



## Examining the Effect of Accreditation on Higher Education Performance through Motivation as a Mediator

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The purpose of this study is twofold: first, to gain insight into the direct effect of accreditation on motivation and higher education performance, and the direct effect of motivation on higher education performance. Second, to examine the indirect effect of accreditation on higher education performance through motivation in the university setting. The study uses a quantitative research approach and collects data from administrative managers at 105 Pakistani universities through face-to-face and online survey methods, and the said data is subsequently analyzed using PLS-SEM. The findings reveal that accreditation has a substantial effect on motivation and higher education performance, and motivation has a considerable effect on higher education performance. Also, accreditation has an indirect effect on higher education performance through motivation. The study contributes empirically by examining the effects of accreditation on motivation and higher education performance and broadens theoretical understanding by introducing motivation as a mediator related to accreditation and higher education performance. Policymakers, administrators, and quality managers can leverage the findings of this study by motivating their academic staff to effectively implement accreditation standards. Furthermore, operationalizing higher education performance through teaching, research, and service will assist policymakers in bringing excellence to their universities by emphasizing these three roles/missions equally.

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### Introduction

In the 21st century world, higher education institutions (HEIs) face the challenge of achieving organizational goals and satisfying all stakeholders, this seems to be a double-

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edged sword for higher education (HE) authorities. This challenging environment requires university leaders to adopt dynamic strategies, one of which is accreditation. This is also supported by researchers who postulate that the accreditation process can help address these challenges (Acevedo-De-los-Ríos & Rondinel-Oviedo, 2022). This is also backed up by the work of several other researchers who have highlighted the various benefits of accreditation, including building an institution's reputation/credibility, increasing student enrollment, employability, internationalization, research, teaching, and innovation (Arrieta & Avolio, 2020; Ibrahim, 2014; Kumar et al., 2020).

Accreditation is an extremely important pillar for assuring quality through specialized agencies (Schomaker, 2015), and to assess the quality of the academic programs (Hegji, 2020; Vlăsceanu et al., 2007), or HEIs as a whole (Vlăsceanu et al., 2007). Previously, scholars have attempted to investigate accreditation in the context of HE, however results are inconsistent. Some studies have found a positive role of accreditation in relation to different aspects of HE (Kumar et al., 2020; Makhoul, 2019; Nguyen & Ta, 2017); while few studies have found an insignificant or negative effect of accreditation with teaching/learning and quality of HEIs (Dattey et al., 2017; Jalal et al., 2017, 2020). However, majority of the previous work on accreditation is qualitative in nature, and thus there is no conclusive empirical evidence of accreditation in relation to higher education performance.

Nevertheless, accreditation alone does not produce the desired results unless combined with the faculty member's motivation to effectively implement the accreditation standards. Researchers have argued that teacher motivation strongly influences job satisfaction and productivity, as well as quality performance by improving the quality of inputs (instructions/teaching), outputs, and outcomes within education systems (Ofojebe & Ezugoh, 2010). Conversely, a lack of faculty motivation can have negative consequences for both universities and the individual performance of teachers. Schomaker (2015) argued that due to low motivation and salary, Egyptian universities lack qualified and adequate faculty members, resulting in poor academic quality and even corruption. Previously, motivation has been investigated in different roles, including as a mediator, however, its results are inconsistent (Hassi et al., 2021; Nurfaizi & Muafi, 2022) or have some empirical and methodological gaps (Akosile & Ekemen, 2022; Gautam & Basnet, 2021; Mata et al., 2021).

The rationale behind this study is the declining quality and persistent underperformance of universities operating in Pakistan. This is why it is often criticized by society and is also reflected in the latest QS World University Rankings 2022, as only six Pakistani universities managed to make it into the top 1,000 list. Researchers believe this is due to the low quality of higher education in Pakistan. This has also been empirically validated in a recent study in which researchers found that the academic quality (i.e., the academic programs offered to students) of Pakistan's public and private universities is poor (Iqbal et al., 2022). Previous literature revealed the three basic functions and academic roles that HEIs must fulfill, including: (1) teaching; (2) research; and (3) service (Agasisti & Bertoletti, 2019; Edgar & Geare, 2013; Yilmaz & Kesik, 2010). Moreover, studies conducted in the Pakistani context also supported vulnerability in areas including: teaching quality, research quality (Banuri, 2021; Hoodbhoy, 2009), and service quality (Mastoi et al., 2019; Nisar, 2019). Given the research context and the gaps identified, this study has posed the following three research questions (RQs):

**RQ1:** How is the effect of accreditation on higher education performance and motivation in



universities?

