Gets the Ball Rolling: A Quantitative Study on Intellectual Leadership Competencies of QEC Leaders

Nazia Abdul Rehman
Assistant Professor, Department of Economics, Federal Urdu University Arts, Science & Technology Karachi
nzshakir@gmail.com

Muhammad Faisal Sultan
Assistant Professor, Faculty of Management & Information Sciences. KASBIT
mfaisal@kasbit.edu.pk

Khurram Shakir
Assistant Professor, Benazir School of Business, Benazir Bhutto Shaheed University, Lyari Karachi
khurram.shakir@bbsul.edu.pk

Abstract

Intellectual competencies are required by every leader in order to succeed in attaining established goals and objectives. However, intellectual competencies of leaders are rarely been studied. Especially in the context of QEC leadership there is a significant lacking of studies. Therefore, the aim of this study is to examine the relationship of intellectual competencies of QEC leaders with reference to the private HEIs from Sindh. The data has been collected from top-positioned personnel of QEC in order to reflect positively towards the significance of intellectual competencies of QEC leaders. Thus, study is one of the prime in its nature and has high significance for the academicians, researchers and students to understand the role of QEC leaders & intellectual competencies in strategic management process. Due to specific nature this study has a very limited sample size and therefore Smart-PLS has been incorporated for analysis. The tool has been selected due to its ability to work on lower sample sizes through creation of 5000 sub-samples. Hence thorough statistical analysis has been made and it has been found that intellectual competencies of QEC leaders are important for fostering the progress of the QEC department as well as the level of quality and institutional performance.

Key Words: Intellectual Leadership, QEC Leaders, Internal Audit, Self-Assessment Mechanism & Organizational Success.

Introduction

Higher Education Commission (HEC) Pakistan was established back in 2002 with the purpose of optimizing the quality of higher education in the country. Thus, since 2002 HEC is trying to quality of higher education that's become even more rigorous in the past decade (Javaid & Siddiquah, 2021). For this purpose, HEC enforces the mechanism of internal quality assurance (IQA) that needs to be incorporated by directorates of quality institutions at all HEC-recognized institutions. In fact, all the recognized HEIs are maintaining the highest category of IQA mechanism and keeping through a focus on two major objectives for IQA, i.e., periodic progress review meetings & perform monitoring visits. HEC demands annual quantitative assessment of IQA assessments & institutions that assures good IQA mechanism are found to be ready for external assessments and evaluations by QAA-HEC, accreditation councils, or any other 3rd party. The performance of IQA has been reflected through the scorecard for the period initiated from the 1st of July and last till the 30th of June (Quality Enhancement Cells in HEIs, n.d.).) Other than these two major objectives QEC at HEIs is also responsible for enhancing academic quality through the quality assessment mechanism of academic programs formally known as the Self-Assessment process. The major outcome of the process is SAR (Self-Assessment Report) and the report is fruitful in assuring academic standards, and sending feedback to faculty members in order to induce improvement and to supplement students with the required skill set for the workplace (Quality Enhancement Cells in HEIs, n.d.).

There is a well-defined road map for quality in the higher education sector. The Higher Education Commission of Pakistan has provided a road map that indicates two levels for quality assurance i.e., program-level and institution-level. On the other side, there are three stages for complying with the requirements of quality assurance. The first stage makes the institution set quality standards that are aligned with national-level criteria & for this purpose proper guidelines & standards required for quality assurance will be provided to the institution. Following these guidelines and criteria will make the institution attain the required affiliations and accreditations. The second stage makes the institution develop its internal quality assurance system (IQA) that will provide guidelines and evaluation system. The third stage makes the institution develop an association with the external quality assurance (EQA) Pakistan and success in attaining association will ensure the maintenance of standards of accreditations required at the product and the institutional level (Rana, 2020). These requirements become focused in recent times as the

higher education commission of Pakistan is working progressively with to assure the optimal quality of advanced-level learning programs (Aziz et al., 2021). These processes are effectively been summarized in figure 1 which is the process of interconnected and interdependent components.

