

# Exploring The Impact Of Transformational Leadership And Human Resource Practices On Operational Excellence Mediated By Knowledge Sharing: A Conceptual Framework

Bilal Saeed, Tasmin R., Ayyaz Mehmood, Aamer Hafeez

**Abstract:** In changing global business environment industries are facing a lot of challenges which hamper its productivity and growth. It is through operational excellence different industries have overcome these challenges and achieved their desired goals. The purpose of this study is to propose a conceptual framework after systematic review of literature on the term operational excellence. Reviewing grounding theory of quality management, operational excellence models and factors influencing operational excellence from both quantitative and qualitative studies, we select three influencing variables Transformational Leadership (TL), Human Resource Practices (HRP) and Knowledge Sharing (KS) which affect operational excellence (OE). This paper further explores the impact of identified variables TL, HRP on OE and further check the role of KS as mediator. Finally this paper finalized a conceptual model after exploring previous studies and propose an empirical investigation for validation in future for researchers and practitioners.

**Index Terms:** Operational excellence, Transformational leadership, HR Practices, Knowledge sharing

## 1 INTRODUCTION

Currently the business environment is competitive with varying demands from different industries and firms are redesigning themselves towards excellence [1]. Accomplishment of organizational vision and objectives should be intentional not accidental. It is challenging to transform intentions into accomplishment and the particular recipe for effective transformation varies from one organization to other. Organizations successful in this transformation have usually mastered commonalities from which maps and general excellence models can be derived as "X Excellence Models". These maps and models provide general guidance and processes for other organizations seeking continued success [2]. These X variations comprise operational, organizational, performance, enterprise or business and herein we focus on operational excellence.

The term operational excellence is almost universal in a broader scope of organizational functions and different research fields. Preliminary literature about excellence is found in the book of Peters & Waterman (1982) namely "In search of excellence: Lessons from America's best-run companies" [4].

It was urged that excellent companies are brilliant in their values, tools cannot substitute thinking, intellect cannot override wisdom and analysis cannot stop action. These companies remain focused to keep the objectives directional in such a complex and competitive environment.

These companies commit and insist on best quality. They own and give value to their customers. They consider their employees by giving worth to their ideas and they appreciate

their contribution in product and service innovation [3]. Tasmin and Woods in (2007) also strongly postulated that through effective management of knowledge would lead to higher innovation capability, among large manufacturing companies in Malaysia [5] The world's innovative researchers on expert performance and creative achievement review multiple theories and findings from different domains of expertise as how experts attain excellence through performance and optimize improvements [6]. Firms with excellent technology development process complemented with efficient uncertainty management would be attaining higher probability in sustaining competitive advantage and performance [7].

Purpose of this study is to systematic review the previous literature on operational excellence from different databases in broader perspective and then narrow down both qualitative and empirical investigations by reviewing academic journals and conferences. During this study it is revealed that most of the relevant articles are available in the quality management journals. After reviewing multiple theories from different quality management journals we found the theory of quality management under pinning the concept of our proposed conceptual framework [8]. Three excellence models (European Foundation for Quality Management (EFQM), Shingo Operational excellence Model (SOEM) and Boston Scientific Strategic Operational Excellence Model) are taken under consideration to investigate the impact of different enablers on operational excellence. Based on systematic literature review, excellence models and refine empirical researches different factors are identified influencing operational excellence in both service and production industries. Three factors transformational leadership (TL) style, human resource practices (HRP) and knowledge sharing (KS) seems to be inclining appropriately towards operational excellence (OE).

## 2 A SYSTEMATIC LITERATURE REVIEW ON OPERATIONAL EXCELLENCE

A systematic literature review on the term "operational excellence" was conducted from six databases Scopus, Emerald Insight, Science Direct, EBSCO host and ProQuest. Based on the search by keyword "operational excellence"

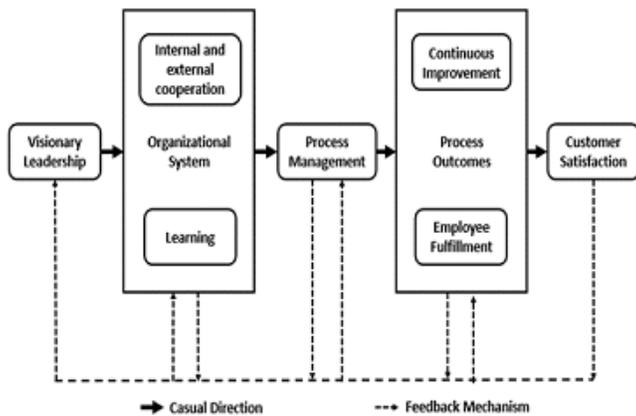
- Bilal Saeed. Faculty of Technology Management, University Tunn Hussain Onn Malaysia, E-mail: e.bilalsaeed@gmail.com
- Tasmin R., Faculty of Technology Management, University Tunn Hussain Onn Malaysia, E-mail: rosmaini@uthm.edu.my
- Ayyaz Mehmood. Management of Science Department, COMSAT University, Pakistan, E-mail: ayaz\_mahmood@comsats.edu.pk
- Aamer Hafeez. Electrical Engineering Department, National University of Computer and Emerging Science, Pakistan, E-mail: aamer.hafeez100@gmail.com



integrated Lean Six Sigma are strategies for continuous improvement to achieve operational excellence and improvement of operational performance in the organizations.

#### 4 TOWARDS A THEORY OF OPERATIONAL EXCELLENCE

The growth and development of excellence concepts and programs arise in the 1980's from the amazing works among Western organizations regarding excellent performances of Japanese firms where the Deming Prize and its fundamental model had already been established a decade ago [13]. Grounding the concept of fourteen Deming's principles of quality management, Anderson, Rungtusanatham, & Schroeder (1994) articulate a theory of quality management based on the Deming's management method [6].