**RQ2:** What effect does motivation have on higher education performance in universities?

**RQ3:** Does accreditation have an indirect effect on higher education performance through motivation in universities?

This study is conducted in the following order. After the introduction, a literature review is performed together with the development of the hypotheses. Subsequently, the research methodology is discussed in terms of sampling procedures and measurements. This is followed by the results and their discussion, and finally the conclusions and recommendations.

## Literature Review and Hypotheses Development

### *Higher Education Performance*

The concept of organizational performance suffers from fragmentation in the context of HE. This is why there is no consensus among researchers on measuring organizational performance in a university setting. Some emphasize financial aspects (Feranecová & Krivovská, 2016), while others emphasize non-financial aspects such as innovation, research, operations, services, internationalization, and governance (Alshaikhmubarak et al., 2020; Asiedu et al., 2020; Gao, 2018; Hernandez-Diaz et al., 2020; Kinanti et al., 2020; Lokuwaduge & Armstrong, 2015; Martin & Thawabieh, 2018; Rodríguez-González & Segarra, 2016).

In a recent study, researchers identified 15 areas of university organizational performance at the global level, the most prominent of which were teaching, research, and services (Iqbal et al., 2022). Coincidentally, these three areas are the top concerns of researchers at Pakistani universities. First, teaching performance (TP) is comprised of outputs related to teaching and learning goals for higher education systems (Agasisti & Bertoletti, 2019). TP is one of the problem areas in the Pakistani HE context due to several reasons including inappropriate/old content, lack of latest knowledge, poor teaching methods, poor learning skills, poor evaluation systems, the superficial teacher recruitment process with political interference (Banuri, 2021; Murtaza & Hui, 2021); disciplinary problems among students, academic scams by teachers, shorter working days (Hoodbhoy, 2009); and lack of faculty members with PhDs (Hoodbhoy, 2009; Murtaza & Hui, 2021).

Second, research performance (RP) implies the “research output of academic staff and HE researchers” (Agasisti & Bertoletti, 2019). RP is the knowledge acquired through research and transferred to others (Bazeley, 2010). RP is weak in Pakistani universities due to many reasons including: corrupt culture; predatory journals; poor criteria for evaluating research work systems (Banuri, 2021; Hoodbhoy, 2009); lack of proper (quality) research, imbalance between teaching and research; and poor research skills (Nisar, 2019).

Third, service performance (SP) is another weak area in the Pakistani HE context. Services are a kind of facts, processes and performances (Zeithaml et al., 2018), while some considered it as third-mission performance, which means “to capture the contribution of universities to society, including the benefits outside the academic environment that arise from HE” (Agasisti & Bertoletti, 2019). However, since there are multiple stakeholders involved in educational provisions (Srikanthan & Dalrymple, 2003), this could also be one of the reasons for poor service performance in HE (Hwawng & Teo, 2001). Given the weak quality and

performance in the three domains described above, this study has operationalized higher education performance in terms of teaching, research, and service provision in the university context.

### **Accreditation and Higher Education Performance**

Accreditation is “the process by which a (non-) governmental or private body evaluates the quality of a higher education institution as a whole or of a specific educational programme in order to formally recognize it as having met certain pre-determined minimal criteria or standards” (Vlăsceanu et al., 2007). Accreditation is believed to have a positive association with teaching and learning (Makhoul, 2019; Nguyen & Ta, 2017); university management activities (Nguyen & Ta, 2017); academic quality and excellence of HEIs (Chang et al., 2016; Kumar et al., 2020; Ulker & Bakioglu, 2018), and improvement of research performance (Ke et al., 2016).

