
Moderating Effect Of Collaboration And Top Management Support On The Relationship Between Knowledge Acquisition And Competitive Advantage In The Public Higher Education Institutions

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The importance of competitive advantage has extended from manufacturing and services to education industry as it is crucial for their survival and growth. Knowledge management is considered integral element to attain competitive advantage, particularly in the knowledge driven economy. However, past studies provide inconclusive results about the essentiality of knowledge management processes for attaining the competitive advantage. Therefore, this study empirically examines the moderating effect of collaboration and top management's support on the relationship between knowledge acquisition and competitive advantage in public higher education institutions of Pakistan. The data were collected through self-administered and email questionnaires which were distributed to the faculty members working at the managerial positions in the Public Sector Higher Education Institutions of Pakistan (PHEIs). Total 176 questionnaires were duly completed. Hence, they were used for the final analysis. The PLS-SEM was employed for the testing of hypotheses. The results for the hypotheses reveal that knowledge acquisition has a significant and positive effect on CA. Yet, the moderating effect of collaboration on the relationship between knowledge acquisition and CA remained insignificant. On the other hand, the moderating effect of top management support on the relationship between knowledge acquisition and CA has been found as significant and negative.

Keywords: Public sector higher education institutions, competitive advantage, knowledge acquisition, top management support, collaboration

1. Introduction

Globalization and radical technological shifts have not only transformed the entire globe, but also altered the stakeholders' expectations (Nielsen and Thomsen, 2018), from the organizations and managers with regard to their handling of the unstructured tasks (Rey Martí & Soriano, 2015), across all the industries. Accordingly, these alterations in the global dynamics have also affected the higher education institutions (HEIs) (Miotto et al., 2016). The role of these institutions is not merely confined to teaching and research as they have crucial social and economic implications and effects on every country (Schlesinger et al., 2015). However, these dynamics have also brought new challenges for the HEIs, particularly the public higher education institutions (PHEIs).

PHEIs are confronting the challenges of decrease in funding, greater expectations of stakeholders, rising demands for accountability and transparency, and competition from the local and international markets. The expectations of internal and external stakeholders have increased in terms of teaching quality, research output, community outreach, employability, and disseminating knowledge acquisition, sharing, creation and transfer opportunities (Agrey and Lampadan, 2014; Ruiz et al., 2016; Vrontis and Thrassou, 2018; Germeijs et al., 2012). Universities have the competitive edge over other universities by means of enrolling the best pupils, employing the most appropriate and productive faculty, connecting with other popular institutions, securing resources for constructing appealing campuses, and most importantly, producing, acquiring and sharing important knowledge (Brown et al., 2016; Ho et al., 2016; Verčič and Žnidar, 2016; Lo and Tian, 2019).

Accordingly, the PHEIs cannot overlook the importance of competitive advantage (CA) for sustaining a competitive position at both national and international levels (Arambewela & Hall, 2006; Chan & Dimmock, 2008; Wilkins & Huisman, 2011). The notion of CA and related competitive theories were initially observed in the private sector. However, the previous studies have also acclaimed that such theories are also applicable in the public sector organizations, including the educational institutions (Barney & Arikan, 2001; Mathooko, 2013; Mathooko & Ogutu, 2013; Porter, 1980; Powell, 2001).

Similarly, Mahat et al. (2018) and Lo and Tian (2019) studied CA and knowledge management in the context of higher education institutions. Predictably, their studies were based on the private higher education institutions, but these institutions belonged to the developed countries. Hence, proven that the empirical research on knowledge management and its processes is very limited in the context of public institutions (Pee and Kankanhalli, 2015), once again. The situation is even more scant when it comes to the empirical examination of knowledge management and CA in the context of the PHEIs of a developing country, such as Pakistan. Although CA has become an equally important feature for the PHEIs as it is for the other institutions, few studies have been conducted on the relationship between knowledge management and CA, and those too with the inconclusive results (Lo and Tian, 2019; Jyoti et al., 2015). Therefore, the current study aims to empirically examine the moderating effect of collaboration and top management support on the relationship between knowledge acquisition and CA in the PHEIs of Pakistan.