Figure 1

Input-Output Model for Quality Management in Higher Education (Rana, 2009)
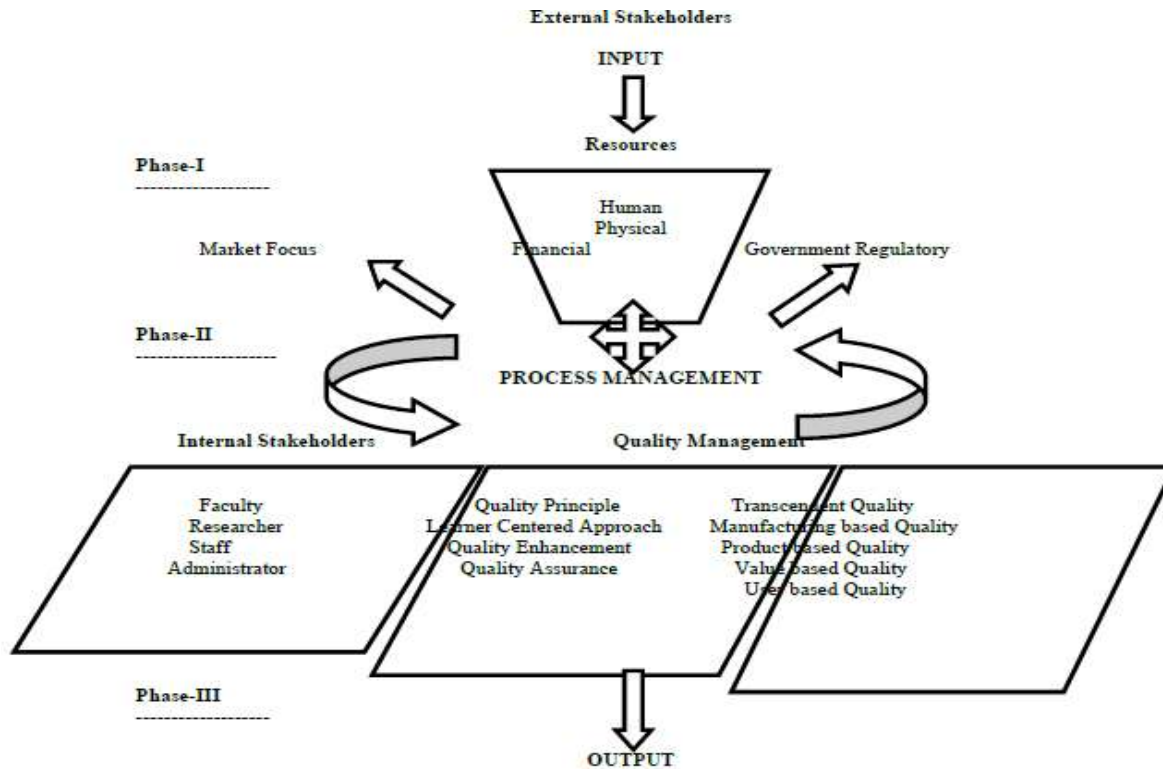
The model that is highlighted in the figure 1 is an example of input-process-output model that is applicable in higher education industry to attain perspectives of quality management. Therefore, the information yield through the process might be used by institution to develop quality proposal for the entire higher education industry (Rana, 2020).

Statement Of Problem

There are several researches that may substantiate the role of QEC in the success and operations of the institutions. Although there is a substantial lacking of research that may explore about the leadership of QEC leaders that is essential for enhancing quality in higher education institutions

(HEIs). However, there is a need of studies that may explore opinion, views and experiences of leaders that may fruitful for understanding the way of enhancement quality at higher education level. These forms of studies may also provide the way to overcome resistance lies in front of quality management in HEIs Javaid & Siddiquah, 2021). On the other side opinion & views are included in intellectual competencies (Ali *et al.,* 2018), & in Pakistan there are severe lacking studies that may related leadership with institutional performance in higher education sector (Alam *et al.,* 2019). Therefore, legitimate to believe the point that there is a need to investigate the relationship of intellectual capabilities of QEC leaders that may assist HEIs in quality enhancement.

Theoretical Framework

This study is based upon Malcolm Bridge theory for the optimization of the institutional quality and performance. The theory has seven major criteria and among these leadership and institutional performance are perceived as the major indicators for the maximization of quality and institutional performance (Noor et al., 2022). There are three major forms of leadership competencies i.e., Intellectual competencies, Managerial competencies and Emotional competencies (Meredith & Mantel, 2012 & Meredith *et al.,* 2017).

Table 1
Selection of Constructs for Quality Enhancement (DVs)

Sr. No.	Authors Name and (Year)	Important Roles of QEC Leaders				
		QEC Established	**SA Mechanism Implemented**	**QEC Empowered**	**Effective Int. Audit**	**High Ranked QEC**
01	Natalya et al (2008)	**Yes**	**Yes**	**No**	**Yes**	**No**
02	Iqbal and Iqbal (2011)	**Yes**	**Yes**	**No**	**Yes**	**No**
03	Asif et al (2013)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
04	Zubair (2013)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
05	Ullah	**No**	**Yes**	**No**	**Yes**	**No**
06	Hina and Ajmal (2016)	**No**	**Yes**	**Yes**	**Yes**	**No**
07	QAA (2011)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Although there is a variety of research that explore managerial competencies and emotional competencies of leader. However, rear studies are directed towards intellectual competencies of leader. Similarly, rear studies are done to relate intellectual competencies of QEC leader with quality management in HEIs. Few of the conducted studies include Ahmad and Ahmed (2022) and Ali et al (2018). However, none of these studies explore the concept through inferential statistics as Ali et al (2018) is a form of descriptive research and predicts the impact of intellectual competencies on the bases of correlation. The other study under this vein by Ahmad and Ahmed (2022) was qualitative and basically based on the opinion of institutional leaders from two universities only. Therefore, considering the framework of variables given by Ali et al (2018) this study tries to cover the need of research associated with leadership attributes and quality assurance perspective at HEIs (Ahmad & Ahmed, 2022). Following are the breakdown of research work used by Ali et al (2018) to predict the impact of intellectual competencies of QEC leaders over quality enhancement of HEIs. However, the purpose of the study is to understand the impact of the intellectual competencies of QEC leaders over quality enhancement. Thus, in order to infer effectively only two DVs i.e., SA Mechanism Implemented & Effective Internal Audit are used to avoid multi-collinearity (Mau & Yanovskiy, 2002). However, the leader cannot be effective without having effective managerial capabilities (Toor & Ofori, 2008). Thus the model of the study has three predictor variables, one moderator (managerial capabilities of QEC leaders), and two DVs, i.e., SA Mechanism Implemented & Effective Internal Audit.