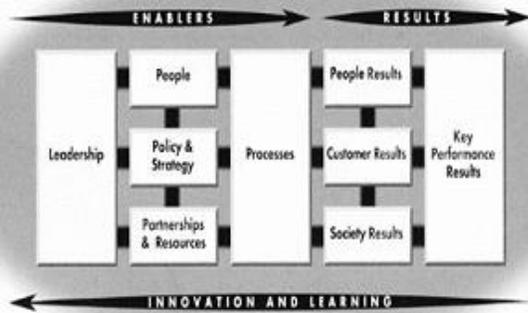
**Figure 3:** Seven concepts of Anderson Theory of Quality Management [6]

This theory of quality management comprising seven concepts. First concept consists of visionary leadership which speaks the role of top management defining a long term vision for the organization. Second concept consists of internal and external cooperation, and third is learning, both these steps belongs to organizational system. Fourth concept is process management that proceed visionary leadership and organizational system towards process outcomes. Process outcomes consists of fifth and sixth concepts namely continuous improvement and employee fulfillment. Seventh and final concept is customer satisfaction that is the outcome of quality management theory as shown in Figure 3 [6]. These seven steps are the foundation of the Anderson et al (1994) theory of quality management based on the fourteen principles of W. Edwards Deming for excellence performance [6]. Visionary leadership is considered as the ability of management to deliver a long range vision for the organization by defining processes and encourage practices, driven by varying customer needs under the role and control of internal management. Visionary leadership is exemplify by clarifying and conveying the vision of management, coaching management style, follower's orientation, participation for change, proper planning, and employee empowerment and executing organizational change. Second concept of quality management theory is internal and external cooperation. It is a propensity of an organization to involve in non-competitive activities. This cooperation is internally between the

employees and externally with product and service suppliers. Internal and external cooperation is exemplify by individual-supplier orientation, firm-supplier partnership, teamwork, collaborative organization, organization wide involvement, understanding with organizational process, firm-supplier trust and fear of elimination. Learning is the third concept of quality management theory and it is capability of an organization to nurture and recognize the development of knowledge base, skills and abilities (KSA). Learning is exemplify by training and development across the company, knowledge foundation, knowledge process, knowledge sharing, educational development, continuous process of self-improvement and learning management. Fourth concept of quality management theory is process management. It is the set of procedural and behavioral practices highlighting the process management, means of actions and not only results. Process management is exemplify by design quality, reduction of mass inspection, understanding the variations, statistical process control, elimination of numerical quotas, management by objectives and merit base reward systems. It also address prevention orientation, understanding employee motivation, stable employment and total cost accounting. Fifth concept of continuous improvement is a propensity of successful organizations to examine and pursue incremental and innovative improvements of its processes, products and services. This is exemplify by continuous self improvement, organizational and other excellence methodologies improvements like lean management, six sigma and operational excellence. Sixth concept of employee fulfillment is a part of human resource management that ensure the commitment of organization with employees according to their needs and satisfaction. Employee fulfillment is exemplify by employee's job commitment, pride and satisfaction. Finally the seventh concept of quality management theory is customer satisfaction. It is the continuous perception of customers that their needs are fulfill by organization through quality of its products and services. Customer satisfaction is exemplify by organization's response time on customer's need, product quality and service quality.

#### 5 OPERATIONAL EXCELLENCE MODELS

European Foundation for Quality management (EFQM) introduced first excellence model in 1988 known as non-prescriptive business excellence EFQM model. Purpose of this model was, quality management people should monitor all activities in an organizations as all level and should focus to continuous improvement process for to enhance organizational performance. EFQM was based on the enablers and key performance results interlinking with processes. Enablers include of people, policy and strategy and partnership and resource that are highly dependent of leadership. Leadership is the most important enabler for successful implementation of EFQM models. Key performance results of EFQM are dependent on people results, customer results and society results [14]. Figure 4 is showing the EFQM excellence model with its respective enablers, processes and results. EFQM excellence model is generic and can be use in all types of organizations to achieve excellence with learning and innovation regardless of sector, structure, size and area.



**Figure 4:** The EFQM Excellence Model

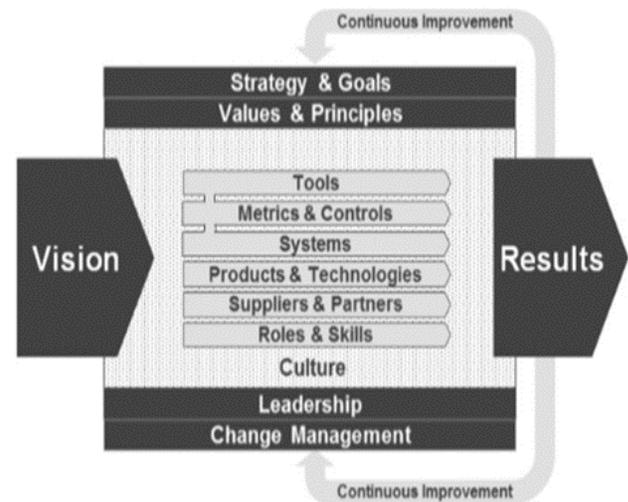
After EFQM another operational excellence model was introduced by Shingo Institute of Operational excellence which is known as Shingo Operational excellence Model (SOEM) against a criteria for which enterprises were assessed as applicant for Shingo prize. Enterprise were preparing themselves for Shingo prize against the criteria of lean manufacturing and quality management. [2]. Figure 5 show the guiding principles of Shingo Operational Excellence Model (SOEM) based on four principles known as cultural enablers, continuous improvement, enterprise alignment and results [15]. Cultural enablers consists of humility within employees and promote respect doe every individual in the organization. Continuous improvement include incremental improvement, quality assurance, processes improvements, flow and pull concepts through scientific thinking for the organizations seeking success. Enterprise alignment include consistency in the in achieving organization's objectives through systematic thinking, methodologies and strategies. Finally results against organizational objectives create value for business excellence, operational excellence and customer satisfaction.



**Figure 5:** SOEM guiding principles

[4] conducted a systematic literature review on existing theories, models and practices of operational excellence and proposed a model of Boston Scientific Strategic Operational Excellence Model as shown in Figure 6. This model align enterprise vision for delivering results through tools, metric

and controls, system, products and technologies, suppliers and partners, and roles and skills.



**Figure 6:** Boston Scientific Strategic Operational Excellence Model

This model also covers the cultural effects through propensity of continuous improvement and results are driven by a strategy and goals, values and principles. Leadership and change management are also the important aspects for successful implementation of this scientific strategic operational excellence model. This model is dynamic with two feedback loops of continuous improvement the first is directed towards strategy and goals and second is directed towards the leadership and change management. This complete model is a systematic approach towards operational excellence.