2. Literature Review and Hypothesis Development

2.1 Knowledge Based View

Organizations employ various types of resources to produce its output broadly based on tangible and intangible resources. In the current knowledge-based intense competitive landscape, intangible assets like knowledge has become more crucial component to achieving and sustain CA because it is difficult to imitate, observe and rare in nature (Black & Boal 1994; Jackson, Hitt & DeNisi 2003; Michalisin, Smith & Kline 1997; Riahi-Belkaoui 2003). Moreover, knowledge assets have got more importance to achieve and bring innovation and ultimately CA than the conventional sources of production (land, labour, capital) (Du Plessis, 2007). Strategies based on knowledge assets provide more sustainable CA to the organizations as compared to the strategies that are based on tangible assets (Barney 2001). Intangible assets are vital for CA as they comprise “consumer trust, brand image, control of distribution, corporate culture, the talent of people, and leadership skills (Evans, Pucik & Barsourx 2002), accumulated learning and experience” (Snell & Bateman 2002) knowledge and know-how that create greater value (Walters, Halliday & Glaser 2002). Having roots in RBV, KBV is defined as knowledge generation, integration and distribution (McEvily et al, 2004; Miller 2002; Narasimha 2000).

According to KBV, knowledge is the vital strategic asset that provides CA to the organization (Argote & Ingram 2000; Jyoti et al, 2015; Grant 1996a; Lopez 2005; Massa & Testa, 2009; Wu & Chen, 2012) and organizations attain “CA through the acquisition, transfer and implementation of these strategic knowledge assets (Nonaka 1991; Prahalad & Hamel 1990; Riahi-Belkaoui 2003). Knowledge shares the same context as financial, human, and other resources but it only enhances rather than diminishing (Duffy 2000). First, the ever-changing work environment requires interaction and implementation of both tacit and explicit knowledge at the workplace. When work requirements are dynamic and unpredictable in nature, continuous knowledge acquisition and implementation becomes crucial for the organization. Moreover, many scientific developments led the dramatic change in the business world (Dimitriades, 2005) and, hence, CA can only be attained when organizations leverage their knowledge assets for greater organizational performance (Jackson, Hitt & DeNisi 2003).

2.2 Knowledge Acquisition and Competitive Advantage

Knowledge acquisition (KA) is an important process through which organizations enhance their knowledge assets by seeking knowledge from external sources. Chen and Wu (2012) found that organizational CA is heavily dependent on leader’s social ties with the external actors from which the leader acquires knowledge. Organizational KA is organizational capability of acquiring, assimilating and application of distinctive knowledge to produce commercial commodity which identified as a crucial component of organizational knowledge in the theory of knowledge based view (KBV) (Grant, 1996; Spender, 1996)

Zhan (2008) found that in transition economies, international joint ventures attain CA through different means such as the acquisition of property from foreign partners, acquisition of knowledge assets from foreign partners and acquisition of market-based resources from the local environment. Various authors including Grant (1996) found that knowledge acquisition capability which includes the identification and acquisition of

knowledge from suppliers, customers, distributors, and competitors, is an important source of CA.

Several authors highlighted the role and importance of KA in a development process of unique product (Zahra et al., 2000), technological uniqueness (Yli-Renko et al., 2001) and CA position building (Dyer and Singh, 1998). Another research stream highlighted the importance of knowledge acquisition to attain a CA by indicating that the knowledge acquisition is an integral component of the organizational learning process that instigates the process enhancing organizational tacit knowledge which is unique, inimitable and value enhancing knowledge to gain CA (Argote and Ingram 2000; Cohen and Levinthal, 1990).

Aforementioned two streams unfold three significant mechanisms to attain CA through knowledge acquisition. First, through knowledge acquisition, organizations enable themselves to increase absorptive capacity by acquiring, assimilating and implementing the knowledge that would lead to CA (Yli-Renko et al., 2001). Second, strong social ties with the external players would enhance the good reputation of an organization and it would also justify the competitive position and action of the organizations (Rao, Chandy, & Prabhu, 2009). Such a legitimate position in the market may be fruitful to attract more business partners and elevate the customer base by acceptance of products and services in the market (Yli-Renko et al., 2001). In view of the preceding discussion, following hypothesis can be derived:

H1: knowledge acquisition has a significant and positive effect on competitive advantage in PHEIs