Literature Review

There are two types of accreditation processes, i.e., one are for the institution and the other one is for the program. HEC is the body for institutional accreditation while programs are accredited by respective accreditation bodies like NBEAC & NCEAC etc. Accreditation Councils are working with QAA-HEC to review various graduate and undergraduate level programs of various universities and HEIs operating in Pakistan. Although MS & Ph.D. programs are reviewed separately by HEC (Javaid & Siddiquah, 2021). Therefore there is a need for effective leadership that may aid institutions in marching towards continuous improvement through an effective quality management system. The postulate is worthy as routine errors that hamper the process of quality management in the industry are based on mishaps and improper working by middle & top management. Hence, the role of a leader is mandatory to exemplify the mission and practices

required to attain a pre-defined vision through effective management of change management practices. Thus, educational leadership is also mandatory and hence in the limelight in past decades. The major purpose of educational leadership is to attain academic excellence. Hence, the role of educational leadership is to assess the impact of internal & external policies on the performance of the institution (Akhtar et al., 2010).

Strategic Perspective and Self-Assessment Mechanism:

A deficiency of resources is one of the main hurdles in devising of effective self-assessment process. Thus, providing strategic, systematic & quality training to the staff and faculty may overcome the hurdle created by lacking resources. Moreover, the quality of HEI may also suffer due to poor curriculum (Akhtar *et al.,* 2010).

In fact, the delivery of the curriculum is also important and it must be related to the required quality criteria. However, rigidity in curriculum delivery may reflect negatively on the quality of the institution. Therefore, most of the accreditation bodies are emphasizing the quality of students' learning outcomes and treat these outcomes as the center for the improvement of academic programs (Akhtar *et al.,* 2010).

Thus, Self-Assessment Mechanism (SAM) has been introduced as a tool that may gauge and optimize the quality of academic programs. In fact, it is the mechanism that is conducted to evaluate the extent of quality of each academic program in a sense to evaluate the contribution of each academic program towards institutional goals and quality. Thus, appropriate to declare SAM as the tool to optimize institutional performance on regular bases (Akhtar *et al.,* 2010).

In fact, even in private universities, QEC is required to arrange meetings with faculty members in order to develop confidence and gain feedback regarding institutional policies and quality mechanisms at the institution. Thus, involvement of faculty members in the enhancement of quality mechanisms is significantly important. In fact, QEC is required to develop teams based on faculty members that will highlight quality mechanisms as well as problems and issues related to academics from their respective departments (Mahmood & Noreen, 2021). Moreover, QEC also collects data from students to compile reports from the input of faculty as well as students. These measures will make QEC evaluate quality on regular bases by using physical as well as virtual platforms (Ali et al., 2018). This will provide improved facilities to students after analyzing these reports as it is the responsibility of QEC leaders to provide all the findings to the

top management and faculty. This top management and faculty will have the points to reconsider their work plans as per the satisfaction level of students (Mahmood & Noreen, 2021).

Strategic Perspective and Effective Internal Audit:

There are several quality-related criteria that are used by HEC to emphasize quality. The major criteria are the development of the accreditation council, quality enriched curriculum, and ranking of the institution on the bases of performance (Noor et al., 2022). Therefore institutional QEC uses a quality calendar as one of the major activities for the enhancement of quality. The calendar has been shared with all the departments with deadlines for complying with quality standards (Mahmood & Noreen, 2021). Furthermore, QEC leaders are involved in the continuous evaluation of quality management systems in order to assess and improve quality policy and its inherited objectives (Noor et al., 2022). Although strategic planning is the tool that is used to set strategic direction and to devise ways to reach destinations (Alam, 2019).

Thus, legitimate to quote Ali et al (2018) who reflected a positive correlation between the intellectual competencies of QEC leaders and with major functions of QEC. Therefore, leaders at HEIs are required to review procedures of quality management in order to gain effectiveness, usefulness, and adequacy. The review highlights the need for a system of quality management through changes in quality policy and related objectives (Noor *et al.,* 2022). Thus, legitimate to quote the indications of Ali et al (2018), that strategic perspective of QEC leaders is highly important in the enhancement of quality through enhancing the role and contribution of the self-assessment mechanism.