## 6 FACTORS AFFECTING OPERATIONAL EXCELLENCE

Based on the previous theories, models and different empirical researches, leadership is found to be one of the most important success factor effecting operational excellence [1]. Out of different leadership styles transformational leadership is mostly prefer by top as well as middle management at their workplace. Transformational leadership create vision and identify the needed change through inspiration, motivation, intellectually stimulate and individually considering followers to execute their desire through followers commitment. [16]. The important success factor are the process, tools, techniques and practices that are highly dependent on the human behavior and practices that contribute in improvement of organizational performance. This study also highlighting Human resource practices as another factor significantly influencing operational excellence. Similarly, from the systematic literature review of operational excellence and results shown in network diagram as in Figure 2 also indicating different studies in the field of knowledge management therefore knowledge sharing is also an important factor help to improve excellence in relationship with other independent variables. Table 1 shows different factors influencing operational excellence in different industries. All these factors have been investigated empirically as well as qualitatively in difference researches related to operational

excellence in both service and manufacturing industries. Out of these popular factors Transformational leadership style, human resource practices and knowledge sharing are the selected factors influencing operational excellence in this proposed conceptual framework.

**TABLE 1**  
FACTORS AFFECTING OPERATIONAL EXCELLENCE

SN	Factors	Dependent Variable	Reference
1	Leadership	Operational excellence	[1][17]
2	HRM Practices		[1][18][19]
3	Operations strategy		[1][18][20]
4	Involvement culture		[1][18][19]
5	Organizational structure		[21][22]
6	Process management		[20][18]
7	External factors		[20]
8	Employee accountability		[17]
9	Risk identification		[17]
10	Risk accountability		[17]
11	Knowledge sharing		[17][23][24]
12	Management of Change		[25][26][27]
13	Transformational leadership		[17]
14	Manufacturing technology		[18][19][28]
15	Affective commitment to change		[19]
16	Value Chain		[21]
17	Redesign innovation		[21]
18	Employee satisfaction		[21]
19	Employee motivation		[21]
20	Employee Training		[21]

## 6 TRANSFORMATIONAL LEADERSHIP

Burns (1978) the winner of the Pulitzer Prize first presents the concept of transforming leadership during his descriptive research about political leaders [29]. Bass (1985) then extended the research of Burns (1978) and use the term transformational instead of transformation. According to Bass (1985), transformational leaders encourage respondents to work extra hours and to do more than they ever expected to do. Transformational leadership motivate their followers to performance more than expectations by transforming their attitudes, morals and beliefs as opposite to simply gaining the compliance [30]. Transformational leadership creates vision and identify the needed change through inspirationally motivating, intellectually stimulating and individually considering followers to execute their desires through followers commitment [31]. Respondents start emulating the leaders and reported that they are willing to meet leader's expectations and ready to give all the support required by the leader [30]. Avolio, Waldman, & Yammarino (1991) introduced 4 "Is" of transformational leadership with a goal that how transformational leadership have significance impact on development of individual and organizational performance [32]. The 4 I's identify the four dimensions of transformational leadership (idealized influence, inspirational motivation, individual consideration and intellectual stimulation). Idealized influence is an important dimension of transformational leadership when leaders act as charismatic role models, they present a sense of confidence on followers and seems powerful to give unconventional and highly influencing decisions according to deeply established values [33]. When the followers feel that their leaders have confidence on them,

care about their work, trust in their capabilities and appreciate their efforts then they are more willing to contribute in the mission of their leader [34]. An intellectually stimulating leader helps the followers to think about previous problems in innovative ways with reasoning and evidence rather than unsupported opinions to solve such issues [32]. Intellectual stimulating leaders in the organizations allow follower's to view problems from a different and focused prospective transforming them into energetic thinkers and consequently employees remained involved with the organizational issues. Followers say of their leaders that they help and support us to think about critical problems in innovative ways, they give me new directions to look at confusions, they help me to reconsider the ideas we never asked before [35]. Intellectual stimulation encourage follower's conceptualization, understanding, examination of problems and the generated solutions. Inspirational motivation concentrates on providing an engaging vision and direction of the future. Inspirational motivation relates to the behavior of leaders that motivate their followers around them by giving importance and appreciation to their works. Inspirational motivation arouse individuals and team spirits by displaying optimism and enthusiasm. The leader inspires followers to envision attractive future circumstances, which they can eventually imagine for themselves [36]. In few simple words followers say of these leaders that what we can do and what we should do. Leaders provide appealing images to the followers response that encourage them to find the meaning of their work [35]. Leaders motivate the followers through their vision and followers show commitment and willing to accomplish their leader's vision. In individual consideration leaders pay attention to the individual concerns of followers or employees in an organization rather than treating all the employees alike. Leaders act as a best mentor and give his attention and time of their followers. Leaders encourage follower's strengths and abilities and address their weakness [32]. Followers respond their leaders in a way that that they help us to develop and they want to know what they think how we are working. Followers are feeling that leaders is giving us personal attention when they feel ignored or rejected [35]. Leaders individually address the issues of followers and followers realize that our issues are exactly under consideration of our leaders.

## 7 HUMAN RESOURCE PRACTICES

Given the significance to human resources in developing greater productivity and profit, a growing body of research propose that human resource practices need to be consistent with organizational strategies and effectiveness [37]. Human resource management include all management decisions and practices that produce employee creativity and innovative behavior at individual level, interpersonal trust and team collaboration at group level that ultimately improve firm performance at organizational level [38][39][40][41]. In most of the previous studies at individual, group and organizational level, human resource practices with four well known dimensions seems to be dominating to achieve exceptional performance. These four dimensions are recruitment and selection, training and development, performance appraisal and compensation and benefits [42][43][18][44][45][46]. Recruitment includes all the activities that managers perform in developing qualified candidates for suitable positions and

selection is choosing best candidate from the pool of qualified applicants appropriate to the offered posts [47]. At the time of hiring, recruiter usually match the applicant's skills, knowledge and abilities (SKAs) either related with job specifications and descriptions to confirm suitability of the applicant for organization [48]. As each candidate belongs to different belief and background values, therefore recruiter also assess behavior and attitude of the applicant that must be in line with organizational culture and working environment to ensure personal-organizational (PO) fitness. Training is a planned activity designed by the organizations for assistance of employee's to learn competencies related to job such as skills, knowledge and behavior that is important for individual and team performance. Development is referred to the assessment of employees personality and improvement in the abilities and job experience through formal education that contribute in the performance of an organization [42]. Training and development create an environment of realization that employees are valuable and organization is willing to invest in them [49]. Performance appraisal system refers to the development of employee's competencies, identification of strengths and weaknesses. It helps to assess and guide the trainings and development needs to increase the competencies and skills necessary for required behavior [50]. When employees in a company realize that the performance appraisal system is fair with justice, then employees would have a positive perception for the company and it would increase their commitment towards the company's objectives. Compensation and benefits increase the motivation and performance of employees at individual level. Employees are expected to work with positive behavior for organization in expectation of rewards and recognition [42]. Employees continuously repeat their positive contributions towards organizational objectives in expectation of compensation and appreciation agreed by the firm [48]. In short, appropriate compensation and benefit induce the employees to contribute with positive work attitudes and behavior for their organization.