Conversely, few researchers have opined that accreditation has a partial or insignificant role in ensuring the quality of programs and attribute development of graduates in Pakistani universities (Jalal et al., 2017). Another study revealed that the NACTE accreditation mechanism for teacher training in Pakistan is less effective in providing adequate, modern and quality education to teachers (Jalal et al., 2020). While for others, accreditation has no impact on curriculum quality, faculty employment, student-staff ratio, and library facilities (Dattey et al., 2017). Given the inconsistent findings in both qualitative and quantitative studies, and the lack of empirical evidence in relation to accreditation and higher education performance, the following hypothesis has been put forward:

**H1:** Accreditation is significantly related with higher education performance.

### **Accreditation and Motivation**

Previous studies have found a positive effect of accreditation and motivation in improving academic quality (Aldoseri & Sharadgah, 2021; Greenfield et al., 2011; Saad, 2022). However, researchers have argued that engaging staff in accreditation processes is indeed a major challenge in healthcare organizations (Greenfield et al., 2011). Simply put, staff motivation is a prerequisite for the effective implementation of accreditation standards and the achievement of quality and academic excellence. In another study conducted at Midwestern University, researchers concluded that the accreditation process is important in enhancing the status and prestige of academic programs; however, it was taken as an additional burden on faculty members unless its value was not recognized. Therefore, the researchers recommended involving faculty members in the accreditation decision, while valuing and encouraging their rigorous work throughout the accreditation process (Hail et al., 2019). The issue of faculty motivation in relation to accreditation is also emphasized in some exploratory studies (Addas, 2018; Bigdeli et al., 2021; Greenfield et al., 2011). Considering the lack of empirical evidence regarding accreditation and motivation, the following hypothesis is proposed:

**H2:** Accreditation is significantly related with motivation.

### **Motivation and Higher Education Performance**

The term motivation comes from the Latin word “movere”, which means “to move” (Kiziltepe, 2008; Steers et al., 2004). Motivation is a mobilization force to drive, direct, and organize human behaviors (Inceoglu et al., 2012); or provision of incentives to encourage people to act in accordance with their wishes (Certo, 2019). Motivation can be intrinsic and extrinsic, depending on the characteristics of the various factors that trigger behavior (Deci et al., 1975). Intrinsic motivation consists of behaviors initiated from within a person and that



positively affect employee behavior, performance, and well-being (Ryan & Deci, 2000). While extrinsic motivation involves valuing or complimenting someone's behavior as a tool so that the satisfaction gained does not come from the activity, but as an external result that leads to the activity (Rita et al., 2018).

Several studies have investigated intrinsic motivation and extrinsic motivation in organizational contexts. Turner (2017) sought to investigate which type of motivation has the driving force for employee performance in organizations. Although the study did not reveal irrefutable evidence, it did conclude that extrinsic motivation is often used to attract employees. However, in the educational context, little empirical evidence is available on intrinsic motivation, extrinsic motivation, and organizational performance. Horodnic and Zait (2015) in their study revealed a significant association between intrinsic motivation, extrinsic motivation, and research productivity; but extrinsic motivation was found to be negatively correlated with the research productivity of professors in Romanian public universities. While another study found that extrinsic factors positively influence the faculty motivation in public sector universities in Pakistan (Rasheed et al., 2016). Given the lack of sufficient evidence and inconsistent findings, the following hypothesis has been proposed:

**H3:** Motivation is significantly related with higher education performance.

### ***The Mediating Effect of Motivation***

Several researchers have investigated motivation as a mediating variable, but their study results are conflicting. Hassi et al. (2021) in their study of different Moroccan organizations revealed that there is no mediating effect of intrinsic motivation in relation to spirituality, intrinsic religiosity, and perceived job performance by full-time employees. Similarly, in another study, researchers found a mediating role for intrinsic motivation between transformational leadership and job performance, but not in relation to Islamic work ethic and job performance (Nurfaizi & Muafi, 2022). Also, some studies investigated the mediating role of motivation in the educational context, and their results confirmed this in the following relationships, such as non-monetary factors and employee retention (Mata et al., 2021); organizational culture and training transfer (Gautam & Basnet, 2021); and core self-evaluations, job satisfaction, and turnover intention (Akosile & Ekemen, 2022). Given the inconsistent results and the lack of empirical evidence on the mediating role of motivation in relation to accreditation and higher education performance, the following hypothesis is suggested:

**H4:** Accreditation has an indirect effect on higher education performance through motivation.

### ***Research Framework***

Given the gaps identified in the existing literature, a conceptual framework based on the “Resource-Based View” (RBV) theory is proposed, as shown in Figure 1. RBV theory asserts that organizations can gain a sustainable competitive advantage over competitors by focusing on internal strengths and resources, but these strengths and resources should be useful, unique, unmatched, and irreplaceable in nature (Barney, 1991). Considering RBV theory, universities can focus on faculty motivation because their motivation is critical for universities to effectively implement accreditation and other established academic standards, which in turn enhances university performance through a competitive advantage compared with other universities. The conceptual model has been composed of three variables that include accreditation (predictor variable), motivation (mediator), and higher education performance (criterion variable).