Vision & Imagination and Self-Assessment Mechanism:

There are three main processes related to quality management, i.e., quality planning, quality control & quality improvement. In fact, these three processes are perceived as three universal processes aligned with quality management. The purpose of these processes is not only to set goals, objectives and aims but also to develop relationship between standards and outcomes. These three phases are also termed Juran's Quality Trilogy by the virtue of which leaders develop action plans for the betterment of institution. This includes the development of plans, and policies, identification of students' needs & transformation of plans into action. In fact, the management system requires the involvement of quality-enriched long-term planning for appropriate monitoring and assessment of the real strengths and weaknesses of the system (Mahmood & Noreen, 2021). Although for attaining these objectives top management must push

the process of quality through synergy and teamwork of faculty as enhancement of quality requires efforts from every faculty member. Hence realization of the significance of the self-assessment mechanism is much important for taking required quality initiatives and fostering the level of quality in HEI (Akhtar *et al.,* 2010)

Vision & Imagination and Effective Internal Audit:

QAA is monitoring the performance of QECs in order to assure optimum level of quality of education at university level. In fact, the head of QAA also visits various QECs for analyzing the standard and relevance of activities that are carried out by these QECs. The evaluation has been based on the different criteria for e.g., governance, integrity, faculty, institutional resources, transparency, assessments, etc (Aziz et al., 2021). In fact, the vision and imagination of QEC leaders are significant predictors of QEC empowerment which is required for attaining membership in international statutory bodies. Thus, legitimate to quote the intellectual competencies of QEC leaders are required to flourish institutional quality as well as to foster institutional performance (Ali et al., 2018).

Critical Analysis & Judgment and Self-Assessment Mechanism:

Monitoring and Evaluation are significant predictors of the quality of education. Although monitoring and evaluation skills are so important as elaborate by National Educational Policy announced in 2017 for introducing better methods and techniques for quality in education. This includes criteria like teacher training, monitoring, assessment, evaluation, etc (Aziz et al., 2021). The role of QEC is similar & aligned with all of these functions as QEC is required to develop quality goals that are in line with criteria of HEC and the needs of stakeholders. One of the mechanisms used by QEC for quality enhancement is SAR reports that are developed by every department & include detail about programs, facilities, curriculum review, libraries, faculty & institutional support initiatives, etc (Mahmood & Noreen, 2021).

Critical Analysis & Judgment and Effective Internal Audit:

Universities are required to comply with targets of quality in order to assure compliance with statutory requirements (Aziz et al., 2021)

Although the imposition of different educational programs of various higher educational institutions produced a severe negative impact on the reputation of the institution as students do not feel positive about these institutions. Therefore, it is legitimate to review and monitoring methods that are used to evaluate degree programs. In fact, effective monitoring is required to

examine the progress of any project while evaluation is done for analyzing the impact of the project in against of the pre-determined objectives (Aziz et al., 2021). Similarly has been highlighted by Ali et al (2018), that critical analysis by QEC leaders has been observed as the potent determinant for conducting effective internal audits and control mechanisms. Although this is not an easy task and QEC managers are required to conduct mock audits and develop all the required details of academic programs before visits of accreditation committees. Thus, it is appropriate to believe the relevance of the system for quality assurance and the effectiveness of tools used for monitoring and evaluation is desired to identify gaps related to capacity building & M&E system. Relevance of the prevailing system of quality assurance and effectiveness of M&E tools and techniques within departments and Quality Enhancement Cell (QEC) is important to explore and identify the gaps in capacity building and M&E system (Aziz et al., 2021)

Managerial Capabilities of QEC leaders:

It is the responsibility of QEC directors to make proper arrangements so that data collection & evaluation may be conducted effectively. This aids in paying desired concerns towards any lacking or problem prevailing in the system (Herani *et al.,* 2015). Hence HEC pay high attention towards the skills and competencies of QEC personnel and also tries to curb their competencies through training and development programs (Herani *et al.,* 2015). Moreover, in developing sides of the world, there is a need for customization of quality management practices in order to promote quality by matching it with the cultural elements of the country. Thus, the major issue is not the adoption of the quality management system and its practices but to implementation of these effectively (Akhtar et al., 2010).

Perceived Increase in Institutional Performance:

The role of QEC in managing overall institutional well-being as well as in the up gradation of institutional grading is phenomenal. In fact, QEC is the department that assists all the other departs in managing required checks and balances of all forms of academic and other forms of activities. QEC's role is also to conduct a quality assurance audit that encompasses all the other departments to identify gray areas and also to provide suggestions for effective resource management (Mahmood & Noreen, 2021). Thus, QEC is not only responsible for collecting all the relevant data but also to apply for accreditations and ranking institutions at the local as well as international levels. In fact, the availability of QEC leaders with knowledge of TQM approaches may enhance the level of education and push institutional performance effectively

(Mahmood & Noreen, 2021).Therefore, optimal to quote Ali et al (2018), that importance of QEC is immensely important for HEIs as it is the department that involves in continuously involved in collecting and evaluating policies and performance. These activities of QEC may also assist institutions in change management practices that are required to optimize academic as well as nonacademic tasks. Hence bars of quality might be raised and evaluations like IPE (Institutional Performance Evaluation) and other benchmarks may be accomplished effectively (Javaid & Siddiquah, 2021).

Therefore, relying on the intellectual competencies of QEC leaders is effective as the descriptive analysis of the intellectual competencies of QEC leaders is found to have a significant impact on major QEC functions (Ali *et al.,* 2018).