## 8 KNOWLEDGE SHARING

Knowledge sharing is an exchange of information in the form of facts, experiences, skills and knowledge. Organizations transform the information is knowledge form for individuals or then arrange to distribute and sharing among organization [51]. Knowledge is a strategic resource of an organizations that empowers both individuals and organizations to achieve several benefits for better learning, decision making, adaptability and innovation [52]. Knowledge sharing is presume as a motivational factor of employees not only for inter organizational but also inta-organizational culture that make every day work easier and faster [53]. Several empirical investigations conclude that knowledge sharing positively contribute with mediating role for individual creativity, team creativity as well as organizational creativity [54][53][55]. Shao, Feng, & Liu (2012) define two dimension of knowledge sharing explicit knowledge sharing and tacit knowledge sharing [56]. Explicit knowledge is document in the books in written form and this knowledge can be articulate, identify and employ and share. Tacit knowledge is available in human mind that is gain through skills and experiences and include insights and intuitions [57]. Similarly, some author also define the knowledge collection and knowledge donations as dimensions of knowledge sharing [34][58][59]. Knowledge collecting is

define as obtaining the knowledge from colleagues in the form useful information whereas knowledge donation involves employees communicating with personal intellectual capital and colleagues [58]. Knowledge sharing in this conceptual framework is used as unidimensional to measure its role between independent and dependent variables.

## 9 TRANSFORMATIONAL LEADERSHIP AND OPERATIONAL EXCELLENCE

Different quantitative researches investigate the impact of transformational leadership on operational excellence by developing hypothesis on the basis of research questions. [18] empirically investigated the positive impact of transformational leadership style with all four dimensions (idealize influence, inspirational motivation, individual consideration and intellectual stimulation) on operational excellence. Multifactor Leadership Questionnaire (MLQ-5X) developed by Avolio, Yammarino, & Bass (1991) is used in different studies and validated multiple times [60]. Transformational style of leadership motivate and support to create a positive organizational change and extraordinary performance to achieve operational excellence [19]. Transformational leadership behavior also influences employees motivation and employees efforts towards efficiency, effectiveness and significantly influence operational excellence [61]. Transformational leaders transform follower's attitudes, approaches and beliefs by motivating them to achieve performance and also influence towards operational excellence [62]. After literature review of previous empirical studies on the relationship between transformational leadership and operational excellence we can develop a hypothesis as

H1: There is a significant positive relationship between Transformational leadership and operational excellence.

## 10 HUMAN RESOURCE PRACTICES AND OPERATIONAL EXCELLENCE

Need of operational excellence in service industry is extremely dependent on the strategy and practices required for successful implementation. Human resource practices along with dimension (training and development, recruitment and selection, performance appraisal and compensation and benefits) influence operational excellence to improve and sustain organizational performance [61]. More empirical investigations proved that human resource practices significantly influence operational excellence in service sector to achieve exceptional performance [18]. Human Resource is an asset of a firm and the sum of total of the competencies, skill and knowledge collectively contribute through effective commitment of employees towards the sustainability of organization and operational excellence [19]. Previous empirical investigations on human resource practices has shown a significant relationship with operational excellence and we can hypothesize a significant relationship of human resource practices on operational excellence.

H2: There is a significant positive relationship between human resource practices and operational excellence

## 11 TRANSFORMATIONAL LEADERSHIP AND KNOWLEDGE SHARING

Transformational leadership creates interest and a supportive working environment among employees of organization to facilitate knowledge sharing activities [63][64]. Transformational leadership with all four dimensions of idealized influence, inspirational motivation, intellectual stimulation and individual consideration significantly influence knowledge sharing for creative performance, team performance and organizational performance [65][66][67]. Transformational leadership provide vision and motivation that exerts followers to work more than expectations through knowledge sharing for individual creativity and team creativity [68]. Similarly in different empirical studies transformational leadership significantly influence knowledge sharing for product and process innovation, team innovation and organization innovation [59][58][69][67]. Transformational leadership create a learning environment in the organization through climate and behavior of knowledge sharing and interpersonal trust among employees [70]. Transformational leadership encourage and enhance the organizational commitment and organizational citizenship behavior to promote knowledge sharing within organization [71]. All the empirical investigations in existing literature between transformational leadership style and knowledge sharing have positive relationship and we can develop the following hypothesis.

H3: There is a significant positive relationship between transformational leadership and knowledge sharing.

## 12 HUMAN RESOURCE PRACTICES AND KNOWLEDGE SHARING

To knowledge sharing there are antecedents to consider which encourage or restrain knowledge sharing [72]. In previous studies there are number of factors influence knowledge sharing between employees and between organization and employees at both individual and organizational levels. Human resource practices with its dominant dimensions of recruitment and selection, training and development, performance appraisal and compensation and benefits gives a substantial positive impact on employees knowledge sharing attitude and behavior [42]. Combination of HR practices provide motivation, incentives and awareness to the employees to participate in maintaining and knowledge sharing activities that help them to innovate and create knowledge [73]. Opportunity, motivation and ability in enhancing HR practices significantly influence knowledge sharing for team creativity in companies [74]. High performance HR practices and measures like provision of job security, skill development through training, good incentive mechanism and performance appraisal of both low and high performers produce a good knowledge sharing behavior between both managers and co-workers [75]. Gara Bach Ouerdian et al., (2017) empirically investigated the positive relationship of HR practices with dimensions of recruitment/selection, compensation and reward, performance appraisal, teamwork and training and development on knowledge sharing with mediating role of learning climate and human capital. Therefore, human resource practices are supposed to be favorable to hypothesize for promoting a positive relationship with knowledge sharing among employees and firm.