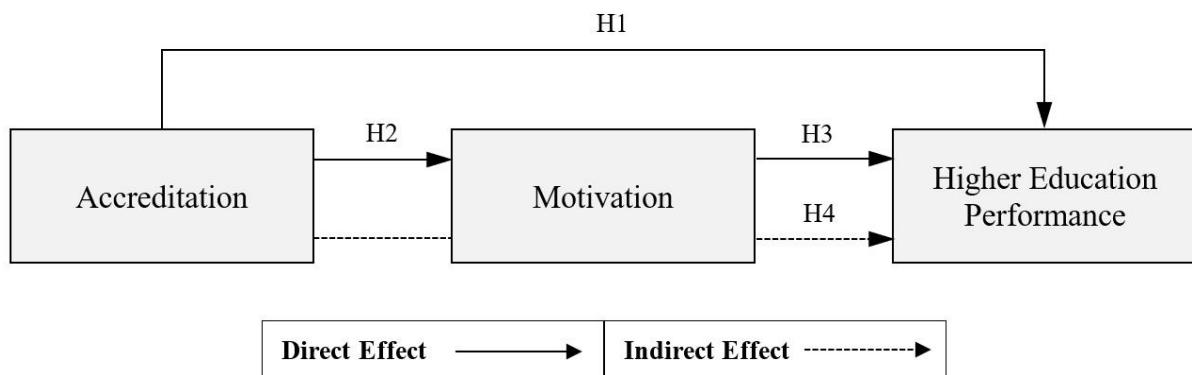


Figure 1. Conceptual Framework

## Methodology

### Participants and Procedure

The study adopted a survey approach, while the population was 226 Pakistani universities, institutions as the unit of analysis, and administrative managers (such as VCs, Deans, Directors, and HODs) as the respondents. The sample size was calculated to be 144 using the table of Krejcie and Morgan (1970), while the data were collected through online surveys and face-to-face visits. A total of 150 questionnaires were distributed, of which 111 were received, but only 105 were found to be valid, with an effective response rate of 70.0%. The unit of analysis in this study was the organization, so only one respondent (administrative manager) per university was targeted due to the profound knowledge and experience of their respective universities.

### Measures

The questionnaire was designed on a 5-point Likert scale, where "1=strongly disagree" and "5=strongly agree". In this study, several scales have been adapted, so it was necessary to test the questionnaire to identify potential problems. The researchers also believe that it is necessary to pre-test the questionnaire with a small group of respondents to test the appropriateness of the questions before conducting the study on a large scale to reduce bias (Sekaran & Bougie, 2016). The initial questionnaire was pre-tested by six experts, two of them senior academics and three quality directors from leading Pakistani universities. One, on the other hand, was a prominent quality management expert with more than 30 years of experience in implementing TQM tools in Pakistani industries. Considering their suggestions, some items were rephrased to improve the clarity and entirety of the survey questionnaire. The questionnaire had nine demographic questions, while the 48 questions were related to the latent variables such as accreditation, motivation, and higher education performance. The detail of the scale items and their corresponding authors is as follows: five accreditation items (Seema et al., 2017); eighteen motivation items (Cruz et al., 2009; Hung, 2020; Mertler, 2001); twenty-five higher education performance items, including five TP items (Dicker et al., 2018; Goos & Salomons, 2017); five RP items (Yaakub & Mohamed, 2020); and fifteen SP items (Asif et al., 2013; Asif & Searcy, 2014; Badri & Abdulla, 2004; Hui et al., 2003; Nedwek & Neal, 1994).

### Participants' Profile

As shown in Table 1, 59 participating universities are from the public sector (56.2%) and 46 (43.8%) are from the private sector. The maximum number of participating universities is 36 (34.3%) from Punjab, followed by 23 (21.9%) from Sindh, 20 (19%) from Khyber Pakhtunkhwa, 17 (16.2%) from Islamabad, 5 (4.8%) from Balochistan, 3 (2.9%) from Azad Jammu Kashmir, and 1 (1%) from Gilgit Baltistan, respectively. Regarding the gender of the respondents, 81 (77.1%) are male and 24 (22.9%) are female. In addition, most respondents are HODs 67 (63.8%), Deans 17 (16.2%) and QEC Directors 13 (12.4%), followed by respondents with other designations.