Research Methodology

Most of the prior studies who collected data from QEC respondents like Ali et al (2018); Aziz et al (2021) and Javaid and Siddiquah (2021) were qualitative in nature. Moreover, all of these are based upon a non-probability sampling technique as the studies were based upon selected universities or on QEC working of state sector universities and institutions. However, this study is based upon data from QEC leaders from private sector institutions of Sindh. Hence the method used for this study is quota sampling which is also a part of non-probability sampling but is perceived as the best alternative to probability sampling (Yang & Banamah, 2014). The study population compromises all the directors, additional directors & deputy directors from HEC-recognized private sector institutions and universities. Most of the respondents are looking at QEC activities full-time while few of the selected participants are filling their responsibilities in addition to the teaching responsibilities. Although this study selected only those who are working full-time at a leading position at QEC. Initially, 125 questionnaires were circulated although after data synthesis analysis has been made on 104 responses. Thus, the response rate is 83% out of which 60% were males.

Research Instrument

The research instrument for the study is a closed-ended questionnaire that is adopted from studies like Akhtar et al (2010); Alam et al (2019); Hina and Ajmal (2016); Noor et al (2022) and Mahmood and Noreen (2021) etc. Although none of these studies are based exactly upon the intellectual competencies of QEC leaders on institutional performance. Therefore the questionnaire used in this study is a hybrid of the self-developed and adapted questionnaire.

Hence, the software used for analysis is SMART-PLS which has the ability to develop 5000 sub-samples for confirmatory factor analysis (Putra, 2022).

Statistical Testing

There are various tools for solving business research problems. Although when the research model has unobserved or latent variables then the use of Structural Equation Modeling (SEM) became the preference. The application of SEM is based on two models i.e., the inner model and the outer model. The inner model is used to reflect the relationship between independent & dependent variables while the outer model is used to indicate the relationship of latent variables with the observed elements. On the other hand, the implementation of SEM can be made by various methods but the use of PLS-SEM is better when the researcher does not have any assumption about the distribution of data. The use of PLS-SEM is also perceived as the best alternative to co-variance-based SEM (Wong, 2013).

Figure 2
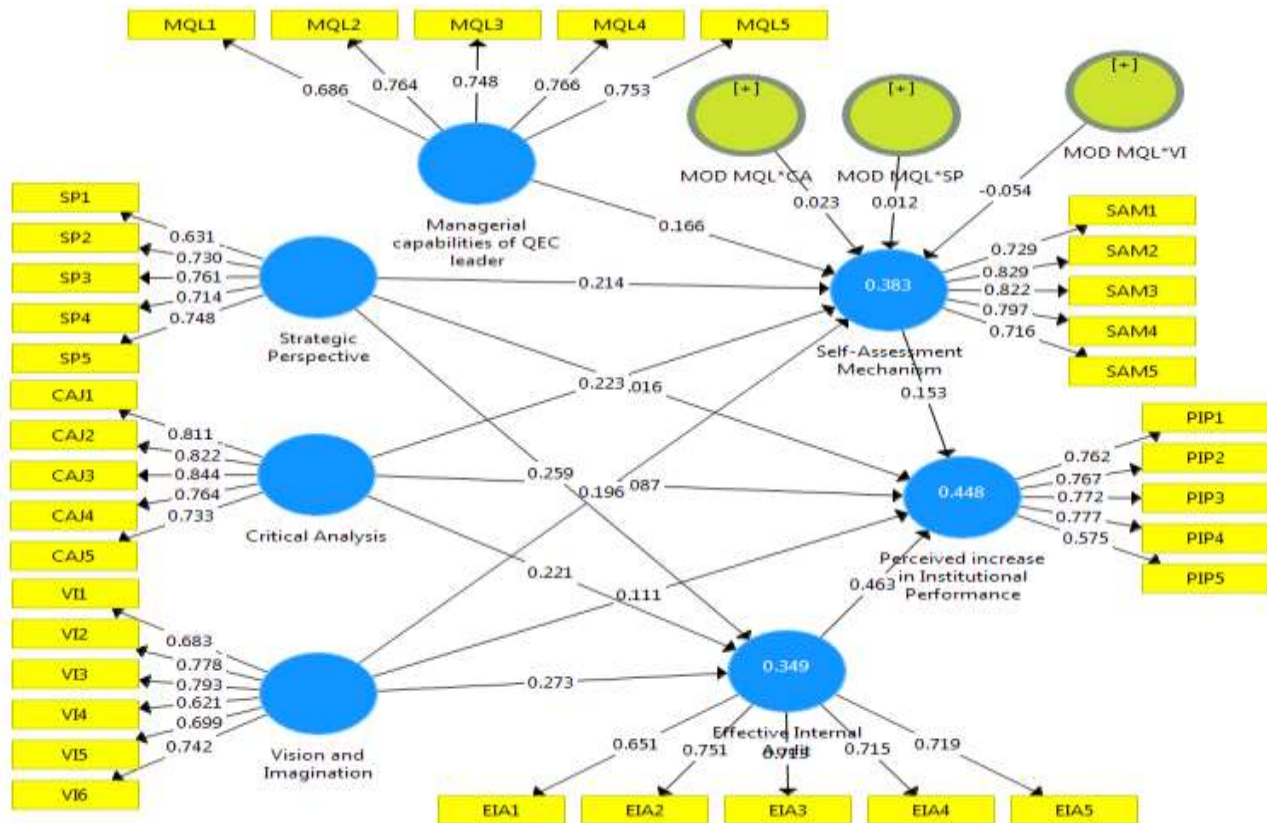*Confirmatory Factor Analysis (CFA) & Outer Loading*