2.3 Moderating effect of Collaboration on the relationship between Knowledge Acquisition and Competitive Advantage

Cultural values in the organization may lead to developing knowledge sharing and acquisition behavior. Thus, innovative cultural values urge employees to collaborate and share knowledge with others with the support of top-level management (Slater & Narver, 1995). The prevalence of supportive and collaborative cultural values in organization indicates that the employees have cohesiveness, ease and sociability with each other (Wallach, 1983; Laskova et al., 2017). When an organization provides a supportive and collaborative culture to the employees they feel ease and comfortable to share and acquire their knowledge that may lead to innovation (Janz & Prasarnphanich, 2003). Employees learn to collaborate, support and share their knowledge and experiences with each other and try to elevate each other performance. Moreover, Organizational culture can be a greater hindrance to nurture KMP such as knowledge sharing in the organization (McDermott & O'Dell, 2001). Organization culture is itself a complex and diverse in nature, it encompasses and exists at various levels of the organization including intra-organization, trans-organization and supra-organization (Sackmann & Friesl, 2007). Specifically, employee motivation to share, collaborate, and top management support and commitment are among the crucial factors of culture that inhibit innovation in HEIs (Laskova et al., 2017). Therefore, a culture must possess the values and norms that

encourage people to share and collaborate with each other and with other partners as well (Rivera-Vazquez et al., 2009). Thus, following hypothesis can be presented:

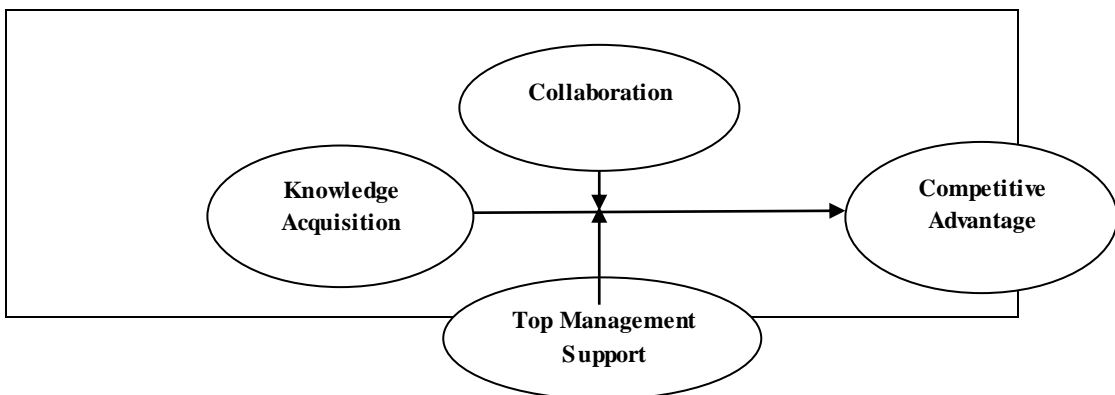
H2: Collaboration significantly and positively moderates the relationship between Knowledge Acquisition and Competitive Advantage in PHEIs

2.4 Moderating effect of Top Management Support on the relationship between Knowledge Acquisition and Competitive Advantage

In the knowledge-based organizations, appropriate management plays a key role in attaining the competitive edge. Top management is responsible for detecting the tacit and explicit knowledge sources, and employing action plans to transform individual's knowledge-base into organizational knowledge-base. According to Nonaka (1988), the top-level management generates a vision, and the middle-level management designs and implements profound steps to resolve the inconsistencies resulting from the gap between what actually exists in the organisations with regard to knowledge sharing and what the top management aspires to achieve. Absence of support and guidance from the top management may result into vague and inadequate flow of information across all the levels within the organisations. Wyman (2007) argued that although majority of the organizations aim to work within a knowledge-based world with the empowered workforce, their internal organizational structures often adhere a rigid top-down hierarchy; for example, where senior managers command orders to the middle managers, who, in turn, convert those orders into tasks which are to be performed by the front-line employees. In such a situation, employees (who actually have to perform the tasks) often experience no sense of responsibility and ownership of the tasks they perform, and so find it hard to coordinate efforts in meeting the long-term objectives of the organizations. Hence, the following hypothesis can be drawn:

H3: Collaboration significantly and positively moderates the relationship between Knowledge Acquisition and Competitive Advantage in PHEIs

Therefore, based on the previous discussion and hypotheses, following conceptual framework is illustrated:



**Figure 2.1**

3. Methodology

3.1 Sample and data collection

To achieve the research objectives, the empirical study was conducted on the public higher education institutions of Pakistan (PHEIs) which is a knowledge intensive industry, and aims to acquire, create, share and apply knowledge. The target population of the current study was academicians who were serving on managerial positions in the PHEIs of Pakistan (i.e., Vice Chancellors, Deans and Head of Departments). The sampling frame was obtained by visiting all PHEIs websites. To enhance the response rate, a letter of recommendation was also granted by the Ministry of Higher Education of Pakistan which was attached along with the final questionnaire. The data was collected through self-administered questionnaires which were sent to the respondents through emails. After several reminders and phone calls, 183 questionnaires were received back out of which 178 were duly completed. Hence, those 178 were used for the final analysis.

3.2 Measures

In the current study, all constructs were adapted / adopted from the previous studies and modified according to the context of the study. Seven items construct of competitive advantage was derived from the study of Chen and Chang (2011), and three items were derived from the work of Haan (2015). Moreover, three items scale of Knowledge acquisition was adapted from the work of Kianto (2011). Furthermore, collaboration was measured through five items scale adopted from the work of Islam et al., (2015). Lastly, items to measure the top management support were also adapted from the work of Islam et al., (2015). In order to measure all the reflective constructs, a 5-points Likert scale was used (e.g., from depicting 1 = strongly disagree to depicting 5 = strongly agree).

3.3 Methods

To attain the research objectives and for hypothesis testing, current study employed the partial least square, structural equation modelling (PLS-SEM). The PLS-SEM is second generation of structural equation modelling which deals well with models that are more complex in nature (Hair et al., 2016). In addition, PLS-SEM is also fruitful in giving good results when data is abnormal or small (Hair et al., 2016; Hopkins and Kuppelwieser (2014). As follows, the current research examined the complex model, having one independent variable and one dependent variable along with two moderators. All the

measurements used in the current research are reflective in nature where measurement model was examined to ensure the convergent validity and discriminant validity while structural model assessed the hypotheses testing and coefficient of determination of the current research model.

4. Data Analysis Results

4.1 Results of Measurement Model

Table and figure 4.1 showing the results of the measurement model. At first, all factor loadings showing the acceptable values as ranging from 0.630 to 0.934 for all reflective constructs. Indicators with an outer loading below 0.4 should be removed from the scale. Hair et al., (2011) recommended that in the outer model indicator/s construct/s having factor loading lower than 0.40 must be deleted . Only item CA1 and CA10 were shown lower factor loadings than acceptable range hence, were deleted. Furthermore, convergent validity was also ascertained by examining the rho-A and AVE where rho-A is ranging from 0.951 and 0.753 and AVE for all reflective constructs were greater than 0.50. Therefore, convergent validity for all reflective constructs was established. In addition, discriminant validity was also ensured whether all constructs are distinct from each other empirical standards (Hair et al., 2016). Fornell-Larcker criterion was employed to examine the discriminant validity. Table 4.2 depicts that all bold diagonal values are greater than the off-diagonal elements in their corresponding row and column thus, discriminant validity was ensured in the current research.