Table 1. Demographic Characteristics

Items		Frequency	Percentage
Sector	Public Sector	59	56.2
	Private Sector	46	43.8
Province	Azad Jammu Kashmir	3	2.9
	Balochistan	5	4.8
	Gilgit Baltistan	1	1.0
	Islamabad	17	16.2
	Khyber Pakhtunkhwa	20	19.0
Gender	Punjab	36	34.3
	Sindh	23	21.9
	Male	81	77.1
Designation	Female	24	22.9
	VC	4	3.8
Designation	Dean	17	16.2
	Director QEC	13	12.4
	Director ORIC	2	1.9
	HOD	67	63.8
	Other	2	1.9

### Data Analysis and Results

The present study employed PLS-SEM to analyze data using the Smart PLS 4 software, due to its ability to capture smaller sample sizes, non-normal data, and the use of latent variable scoring models (Hair et al., 2019). However, prior to data analysis, data were tested for "common-method bias" (CMB) as advocated by previous researchers (Podsakoff et al., 2012). Initially, "Harman's one-factor test" was used to detect any possibility of CMB, and the results showed that one-factor accounted for 40.84% of the total variance, which was below the maximum limit of 50%. Similarly, a "Full Collinearity Test" was performed to determine the VIF values for all constructs, and the VIFs (Table 2) were found to be less than the threshold of 3.3 recommended by Kock (2015). Both tests showed that there is no CMB problem and that the current study results are not affected by CMB.

Table 2. Full-Collinearity Test Results

Criterion Variable	Predictor Variables	Tolerance	VIF
ACC	MOT	0.519	1.927
	HEP	0.519	1.927
MOT	ACC	0.577	1.733
	HEP	0.577	1.733
HEP	ACC	0.686	1.457
	MOT	0.686	1.457

Abbreviations: ACC, accreditation; MOT, motivation; HEP, higher education performance.

### Measurement Model

The factor loadings of all the items were evaluated and found to be greater than 0.600 except EMOT4, EMOT6, SP1, SP2, SP3 and SP15, which had values less than 0.500 (Hair et al., 2016), hence they were removed. The internal consistency reliability was verified through the “composite reliability” (CR) to confirm whether the study items are reliable (McNeish, 2018). The resulting values of Alpha and CR were found to be higher than 0.700 (Wasko & Faraj, 2005); similarly, the “Average Variance Extracted” (AVE) values of all the constructs were found to be greater than 0.500 (Hair et al., 2014, 2016). The validity of the measurement model was established as the values for all the required tests (Table 3) suggested by the researchers (Hair et al., 2014, 2017) were found to be acceptable.

Table 3. Measurement Model Results

Constructs	Item	Loading	Alpha	rho_A	CR	AVE
Accreditation (ACC)	ACC1	0.824	0.913	0.916	0.935	0.741
	ACC2	0.877				
	ACC3	0.879				
	ACC4	0.834				
	ACC5	0.889				
Motivation (MOT)	IMOT1	0.695	0.704	0.778	0.867	0.766
	IMOT2	0.830				
	IMOT3	0.851				
	IMOT4	0.746				
	IMOT5	0.794				
	IMOT6	0.817				
	IMOT7	0.747				
	IMOT8	0.751				
	IMOT9	0.761				
	EMOT1	0.692				
	EMOT2	0.750				
	EMOT3	0.709				
	EMOT5	0.698				
	EMOT7	0.666				
	EMOT8	0.768				
	EMOT9	0.695				
Higher Education Performance (HEP)	TP1	0.680	0.859	0.865	0.914	0.779
	TP2	0.854				
	TP3	0.849				
	TP4	0.835				
	TP5	0.854				
	RP1	0.848				
	RP2	0.868				
	RP3	0.902				
	RP4	0.812				
	RP5	0.887				
	SP4	0.783				



SP12	0.850
SP13	0.828
SP14	0.810

Abbreviations: AVE, average variance extracted; CR, composite reliability.

Besides, discriminant validity was assessed using the “Heterotrait-Monotrait Ratio” (HTMT), which is “the extent to which a construct is truly distinct from other constructs by empirical standards” (Hair et al., 2017). The resulting HTMT ratio for all variables (Table 4) was below the upper limit of 0.90 (Gold et al., 2001; Teo et al., 2008), therefore it was also found acceptable.