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Table 2
Convergent Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Critical Analysis	0.854	0.858	0.896	0.633
Effective Internal Audit	0.755	0.759	0.836	0.505
MOD MQL*CA	1.000	1.000	1.000	1.000
MOD MQL*SP	1.000	1.000	1.000	1.000
MOD MQL*VI	1.000	1.000	1.000	1.000
Managerial capabilities of QEC leader	0.798	0.799	0.861	0.554
Perceived increase in Institutional Performance	0.783	0.794	0.853	0.540
Self-Assessment Mechanism	0.838	0.839	0.886	0.609
Strategic Perspective	0.764	0.771	0.841	0.516
Vision and Imagination	0.815	0.823	0.866	0.521

Figure 2 is plotted to indicate outer loading for every element included in the research process. The legitimacy or outer loading is similar to factor loading (Afthanorhan, 2013) although researchers must not include elements with values lower than 0.70 (Hair et al., 2017)

However, if the inclusion does not create a negative impact on convergent criteria then it is a provision to include only those elements that have values between 0.60 & 0.70 (Sander & Teh, 2014)

Table 2 is positioned to indicate construct reliability & convergent validity. According to Hair et al (2017), a combination of composite reliability and average variance extracted (AVE) is used to highlight convergent validity. Although AVE with values of 0.5 or above is sufficient to reflect convergent validity (Yaacob *et al.,* 2021). On the other side Cronbach's Alpha, Goldstein rho & composite Reliability are also used to highlight construct reliability. According to Vijayabanu and Arunkumar (2018), the minimum acceptable value for Cronbach's alpha is 0.4 while the minimum value for Composite reliability is 0.6. Therefore, none of the elements must be deleted as the values of all the elements are higher than 0.60 and this makes all of these qualified for evaluation.

Table 3
Discriminant Validity

	Critical Analysis	Effective Internal Audit	MOD MQL*CA	MOD MQL*SP	MOD MQL*VI	Managerial capabilities of QEC leader	Perceived increase in Institutional Performance	Self-Assessment Mechanism	Strategic Perspective	Vision and Imagination
Critical Analysis										
Effective Internal Audit	0.566									
MOD MQL*CA	0.094	0.079								
MOD MQL*SP	0.038	0.065	0.648							
MOD MQL*VI	0.082	0.150	0.534	0.614						
Managerial capabilities of QEC leader	0.582	0.787	0.053	0.043	0.138					
Perceived increase in Institutional Performance	0.519	0.798	0.061	0.077	0.099	0.721				
Self-Assessment Mechanism	0.573	0.523	0.048	0.022	0.042	0.580	0.553			
Strategic Perspective	0.675	0.632	0.064	0.037	0.086	0.680	0.524	0.621		
Vision and Imagination	0.403	0.563	0.095	0.057	0.071	0.580	0.523	0.532	0.479	

Table 3 is positioned to highlight discriminant validity through the use of the Heterotrait-Monotrait Ratio (HTMT) which is the best tool to be used to determine discriminant validity (Iqbal et al., 2021).

However, the value must be equal to or lower than 0.85 to assure the presence of discriminant validity (Hair *et al.,* 2019). Hence, table 2 assures the discriminant validity through Heterotrait-Monotrait Ratio and there is no need to obsolete any of the elements as none of these are generating 0.85 or above at the junction of the variables.

Table 4
Quality Criteria & Predictive Accuracy

	R Square	R Square Adjusted
Effective Internal Audit	0.549	0.544
Perceived increase in Institutional Performance	0.448	0.440
Self-Assessment Mechanism	0.512	0.498

Table 4 is plotted as the indicator of Quality Criteria to indicate predictive accuracy. That is a percentage that might be reflected in the dependent variable through a 1% change in the independent variable. The analysis is the same as that of ordinary least square (OLS) (Benitez et

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al., 2020) and the minimum value that is required to show the relationship is 0.25 while 0.50 to 0.74 is moderate and 0.75 and above is termed as an excessive relationship (Cheah *et al.,* 2018). Thus all the relationships highlighted in table 3 are above the least criteria and only one of the relationships that is caused through mediation has a value of 0.448. Thus, lies in line with the requirements & needs of model authentication and estimation.

Table 4 is presented to highlight the impact of variables over others and is hence included in the section of inferential statistics for SMART-PLS (Silaparasetti *et al.,* 2017). Although there are two major criteria to legitimize the impact i.e., t-value and p-value with a threshold value of 1.97 or above and 0.05 or below respectively (Hair et al., 2017). However, there is a need to assure both criteria in order to reflect the impact of variables over others (Hair et al., 2019). Thus, in the light of these parameters vision and imagination are producing significant impact over both the dependent variables i.e., self-assessment mechanism& effective internal audit. Similarly, the critical analysis also has a positive significant impact on both of the dependent variables. Last but not least strategic perspective also has a positive significant impact on both of the dependent variables. However, when it comes to the direct relationship of predictors with the perceived increase of organizational performance then it is only vision and imagination that also has a direct relationship.

