportunities*, In: Strateg. J. Bus. Chang. Manag., 2023, 10, 2, 1435–1456
[27] Zhang, T., Feng, T., Cui, M., *Smart contract design and process optimization of carbon trading based on blockchain: The case of China's electric power sector*, In: J. Clean. Prod., 2023, 397, 136509
[28] Atkinson, C.L., *Competence in bureaucracy*, Global encyclopedia of public administration, public policy, and governance, Springer, 2023, 2244–2248
[29] Xu, J., Gürbüz, M.C., Feng, Y., Chen, S., *Optimal spot trading integrated with quantity flexibility contracts*, In: Prod. Oper. Manag., 2020, 29, 6, 1532–1549
[30] Rajput, A., Gulzar, S., Shafi, K., *Impact of supplier development on supplier performance: Mediating role of trust*, In: Bus. Econ. Rev., 2019, 11, 2, 45–66
[31] Kamis, A., Saibon, R.A., Yunus, F.M., Rahim, B., Herrera, L.M., Montenegro, P., *The SmartPLS analyzes approach in validity and reliability of graduate marketability instrument*, In: Soc. Psychol. Educ., 2020, 57, 8, 987–1001
[32] Cooper, B., Eva, N., Fazlelahi, F.Z., Newman, A., Lee, A., Obschonka, M., *Addressing common method variance and endogeneity in vocational behavior research: A review of the literature and suggestions for future research,* In: J. Vocat. Behav., 2020, 121, 103472
[33] Chin, W.W., *Commentary: Issues and opinion on structural equation modeling*, In: MIS quarterly, JSTOR, 1998, vii–xvi
[34] Pandey, P., Pandey, M.M., *Research methodology tools and techniques*, Bridge Center, 2021
[35] Shrestha, N., *Factor analysis as a tool for survey analysis*, In: Am. J. Appl. Math. Stat., 2021, 9, 1, 4–11
[36] Hair Jr, J.F., et al., *Evaluation of reflective measurement models*, Partial Least Squares Struct. Equ. Model. Using R A Workb., 2021, 75–90

[37] Pradhan, S.K., Routroy, S., *Improving supply chain performance by Supplier Development program through enhanced visibility*, In: Mater. Today Proc., 2018, 5, 2, 3629–3638
[38] Wacker, J.G., Yang, C., Sheu, C., *A transaction cost economics model for estimating performance effectiveness of relational and contractual governance: Theory and statistical results*, In: Int. J. Oper. Prod. Manag., 2016, 36, 11, 1551–1575
[39] Johnson, F., Leenders, M.R., Flynn, A.E., *Purchasing and supply management*, McGraw-Hill Companies, Inc, 2021
[40] Sheffi, Y., *The new (ab) normal: Reshaping business and supply chain strategy beyond Covid-19*, MIT CTL Media, 2020

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