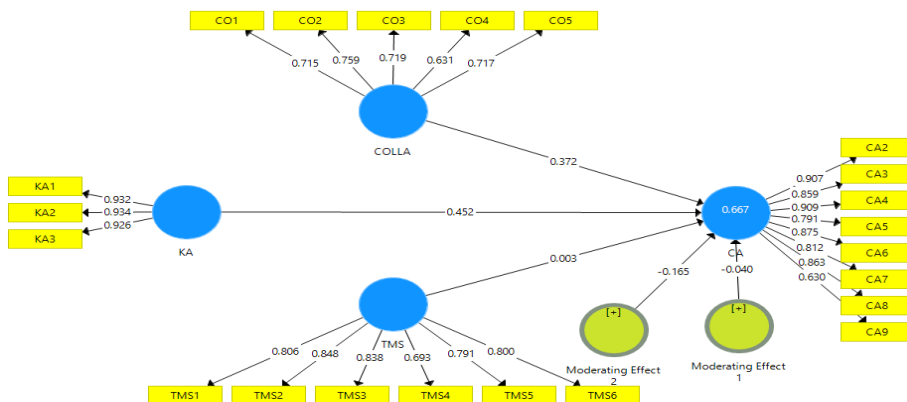


Figure 4.1

Table 4.1 Convergent Validity

Construct	Items	Loadings	rho_A	AVE
Competitive Advantage	CA2	0.907	0.936	0.698
	CA3	0.859		
	CA4	0.909		
	CA5	0.791		
	CA6	0.875		
	CA7	0.812		
	CA8	0.863		
	CA9	0.630		
Collaboration	CO1	0.715	0.753	.503
	CO2	0.759		
	CO3	0.719		
	CO4	0.631		
	CO5	0.717		
Knowledge Acquisition	KA1	0.932	0.951	.867
	KA2	0.934		
	KA3	0.926		
To Management Support	TMS1	0.806	0.894	.637
	TMS2	0.848		
	TMS3	0.838		
	TMS4	0.693		
	TMS5	0.791		
	TMS6	0.800		

Table 4.2 Discriminant Validity

	CA	COLLA	KA	TMS
CA	0.835			
COLLA	0.695	0.709		
KA	0.712	0.558	0.931	
TMS	0.513	0.617	0.398	0.798

4.2 Results of Structural Model

The Figure 4.2 and table 4.3 reveals the results of structural model or hypothesis testing. Knowledge acquisition showed a significant and positive effect on competitive advantage in (Hypothesis 1: $\beta = 0.452$; $p < .01$), thus,hypothesis 1 is supported and accepted.

Secondly, a significant and positive moderating effect of collaboration on the relationship between knowledge acquisition and competitive advantage is not proven (Hypothesis 2: $\beta = -0.040$; $p > .10$). Hence, Hypothesis 2 is not supported and rejected. The third hypothesis was partially proven as it shows significant but negative effect of top management support on the relationship between knowledge acquisition and competitive advantage (Hypothesis 3: $\beta = -0.165$; $p < .01$), therefore partially supported and accepted.

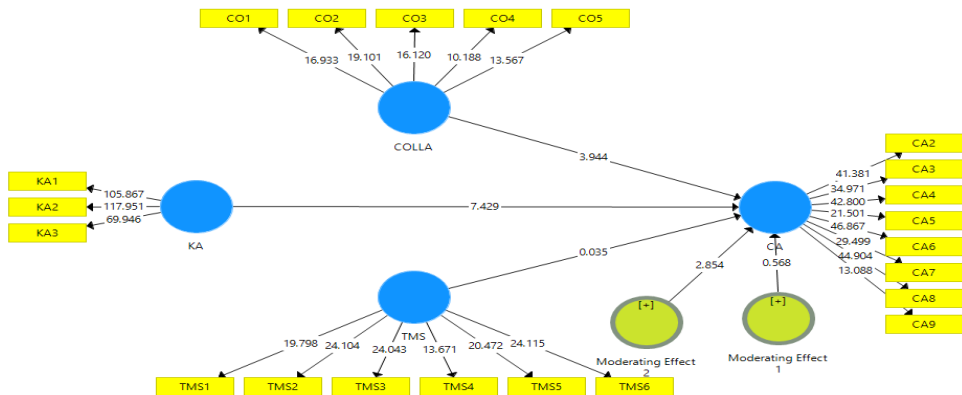


Figure 4.2

Table 4.3 Results of Hypothesis Testing

	Original Sample (O)	T Statistics (O/STDEV)	P Values	Decision
KA -> CA	0.452*	7.429	0.000	Supported
KA*Collaboration	-0.040	0.568	0.571	Not Supported
KA*TMS	-0.165**	2.854	0.004	Partially Supported

*Significant at 0.001. ** Significant at 0.05

5. Discussion and Implications

The basic objective of the current study was to examine the moderating effect of collaboration and top management support on the relationship between knowledge acquisition and competitive advantage in the public higher education institutions of Pakistan (PHEIs). The conceptual model was drawn from the theoretical underpinning of the resource-based view and social exchange theory.