Table 4. Discriminant Validity – (HTMT)

	ACC	MOT	HEP
ACC			
MOT	0.668		
HEP	0.757	0.875	

Abbreviations: ACC, accreditation; MOT, motivation; HEP, higher education performance.

### Structural Model

The structural model (Figure 2.) was evaluated to explain the proposed relationships between the variables in this study. The hypotheses (H1 to H3) were on direct relationships. First, H1 assesses that accreditation is directly related to higher education performance and the results confirmed this ( $\beta = 0.409$ ,  $t = 4.896$ ,  $p = 0.000$ ). Second, H2 considers whether accreditation is directly related to motivation, and the results confirmed this as significant ( $\beta = 0.560$ ,  $t = 8.750$ ,  $p = 0.000$ ). Third, H3 evaluates that motivation is directly related to higher education performance, and the results confirmed that this is significant ( $\beta = 0.470$ ,  $t = 6.541$ ,  $p = 0.000$ ). Therefore, the results of the first three hypotheses (H1, H2, and H3) of direct relationship were found to be supported. The results of the three hypotheses of direct relationships are summarized in Table 5.

Table 5. Direct Relationship Results

	Relationship	$\beta$	SD	t-value	p-value	Decision
H1	ACC -> HEP	0.409	0.084	4.896	0.000	Supported
H2	ACC -> MOT	0.560	0.064	8.750	0.000	Supported
H3	MOT -> HEP	0.470	0.072	6.541	0.000	Supported

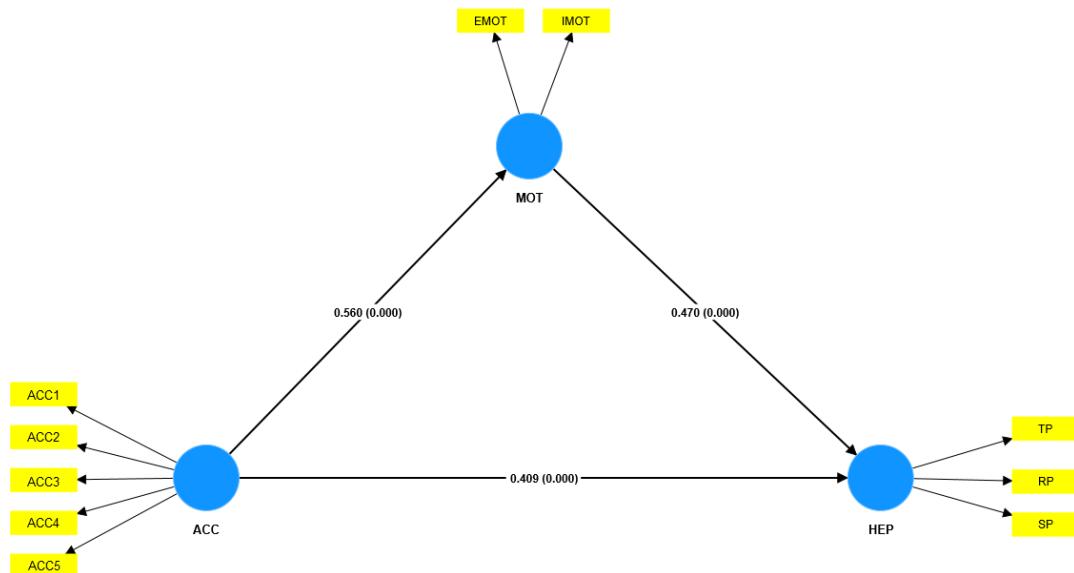


Figure 2. Structural Model

### Mediation Analysis

Hypothesis (H4) assesses whether accreditation has an indirect effect on higher education performance through motivation, and the results (Table 6) also confirmed its significance ( $\beta = 0.263$ ,  $t = 5.020$ ,  $p = 0.000$ ). Thus, H4 was also found to be supported, meaning that the mediating effect of motivation in relation to accreditation and higher education performance is empirically validated.