Table 5
Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Critical Analysis -> Effective Internal Audit	0.221	0.223	0.054	4.059	0.000
Critical Analysis -> Perceived increase in Institutional Performance	0.087	0.089	0.053	1.649	0.100
Critical Analysis -> Self-Assessment Mechanism	0.223	0.218	0.063	3.550	0.000
Effective Internal Audit -> Perceived increase in Institutional Performance	0.463	0.464	0.056	8.321	0.000
MOD MQL*CA -> Self-Assessment Mechanism	0.023	0.027	0.064	0.366	0.715
MOD MQL*SP -> Self-Assessment Mechanism	0.012	0.013	0.067	0.186	0.853
MOD MQL*VI -> Self-Assessment Mechanism	-0.054	-0.060	0.064	0.845	0.399

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Managerial capabilities of QEC leader -> Self-Assessment Mechanism	0.166	0.167	0.060	2.768	0.006
Self-Assessment Mechanism -> Perceived increase in Institutional Performance	0.153	0.150	0.054	2.810	0.005
Strategic Perspective -> Effective Internal Audit	0.259	0.261	0.061	4.241	0.000
Strategic Perspective -> Perceived increase in Institutional Performance	0.016	0.017	0.057	0.286	0.775
Strategic Perspective -> Self-Assessment Mechanism	0.214	0.208	0.065	3.269	0.001
Vision and Imagination -> Effective Internal Audit	0.273	0.270	0.055	4.962	0.000
Vision and Imagination -> Perceived increase in Institutional Performance	0.111	0.115	0.052	2.131	0.034
Vision and Imagination -> Self-Assessment Mechanism	0.196	0.203	0.054	3.644	0.000

Moreover, the managerial capabilities of QEC leaders also have a significant relationship with the self-assessment mechanism. However, when the study tests managerial competencies as the moderator with all three predictors to create an impact on self- assessment mechanism then results are found to be on the neutral side. Hence on the base of the analysis, it has been assumed that all the intellectual competencies of QEC leaders are important for the major roles of the QEC department.

On the other hand figure 3 it has also been indicated that mediation effects also exist in the analysis. However, the self-assessment mechanism does not create any indirect effect for any of the three predictors. Though when it comes to effective internal audits then it is found to be generating an indirect impact of strategic perspectives & vision & imagination over institutional performance.

Figure 3
Path Coefficient
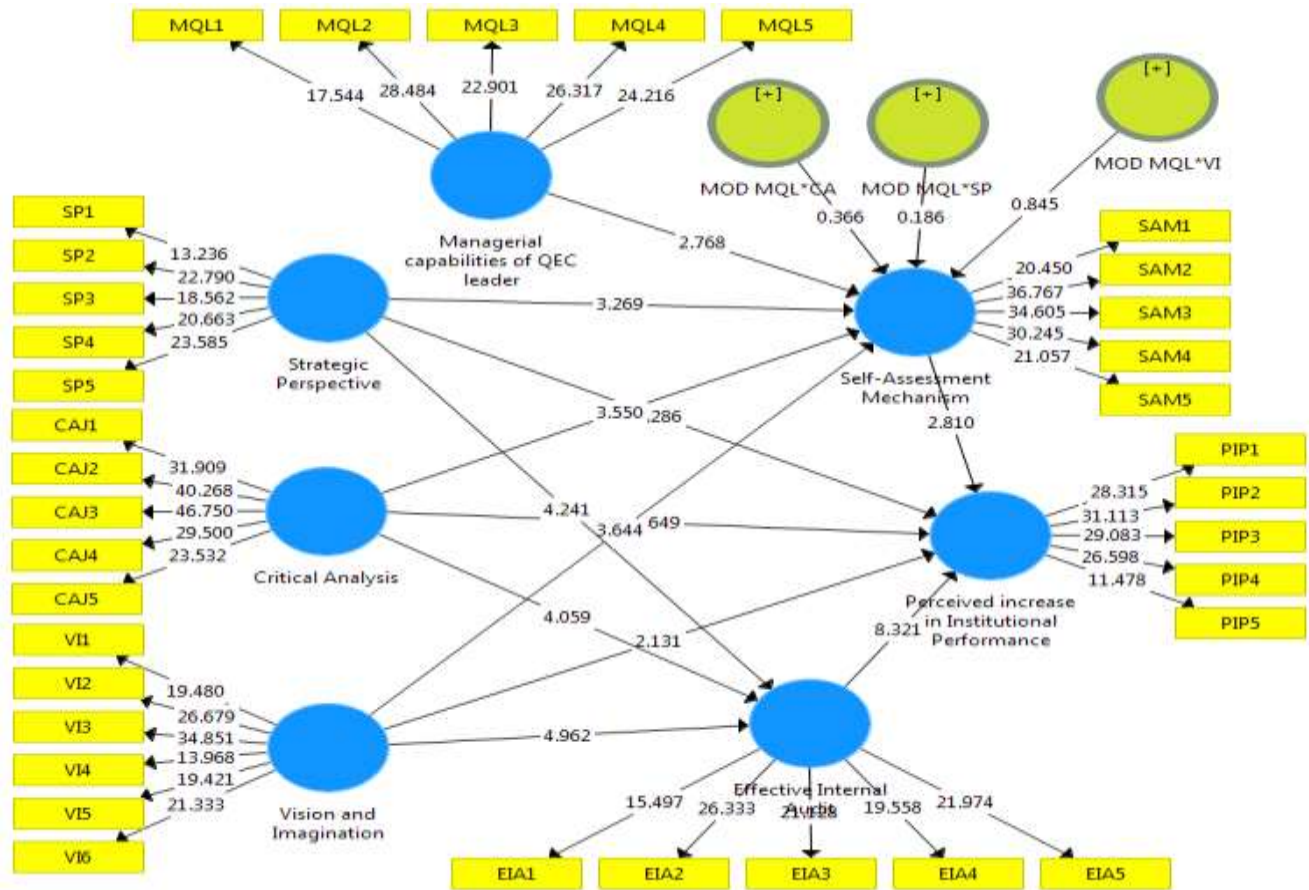
Conclusion and Discussion