H4: There is a significant positive relationship between human resource practices and knowledge sharing.

## 13 KNOWLEDGE SHARING AND OPERATIONAL EXCELLENCE

Different knowledge applications indicate that actual use of knowledge develop organizational competencies to enhance operational excellence that is a major indicator of organizational performance [24][23]. Knowledge management practices identify the sources of required and valuable knowledge for employees. It encourage, reward and promote knowledge management practices to sharing of this knowledge that positively influencing towards three well known value disciplines identified by Treacy & Wiersema (1993) customer intimacy, product leadership and operational excellence in the companies like telecommunication [25][26]. Similarly in telecommunication companies knowledge sharing strategies enhance the customer relationship management (CRM) with dimensions of operational excellence, innovation process and customer intimacy which reflect overall on organization capability [76]. Various quality management practices also helps to implement positive culture of knowledge sharing through the capture process of tacit knowledge that support in implementation of operational excellence [23]. Similarly Rehman et al. (2015) empirically investigated the mediating role of knowledge sharing between knowledge management strategy and overall performance with an indicator of operational excellence. We can formulate the statement for development of hypothesis as follows.

H5: There is a significant positive relationship between knowledge sharing and operational excellence.

## 14 KNOWLEDGE SHARING AS MEDIATOR

In most of the pervious empirical researches knowledge sharing is found to be a well-established mediator between different independent and dependent variables. Knowledge sharing mediate between the relationship of transformational leadership style with product innovation, process innovation, unit performance, team performance, organizational performance and organizational innovation [77][63][78][66]. Knowledge sharing is refer to the sharing of information, ideas and relevant tasks among individuals or group of people in the organizations. In different empirical studies knowledge sharing is also used as mediator between transformational leadership with individual creativity, team creativity and organizational creativity that also impact job performance and firm performance [57][79][33]. The mediating role of knowledge sharing between the relationship of transformational leadership and operational excellence is propose in the conceptual framework and considered as research gap for further investigation. The hypothesis is developed is as,

H6: There is a significant positive mediating effect of knowledge sharing between the relationship of transformational leadership and operational excellence.

Similarly in previous literature of knowledge sharing, it is studied as mediator in different researches between the relationship of human resource practice and knowledge creation. High performance human resource practices also influence corporate entrepreneurship indirect with knowledge sharing as mediator. Human resource practices along with all

dimensions of recruitment and selection training and development, compensation and reward and performance appraisal significantly influence knowledge sharing [42]. Human resource practice along with all dimension also directly influence knowledge sharing. The mediating effect of knowledge sharing and maintaining occurs can be measured because HR practices expected to enhance and support knowledge creation, when these practices are designate to simultaneously encourage both exploratory behaviors. The hypothesis proposed for conceptual framework is given below. H7: There is a significant positive mediating effect of knowledge sharing between the relationship of Human resource practice and operational excellence.

A conceptual framework is proposed to measure the impact of two independent variables transformational leadership and human resource practices on dependent variable operational excellence with the mediating role of knowledge sharing in shown below in Figure 6.

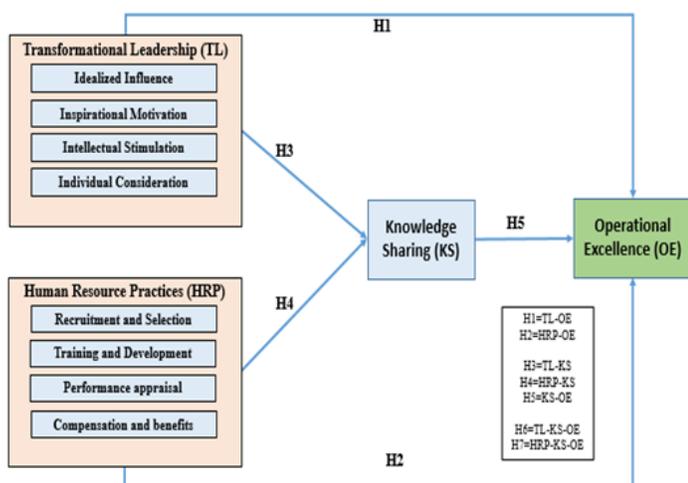


Figure 6: Proposed conceptual framework

## 15 CONCLUSION

Purpose of this conceptual paper is to systematically review the existing literature on operational excellence and exploring related theories and models, how operational excellence is contributing with exceptional performance in service industry. Previous studies are reviewed systematically to find out the factors effecting operational excellence from both qualitative and quantitative researches. Three factors transformational leadership, human resource practices and knowledge sharing are the part of proposed conceptual framework having significant relationships with operational excellence. Transformational leadership and human resource practices are the two independent variables, operational excellence as dependent variable and knowledge sharing is used as mediator between the relationship of transformational leadership with operational excellence and human resource practices with operational excellence. The conceptual framework is proposed on the bases of exiting literature, theory and models, however its empirical investigation is left for future researchers and practitioners.

## 16 FUTURE RESEARCH

The seven hypothesis developed in the proposed conceptual framework will help to contribute in the empirical validation of EFQM, SOME and Boston scientific management models. We will encourage a follow up study to empirically test the antecedents of operational excellence in context of service sector. Future research on proposed conceptual framework involve selection of scales to measure the impact of transformational leadership, human resource practices and knowledge sharing in a specific sector. However, more empirical research is required to further examine the impact of other leadership styles, process, strategies, cultural impact, systems, skills, tools, values and principles on operational excellence in both service and production sectors to further validate the already implemented operational excellence models and related theories.