Table 6. *Indirect Relationship Results*

Relationship	$\beta$	SD	t-value	p-value	Decision
H4 ACC -> MOT -> HEP	0.263	0.052	5.020	0.000	Supported

### Discussion

This study substantiates all proposed direct and indirect effects of accreditation on higher education performance through motivation based on RBV theory. The RBV theory asserts that the competitiveness of firms depends on their internal strengths, which in turn determine their performance (Barney, 1991; Wernerfelt, 1984). The present study validates the considerable effect of accreditation relative to higher education performance, as a valuable resource of RBV. Accreditation in higher education can serve many purposes, such as ensuring adherence to standards, accountability and clarity, improving quality, and enabling student mobility (Sanyal & Martin, 2007). Considering the recent challenges faced by HEIs, this study provides empirical evidence that accreditation can play a positive role in improving the quality and performance of universities around the world, thereby gaining a competitive advantage. The results of this study are somewhat aligned with a few studies. Such as, accreditation plays a positive role in relation to teaching and learning (Makhoul, 2019; Nguyen & Ta, 2017); university management activities (Nguyen & Ta, 2017); academic quality and excellence of HEIs (Chang et al., 2016; Kumar et al., 2020; Ulker & Bakioglu, 2018), and improvement of research performance (Ke et al., 2016), but no study has investigated the relationship between accreditation and higher education performance. This

study contributes to the extant literature by providing empirical evidence on the direct and indirect effects of accreditation on higher education performance in the university context.

Moreover, this study also found that motivation significantly influences higher education performance. For example, the researchers found a significant effect of intrinsic and extrinsic motivation on researchers' productivity (Horodnic & Zait, 2015); and between extrinsic factors and teacher motivation (Rashed et al., 2016). This means that when people at all levels are engaged and motivated, it will lead to a better higher education performance. Additionally, this study also validates the significant association between accreditation and motivation. Such as, some researchers have found that motivation is necessary to improve quality and engage staff in the accreditation process of healthcare organizations (Greenfield et al., 2011). Similarly, in another study researchers have found that although the accreditation process was important in enhancing the status and prestige of academic programs; however, it was taken as an additional burden on faculty members unless its value was not recognized (Hail et al., 2019). In other words, faculty members link accreditation with recognition of their work, which is considered an innate need or intrinsic motivation factor.

In addition, this study empirically corroborates the mediating role of motivation in accreditation and higher education performance. This is also supported by studies in which researchers have investigated the mediating role of motivation on non-financial factors and staff retention (Mata et al., 2021); organizational culture and training transfer (Gautam & Basnet, 2021); and between core self-assessment, job satisfaction, and intention to leave (Akosile & Ekemen, 2022). However, no study to date empirically examines the mediating effect of motivation in relation to accreditation and higher education performance. Thus, this is the first study that introduces motivation as a mediator in relation to accreditation and higher education performance, and then empirically validates it in the university context.

## Conclusion and Recommendations

The study findings can be divided into direct and indirect effects of accreditation. First, this study empirically confirms the direct effect of accreditation on higher education performance and motivation, and the direct effect of motivation on higher education performance. Second, the study also validates the indirect effect of accreditation on higher education performance through motivation in the university context. In conclusion, the study empirically confirms that both accreditation and motivation are valuable resources for universities. This means that if universities want to improve performance, they must boost the motivation of their staff, especially faculty members so that accreditation standards can be effectively implemented.

This study has made several contributions to the existing literature, such as by empirically examining the effects of accreditation on motivation and higher education performance, and by broadening theoretical understanding by introducing motivation as a mediator related to accreditation and higher education performance. The findings of this research can provide policymakers, administrators, and quality managers with leverage by motivating their academic staff to effectively implement accreditation standards. Furthermore, because this study has operationalized higher education performance in terms of teaching, research, and service, it will help policymakers bring excellence to their universities by giving equal importance to all three roles/missions.

Although this study makes a useful contribution to the field of higher education and quality

management, there are some shortcomings. First, the study collected data at a single point in time (cross-sectional design). Second, the unit of analysis for this study was 'institution', so only one respondent (administrator) from a university was selected. Third, because the study was based on a nationwide survey, the researchers were unable to personally administer the questionnaires at distant universities, so they also used online surveys, resulting in a relatively small sample size.

Given these limitations, it is suggested that future researchers can replicate the study model with larger samples and longitudinal study designs to increase the generalizability of the results. In addition, researchers can introduce other predictor or mediator variables, such as leadership styles and quality culture in relation to higher education performance. Finally, this study was based on the perceptions of administrators, so future researchers can incorporate the perceptions of other stakeholders, such as teachers and students.

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