The results for the first hypothesis revealed that knowledge acquisition has a significant and positive effect on competitive advantage. These results are in accord with the various previous studies which also revealed a significant and positive association among

knowledge acquisition and competitive advantage. For example, Chen and Wu (2012) unfolded that organizations are dependent upon the social ties of their leaders who acquire external knowledge and implement it within the organizations. Similarly, Zhan (2008) discovered that knowledge acquisition is a significant predictor to attain CA in the international joint-ventures as it enables them to learn and acquire unique knowledge and skills. Moreover, knowledge acquisition impetus the learning process within the organization by accumulating the tacit knowledge as it is valuable and inimitable to attain the CA (Argote & Ingram 2000; Cohen & Levinthal. 1990) at the national, international and global levels. Same may be applicable to the context of PHEIs as they are going through a transition phase due to the globalization.

Moreover, technological advancement and their emerging competition with the private higher education institutions are urging them to bring changes into their organizational cultures and structures. A number of PHEIs have started their faculty development programs through which hundreds of faculty members have been sent to foreign universities for attaining the Doctor of Philosophy degrees in various disciplines. At their completion of the degrees, when these faculty members return to Pakistan, they are the major source of new knowledge- a knowledge they acquired from foreign universities. Similarly, various universities are also signing MOUs with foreign universities in order to acquire knowledge and skills in different academic, research and management fields.

The second hypothesis was to assess the moderating effect of collaboration on the relationship between knowledge acquisition and CA in the PHEIs. The result shows an insignificant effect of collaboration on the relationship between knowledge acquisition and CA. The rationale for this may be attributed to the various elements within the public organizations that undermine the employee collaboration with each other, such as fear of losing power, distrust, maintenance of status quo, high formalization, lack of group tasks and visionary leadership. All of these elements act impediment to strong socialization and competitiveness in the educational.

The third hypothesis was formulated to examine the moderating effect of top management support on the relationship between knowledge acquisition and CA in the PHEIs of Pakistan. The results unfolded the significant and negative moderating effect on the relationship between knowledge acquisition and competitive advantage. These results are surprisingly contrasting to the previous studies. For example, Wang and Noe (2010) asserted that the top management's support along with the proper implementation of the employees' incentive mechanism facilitate knowledge acquisition and stimulate employees to share their acquired knowledge. Moreover, this can further contribute towards the attainment of organizational success and CA. In addition, top management's support enhances the level and quality of knowledge exchange and internal knowledge acquisition through influencing employees' commitment (Lee et al., 2015). Previous knowledge-management studies have also documented that the supportive behaviours by the top management are essential to nurture an encouraging environment at the workplace (e.g., where the employees are encouraged to apply their knowledge at their work activities freely), which, in turn, enhances the organizational competitiveness. On the other hand, the contrasting results are due to the fact that PHEIs apparently have rigid organizational structures and less power sharing cultures which undermine the knowledge acquisition

initiatives taken by their employees. Consequently, this adds to the incompetency of the PHEIs. This kind of situation is more pertinent to the developing countries, such as Pakistan, where centralisation and high formalisation are prominent hallmarks of the public sector organizations, including the PHEIs, which lead to stifle their soul of collaboration.

6. Conclusion and Limitations

Emergence of Globalization and technological advancement has transformed manufacturing and service based economies into a knowledge based economy. It is, therefore, knowledge that has become a key factor in attaining the competitive advantage in the knowledge based economy. The importance of competitive advantage cannot be denied due to the fact that competitive advantage is considered as a key element for organizational growth and survival in all the industries, including the public sector higher education. There have been a few studies conducted on the knowledge management and competitive advantage regarding the higher education industry, but those too have been conducted in the context of private higher education institutions. Moreover, such studies presented unsettled results. Thus, the current research examines the moderating effect of collaboration and top management support on the relationship between knowledge acquisition and competitive advantage in the public sector higher education institutions of Pakistan (PHEIs). The current research reveals mixed findings where knowledge acquisition has been found as a significant and positive predictor of competitive advantage. As for the collaboration, it has been found to be insignificant as a moderator of the relationship between knowledge acquisition and competitive advantage. Moreover, the current research reveals an interesting result about the significant and negative moderating effect of top management support on the relationship between knowledge acquisition and competitive advantage in PHEIs. However, as mentioned earlier, the study provides mixed results. It may be due to the limitation that the study only examined the PHEIs and overlooked the private higher education institutions. Thus, the findings may not be generalised. Another limitation was that the sample size was small due to the relatively small population size. Nevertheless, these limitations serve as the future directions for the prospective studies in the similar field where both public and private higher education institutions may be examined together for more generalized and profound results.

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