## 17 REFERENCES

- [1] R. Shehadeh, Z. M.F.Al-Zubi, and & M. M. Ayman Bahjat Abdallah, "Investigating Critical Factors Affecting the Operational Excellence of Service Firms in Jordan," J. Manag. Res., vol. 8, no. 1, p. 157, 2016.
- [2] R. Edgeman, "Excellence models as complex management systems: An examination of the Shingo operational excellence model," Bus. Process Manag. J., vol. 24, no. 6, pp. 1321–1338, 2018.
- [3] T. J. Peters and R. H. Waterman, In search of excellence: lessons from America's best-run companies. Harper & Row, 1982.
- [4] P. Found, A. Lahy, S. Williams, Q. Hu, and R. Mason, "Towards a theory of operational excellence," Total Qual. Manag. Bus. Excell., vol. 29, no. 9–10, pp. 1012–1024, 2018.
- [5] K. A. Ericsson, The road to excellence: The acquisition of expert performance in the arts and sciences, sports, and games. Psychology Press, 2014.
- [6] J. C. Anderson, M. Rungtusanatham, and R. G. Schroeder, "A theory of quality management underlying the Deming management method," Acad. Manag. Rev., vol. 19, no. 3, pp. 472–509, 1994.
- [7] M. Treacy and F. Wiersema, "Customer intimacy and other value disciplines," Harv. Bus. Rev., vol. 71, no. 1, pp. 84–93, 1993.
- [8] Business Dictionary, "What is operational excellence? definition and meaning - BusinessDictionary.com," Business Dictionary, 2019. [Online]. Available: <http://www.businessdictionary.com/definition/operational-excellence.html>. [Accessed: 05-Oct-2019].
- [9] O. M. F. C. Walter and E. P. Paladini, "Lean Six Sigma in Brazil: a literature review," Int. J. Lean Six Sigma, vol. 10, no. 1, pp. 435–472, Mar. 2019.
- [10] A. Laureani and J. Antony, "Leadership and Lean Six Sigma: a systematic literature review," Total Qual. Manag. Bus. Excell., vol. 30, no. 1–2, pp. 53–81, 2019.
- [11] S. A. Albliwi, J. Antony, and S. A. H. Lim, "A systematic review of Lean Six Sigma for the manufacturing industry," Bus. Process Manag. J., vol. 21, no. 3, pp. 665–691, 2015.
- [12] R. Basu, "Six-Sigma to operational excellence: role of tools and techniques," Int. J. Six Sigma Compet. Advant., vol. 1, no. 1, pp. 44–64, 2004.

- [13] A. M. Carvalho et al., "Total Quality Management & Business Excellence Operational excellence , organisational culture and agility : the missing link ?," *J. Total Qual. Manag. Bus. Excell.*, vol. 3363, 2017.
- [14] U. Nabitz, N. S. Klazinga, A. Medisch, C. Universiteit, and J. Walburg, "The EFQM excellence model : European and Dutch experiences with the EFQM approach in health care," no. May 2014, 2000.
- [15] Shingo Institute, "The Shingo Model - Shingo Institute," 2019. [Online]. Available: <https://shingo.org/model>. [Accessed: 13-Jun-2019].
- [16] M. F. van Assen, "Exploring the impact of higher management's leadership styles on lean management," *Total Qual. Manag. Bus. Excell.*, vol. 29, no. 11–12, pp. 1312–1341, 2018.
- [17] T. Al-Nabhan, T. M. Yusuf, and H. Al-Hennawi, "Enhancing Management of Change System for Operational Excellence," in *Abu Dhabi International Petroleum Exhibition & Conference*, 2018, p. 16.
- [18] H. Ahmad, J. M. I. Alekam, S. Shaharruddin, L. Marchalina, and O. Fok-Yew, "The relationship between the change management and the operational excellence in electrical and electronics manufacturing companies," *Int. J. Supply Chain Manag.*, vol. 7, no. 5, pp. 511–519, 2018.
- [19] O. Fok-Yew and H. Ahmad, "The Effect of Change Management on Operational Excellence moderated by Commitment to Change: Evidence from Malaysia," *Int. J. Innov. Appl. Stud.*, vol. 9, no. 2, pp. 615–631, 2014.
- [20] M. H. A.-A. A. Wahab and M. I. and Mohd Nazri, "Influence of Internal and External Environmental Factors on Operational Excellence of Manufacturing Sectors in Malaysia," *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 9, no. 2, pp. 961–970, 2019.
- [21] C. L. Obunike, "MANAGEMENT INNOVATION AND OPERATIONAL EXCELLENCE : A CASE OF MEDIUM SCALE ENTREPRISES IN LAGOS STATE , NIGERIA," *AEFUNAI J. ACCOUNTING, Bus. Financ.*, pp. 32–50, 2018.
- [22] A. M. Carvalho, P. Sampaio, E. Rebentisch, and P. Saraiva, "Operational excellence as a means to achieve an enduring capacity to change – revision and evolution of a conceptual model," *Procedia Manuf.*, vol. 13, pp. 1328–1335, 2017.
- [23] W. G. Dzekashu and R. Walter, "A quality approach to tacit knowledge capture: Effective practice to achieving operational excellence," *Int. J. Appl. Manag. Technol.*, vol. 13, no. 1, p. 4, 2014.
- [24] I.-L. Wu and J.-L. Chen, "Knowledge management driven firm performance: the roles of business process capabilities and organizational learning," *J. Knowl. Manag.*, vol. 18, no. 6, pp. 1141–1164, 2014.
- [25] J. D. Mckeen, M. H. Zack, and S. Singh, "Knowledge Management and Organizational Performance : An Exploratory Survey," *Proc. 39th Hawaii Int. Conf. Syst. Sci. - 2006*, vol. 00, no. C, pp. 1–9, 2006.
- [26] M. Zack, J. McKeen, and S. Singh, "Knowledge management and organizational performance: an exploratory analysis," *J. Knowl. Manag.*, vol. 13, no. 6, pp. 392–409, 2009.
- [27] W. ul Rehman, M. Ilyas, and N. Asghar, "KNOWLEDGE SHARING, KNOWLEDGE MANAGEMENT STRATEGY AND PERFORMANCE A Knowledge Based View," *Pak. Econ. Soc. Rev.*, pp. 177–202, 2015.
- [28] D. S. Wheeler, B. Tofani, and B. Morris, "Transformational Change in Health Care Through Operational Excellence," *Curr. Treat. Options Pediatr.*, vol. 2, no. 4, pp. 332–338, 2016.
- [29] J. M. Burns, *Leadership*, 1st ed. New York: Harper & Row, 1978.
- [30] B. M. Bass, "Leadership: Good, better, best," *Organ. Dyn.*, vol. 13, no. 3, pp. 26–40, 1985.
- [31] M. F. Van Assen, "Exploring the impact of higher management ' s leadership styles on Lean management," *Total Qual. Manag. Bus. Excell. ISSN1478-3363*, vol. 3363, 2018.
- [32] B. J. Avolio, D. A. Waldman, and F. J. Yammarino, "Leading in the 1990s: The four I' s of transformational leadership," *J. Eur. Ind. Train.*, vol. 15, no. 4, 1991.
- [33] R. Masa'deh, B. Y. Obeidat, and A. Tarhini, "A Jordanian empirical study of the associations among transformational leadership , transactional leadership , knowledge sharing , job performance , and," *J. Manag. Dev.*, vol. 35, no. 5, pp. 681–705, 2016.
- [34] S. Al-husseini and I. Elbeltagi, "Evaluating the effect of transformational leadership on knowledge sharing using structural equation modelling: the case of Iraqi higher education," *Int. J. Leadersh. Educ.*, vol. 21, no. 4, pp. 506–517, 2018.
- [35] R. Parrott, "Transformational Leadership : Theory and Reflections," *Ashl. Theol. J.*, vol. 32, pp. 63–76, 2000.
- [36] B. M. Bass, B. J. Avolio, D. I. Jung, and Y. Berson, "Predicting unit performance by assessing transformational and transactional leadership.," *J. Appl. Psychol.*, vol. 88, no. 2, p. 207, 2003.
- [37] J. N. and H. Lee, "High commitment human resource practices and employee behavior: a multi-level analysis," 2018.
- [38] D. Jaiswal and R. L. Dhar, "Impact of human resources practices on employee creativity in the hotel industry: The impact of job autonomy," *J. Hum. Resour. Hosp. Tour.*, vol. 16, no. 1, pp. 1–21, Jan. 2017.
- [39] F. Slagter, "HR practices as predictors for knowledge sharing and innovative behaviour: a focus on age," *Int. J. Hum. Resour. Dev. Manag.*, vol. 9, no. 2–3, pp. 223–249, 2009.
- [40] H. Bulińska-Stangrecka and A. Bagieńska, "HR Practices for Supporting Interpersonal Trust and Its Consequences for Team Collaboration and Innovation," *Sustainability*, vol. 11, no. 16, p. 4423, 2019.
- [41] G. Sánchez-Marín, Á. L. Meroño-Cerdán, and A. J. Carrasco-Hernández, "Formalized HR practices and firm performance: an empirical comparison of family and non-family firms," *Int. J. Hum. Resour. Manag.*, vol. 30, no. 7, pp. 1084–1110, 2019.
- [42] C.-Y. Fong, K.-B. Ooi, B.-I. Tan, V.-H. Lee, and A. Yee-Loong Chong, "HRM practices and knowledge sharing: an empirical study," *Int. J. Manpow.*, vol. 32, no. 5/6, pp. 704–723, 2011.
- [43] M. H. Rana and M. S. Malik, "Impact of human resource (HR) practices on organizational performance: Moderating role of Islamic principles," *Int. J. Islam. Middle East. Financ. Manag.*, vol. 10, no. 2, pp. 186–207, 2017.