This is one of the primary quantitative studies on the intellectual competencies of QEC leaders on major functions of the QEC department as well as on institutional performance. Findings indicated that intellectual competencies are fruitful for the optimization of major functions allocated to QEC and hence find consistent with Ahmad and Ahmed (2022). Therefore, it is optimal to appreciate the use of Malcolm Bridge theory, as used by Noor et al (2022), and order to discuss the intellectual competencies of leaders as indicated by Meredith and Mantel (2012) and Meredith *et al.* (2017).

Thus, linking the study with the intellectual competencies of QEC leaders will not only brides the gap posited by Ahmed (2022) and Ali et al (2018). Although in order to compare the findings of the study with all the major relationships of the study it is required to link the conclusion

systematically with the literature. Hence, the forthcoming passage will compare the conclusion with the literature in three different paragraphs. In order to relate the strategic perspective of QEC leaders with the self-assessment mechanism it has been observed that findings are consistent with Ali et al (2018) as well as Mahmood and Noreen (2021). These propositions are true as QEC has to collect data from faculty (Mahmood & Noreen, 2021) & students, by using online and offline platforms (Ali et al., 2018). Thus QEC may become able to provide effective feedback to faculty and top management that may aid in the betterment of individual and institutional performance (Mahmood & Noreen, 2021).

Moreover, the study also aligned with Ali et al (2018) and Mahmood and Noreen (2021), as institutional leaders is required to review the quality of institutional performance on regular bases to gain the required information. The information gained is beneficial for quality up-gradation at institutions. Moreover, to relate vision and imagination with the self-assessment mechanism it is potent to reflect that findings are consistent with Mahmood and Noreen (2021). In fact, to align with Juran's Quality Trilogy there is a need for appropriate monitoring and assessment of the real strengths and weaknesses of the system. On the other side vision and imagination are also associated with effective internal audit and therefore effective writing that study is also aligned with Aziz et al (2021), as QAA visits various QECs for analyzing their standard and relevance activities. The purpose of these visits is to ensure governance, integrity, faculty, institutional resources, transparency, assessments, etc. Similarly, vision and imagination are also aligned with effective internal audits as the role of QEC is to link institutional performance with required benchmarks. In fact, QAA-HEC might conduct surprise visits for evaluation and analysis of QEC performance on parameters like governance, integrity, faculty, institutional resources, transparency, assessments, etc (Mahmood & Noreen, 2021).Last but not least critical analysis is also found to be aligned with self-assessment mechanisms as well as effective internal audit. Postulates are true as the role of QEC is to link the goals of the institutions with the criteria of HEC and needs of stakeholders. Hence optimal to focus on elements e.g., teachers' training monitoring, assessment, evaluation, etc. (Mahmood & Noreen, 2021).

Other than the parameters of the intellectual competencies of QEC leaders the findings are also related to Herani et al. (2015), as managerial competencies of QEC leaders are also found to be

positively correlated with a perceived increase in institutional performance. However, the moderation of the managerial competencies of QEC leaders with intellectual competencies of QEC leaders is not producing an impact on institutional performance. Although, this is not a reason to omit the points given by Herani et al (2015), as the real role of QEC leaders is to attain high performance in the QEC department as well as an institution (Ali *et al.,* 2018). On the other side, none of the intellectual competencies of QEC leaders are found to be affecting the performance of the institution directly. Thus legitimate to include parameters on the base of Ali et al (2018), which is legitimized through the mediating role of strategic perspectives & vision & imagination with intuitional performance. Although an indirect relationship between the vision and strategic perspective of QEC leaders with an increase in institutional performance legitimizes the postulates of Akhtar et al (2010) and Ali et al (2018).

Policy Implications

The findings of the study are consistent with Ahmad and Ahmed (2022) and Ali et al (2018) who found the intellectual competencies of QEC leaders as the major predictors of self-assessment mechanisms & effective internal audits. Thus all three competencies highlighted by Meredith and Mantel (2012) and Meredith et al. (2017), are important for QEC leaders. In fact, the findings of this study also reflected that managerial competencies are effectively correlated with the self-assessment mechanism. Hence in addition to the experienced QEC leaders as indicated by higher educational institutions must also hire personnel who are visionary (Shabbir *et al.,* 2016).

Area for Future Research

Further studies might also be conducted on the remaining dimension (functions) that are required to perform by QEC as highlighted by Ali et al (2020). Moreover, future research may relate other competencies of QEC leaders with QEC functions and also with the perceived performance of institutions.

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