- [44] C. L. Saroja and J. U. M. Reddy, "HRM Practices On Employee Performance And Organizational Performance In Telangana Hospitals," 2019.
- [45] B. Obeidat, H. F. Tawalbeh, and M. A. Akour, "Reviewing the Literature among Human Resource Management (HRM) Practices, Total Quality Management (TQM) Practices and Competitive Advantages," *J. Soc. Sci.*, vol. 8, no. 2, pp. 327–358, 2019.
- [46] E. Gara Bach Ouerdian, N. Mansour, A. Al-Zahrani, and A. Chaari, "Promoting knowledge sharing in Tunisian KIFs through HRM Practices. The mediating role of human capital and learning climate," *Int. J. Hum. Resour. Manag.*, pp. 1–39, 2017.
- [47] A. I. Ismail, A. H. A. Majid, M. Jibrin-Bida, and M. H. R. Joarder, "MoGlobal Business Reviewderating Effect of Management Support on the Relationship Between HR Practices and Employee Performance in Nigeria," p. 0972150918811487, 2019.
- [48] A. Naeem, N. H. Mirza, R. M. Ayyub, and R. N. Lodhi, "HRM practices and faculty's knowledge sharing behavior: mediation of affective commitment and affect-based trust," *Stud. High. Educ.*, vol. 44, no. 3, pp. 499–512, 2019.
- [49] A. C. Bos-Nehles and A. A. R. Veenendaal, "Perceptions of HR practices and innovative work behavior: the moderating effect of an innovative climate," *Int. J. Hum. Resour. Manag.*, vol. 30, no. 18, pp. 2661–2683, Oct. 2019.
- [50] E. van Esch, L. Q. Wei, and F. F. T. Chiang, "High-performance human resource practices and firm performance: The mediating role of employees' competencies and the moderating role of climate for creativity," *Int. J. Hum. Resour. Manag.*, vol. 29, no. 10, pp. 1683–1708, 2018.
- [51] R. Tasmin and L. S. Yap, "Determining factors of knowledge management implementation in knowledge-based organizations," in *PROCEEDINGS OF KNOWLEDGE MANAGEMENT 5TH INTERNATIONAL CONFERENCE 2010*, 2010, pp. 49–54.
- [52] M. S. Malik and M. Kanwal, "Impacts of organizational knowledge sharing practices on employees' job satisfaction," *J. Work. Learn.*, vol. 30, no. 1, pp. 2–17, 2018.
- [53] G. Schiuma, V. Vuori, and J. Okkonen, "Knowledge sharing motivational factors of using an intra-organizational social media platform," *J. Knowl. Manag.*, 2012.
- [54] X. Zhang, Y. Zhang, Y. Sun, M. Lytras, P. Ordonez de Pablos, and W. He, "Exploring the effect of transformational leadership on individual creativity in e-learning: a perspective of social exchange theory," *Stud. High. Educ.*, vol. 43, no. 11, pp. 1964–1978, 2018.
- [55] S. T. Hussain, J. Abbas, S. Lei, M. Jamal Haider, and T. Akram, "Transactional leadership and organizational creativity: Examining the mediating role of knowledge sharing behavior," *Cogent Bus. Manag.*, vol. 4, no. 1, p. 1361663, 2017.
- [56] Z. Shao, Y. Feng, and L. Liu, "The mediating effect of organizational culture and knowledge sharing on transformational leadership and Enterprise Resource Planning systems success: An empirical study in China," *Comput. Human Behav.*, vol. 28, no. 6, pp. 2400–2413, 2012.
- [57] X. Zhang and Y. Zhang, "Effect of Transformational Leadership on Individual Creativity through Knowledge Sharing: a Perspective of Social Exchange Theory.," in *PACIS*, 2016, p. 48.
- [58] B. P. Le, H. Lei, S. Phouvang, T. S. Than, T. M. A. Nguyen, and J. Gong, "Self-efficacy and optimism mediate the relationship between transformational leadership and knowledge sharing," *Soc. Behav. Personal. an Int. J.*, vol. 46, no. 11, pp. 1833–1846, 2018.
- [59] L. B. Phong, L. Hui, and T. T. Son, "How leadership and trust in leaders foster employees' behavior toward knowledge sharing," *Soc. Behav. Personal. an Int. J.*, vol. 46, no. 5, pp. 705–720, 2018.
- [60] B. J. Avolio, F. J. Yammarino, and B. M. Bass, "Identifying common methods variance with data collected from a single source: An unresolved sticky issue," *J. Manage.*, vol. 17, no. 3, pp. 571–587, 1991.
- [61] M. Hafeez and A. A. Wahab, "Factors Influencing the Operational Excellence of Small and Medium Enterprise in Malaysia," *Int. J. Acad. Res. Bus. Soc. Sci.*, no. January 2017, 2016.
- [62] M. H. A.-A. A. Wahab, M. Ismail, and M. N. Muhayiddin, "The Effect of Internal Environmental Factors on Operational Excellence of Manufacturing Industry: A Pilot Study," *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 9, no. 2, pp. 1087–1099, 2019.
- [63] P. B. Le and H. Lei, "Determinants of innovation capability: the roles of transformational leadership, knowledge sharing and perceived organizational support," *J. Knowl. Manag.*, vol. 23, no. 3, pp. 527–547, 2019.
- [64] D. M. C. Nogueira, P. S. A. Sousa, and M. R. A. Moreira, "The relationship between leadership style and the success of Lean management implementation," *Leadersh. Organ. Dev. J.*, vol. 39, no. 6, pp. 807–824, 2018.
- [65] E. Sulistiyani and E. Rahardja, "Examining the Effect of Transformational Leadership, Extrinsic Reward, and Knowledge Sharing on Creative Performance of Indonesian SMEs.," *Qual. to Success*, vol. 19, no. 167, 2018.
- [66] A. Lee, S. Willis, and A. W. Tian, "Empowering leadership: A meta-analytic examination of incremental contribution, mediation, and moderation," *J. Organ. Behav.*, vol. 39, no. 3, pp. 306–325, 2018.
- [67] C.-C. Wu, F. C. Hsieh, and C.-W. Ho, "The exploration of transform leadership and organizational performance—Two mediators' model," in *2012 IEEE International Conference on Industrial Engineering and Engineering Management*, 2012, pp. 2346–2350.
- [68] H. Hu, Q. Gu, and J. Chen, "How and when does transformational leadership affect organizational creativity and innovation? Critical review and future directions," *Nankai Bus. Rev. Int.*, vol. 4, no. 2, pp. 147–166, 2013.
- [69] Y. Liu and J. S. Phillips, "Examining the antecedents of knowledge sharing in facilitating team innovativeness from a multilevel perspective," *Int. J. Inf. Manage.*, vol. 31, no. 1, pp. 44–52, 2011.
- [70] S. Park and E.-J. Kim, "Fostering organizational

- learning through leadership and knowledge sharing,” *J. Knowl. Manag.*, vol. 22, no. 6, pp. 1408–1423, 2018.
- [71] S. H. Han, G. Seo, S. W. Yoon, and D.-Y. Yoon, “Transformational leadership and knowledge sharing: Mediating roles of employee’s empowerment, commitment, and citizenship behaviors,” *J. Work. Learn.*, vol. 28, no. 3, pp. 130–149, 2016.
- [72] A. Mahmood, M. A. Qureshi, and Q. Shahbaz, “An examination of the quality of tacit knowledge sharing through the theory of reasoned action,” *J. Qual. Technol. Manag.*, vol. 7, no. 1, pp. 39–55, 2011.
- [73] I. M. Prieto Pastor, M. P. Perez Santana, and C. Martín Sierra, “Managing knowledge through human resource practices: empirical examination on the Spanish automotive industry,” *Int. J. Hum. Resour. Manag.*, vol. 21, no. 13, pp. 2452–2467, 2010.
- [74] Z. Ma, L. Long, Y. Zhang, J. Zhang, and C. K. Lam, “Why do high-performance human resource practices matter for team creativity? The mediating role of collective efficacy and knowledge sharing,” *Asia Pacific J. Manag.*, vol. 34, no. 3, pp. 565–586, 2017.
- [75] M. Mustafa, E. Lundmark, and H. M. Ramos, “Untangling the relationship between human resource management and corporate entrepreneurship: The mediating effect of middle managers’ knowledge sharing,” *Entrep. Res. J.*, vol. 6, no. 3, pp. 273–295, 2016.
- [76] A. Shaqrah, R. Alqirem, and K. Alomoush, “Affecting Factors of Knowledge Sharing on CRM: An Empirical Investigation Using Structural Equation Modeling,” *World J. Soc. Sci.*, vol. 1, no. 1, pp. 1–16, 2011.
- [77] H. Lei, T. T. Nguyen, and P. B. Le, “How knowledge sharing connects interpersonal trust and innovation capability: The moderating effect of leadership support,” *Chinese Manag. Stud.*, vol. 13, no. 2, pp. 276–298, 2019.
- [78] Y.-Y. Chang, W.-C. Chao, C.-Y. Chang, and H.-R. Chi, “Transformational leadership influence on unit performance: Cross-level moderated mediation evidence,” *Leadersh. Organ. Dev. J.*, vol. 39, no. 4, pp. 554–571, 2018.
- [79] Y. Dong, K. M. Bartol, Z. Zhang, and C. Li, “Enhancing employee creativity via individual skill development and team knowledge sharing: Influences of dual-focused transformational leadership,” *J. Organ. Behav.*, vol. 38, no. 3, pp. 439–458, 2017.