

# ASSET SPECIFICITY: THE CRITICAL SUCCESS FACTORS FOR HIGHER EDUCATIONAL SPECIFIC QUALITY

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### Abstract

**Purpose:** Several studies on asset specificity largely focus on manufacturing firms, however study that revealed asset specificity as critical success factor for educational are still underdeveloped. This study aims to reveal asset specificity as critical success factor to enhance competitive advantage. **Research methodology:** This study based on a semi-systematic review of 83 the literatures relating to asset specificity. The literatures were taken from the bibliography of Scopus and Google Scholar spanning 1985-2021 which is then analyzed and compiled into the findings of the present study. **Results:** The results (1) higher education institutions have to offer educational services with more advantages than other higher education institutions, (2) service quality has been a crucial element in offering effective educational services or commonly known as higher education performance (HEdPERF), (3) asset specificity (consisting of human asset specificity, physical asset specificity, site-specificity, dedicated assets specificity, brand capital specificity, temporal asset specificity, and procedural asset specificity) enables higher education institutions to have specific HEdPERF, (4) asset specificity offers a specific framework for universities in offering comprehensive services. Universities' competitive advantages are based on their unique resources, difficult to imitate, unique and cannot be replaced by competitors. **Conclusions:** university managers must build competitive advantage by optimizing the specificity of the assets that are managed optimally.

**Keywords:** Asset Specificity, HEdPERF, Competitive Advantage

**JEL Classification:** I2; I21; I23; L1; L21;

## I. INTRODUCTION

Asset specificity refers to specific investments in certain assets that are beneficial to certain exchange relations because investments in other assets require much higher switching costs (Chiou and Droge, 2006; Zhao and Wang, 2011; Badrinarayanan et al., 2016). Studies on asset specificity have largely focused on manufacturing and, to a lesser extent, non-educational service firms. Nevertheless, asset specificity is also crucial for educational service firms like

higher education institutions. Universities that were immune to competition (Bunzel, 2007) have to survive in more intense competition, more competitive and specific resources to survive the competition.

Investments in specific assets lead to highly specialized assets that can only be used for specific purposes (Brown and Potoski, 2005). However, service firms' use of asset specificity potentially creates competitive advantages (Brouthers and Brouthers, 2003) through irreplaceable performance. The resource-based view labels this process as an isolating mechanism (Rumelt, 1984). In a similar vein, universities have to be specialized to create their competitive advantages. They have to offer educational services with more advantages relative to other universities. Investments in specific assets prevent other universities from replicating them easily. Even if competitors manage to copy these resources, they will find it difficult to adapt these resources in their settings.

This research is important to study because today's is facing a very sharp level of competition and even in some countries, universities are now becoming models of themselves in corporate entities and managed like businesses (Woldearegay, 2021) important for universities to have resources or specificity assets, as well as the quality of higher education services that are unique and specific so that they become a source of excellence that can increase

Based on this reason it is necessary to know what is meant by asset specificity and its dimensions in the context of higher education. Currently there is no research related to the role of asset specificity in creating quality education services and competitive advantage in universities. Through this study, it is also expected to obtain an overview of the linkage of ownership of specific assets that can increase the competitive advantage of a university which will be realized in providing their educational services.

Service quality is an important element to delivery of effective education services or higher education performance (HEdPERF) at universities. Asset specificity (consisting of human asset specificity, physical asset specificity, site-specificity, dedicated assets specificity, brand capital specificity, temporal asset specificity, and procedural asset specificity) enables higher education institutions to have specific HEdPERF. Asset specificity offers a specific framework for universities in offering comprehensive services. Universities' competitive advantages are based on their unique resources.

This study was conducted based on a review of various literatures related to asset specificity and HEdPERF. Based on the research results, we tries to produce a conceptual framework that links asset specificity and HEdPERF that can create a competitive advantage for a university. This study will examine the dimensions of asset specificity that are appropriate in the context of higher education. This study will also explore how the dimensions of asset specificity one by one can help improve the quality of higher education services so that a competitive advantage can be created.

## 2. LITERATURE REVIEW

### 2.1 Asset Specificity

Lui and Ngo (2005) define specificity as the non-recoverable that represents special investments in relationships. Using specific assets will increase partnership values and intention to cooperate. Investments in specific assets are transaction-dependent and cannot be used for other transactions (Morrill and Morrill, 2003). In this regard, asset specificity stabilizes relationships by creating the “mutual hostage” conditions (Sa Vinhas and Heide, 2015). Specific investments are those made to produce a less adaptable product for other good/ service production activities, to the extent that they are required to produce high-quality services (Brown and Potoski, 2005). De Vita et al. (2011) identify the interpretative pattern of asset specificity by categorizing the definitions into six main themes: (1) the required customization level to support transactional relationships; (2) asset or investment uniqueness to perform the tasks; (3) the importance of both transacting parties’ identities; (4) asset or investment transfers needed to support certain transactions; (5) assets or investments’ values outside the transactional relationships; and (6) invested or committed values in the relationship continuity. Asset specificity varies according to the extent these assets are transaction-specific (Williamson, 1985; Anderson and Weitz, 1992).

Investments in asset specificity (site, equipment, and human) will help service providers generate stronger relationships with their main customers (Ghani and Khan, 2004). Asset specificity affects contract complexity (Anderson and Dekker, 2005; Duplat and Lumineau, 2016) and build communication channels with partners that enable firms and their partners to jointly understand the projects (Shi et al., 2018). Further, Luo et al. (2015) argue that asset specificity only applies to certain exchange relationships. Meanwhile, Morrill and Morrill (2003) emphasize the importance of various indicators in analyze asset specificity because it is not directly observable. According to the transaction cost approach, the efficiency of the governance structure is determined by asset specificity. Market (hierarchical) governance is used when asset specificity is low (high) (Williamson, 1996). Asset sdpecificity does not only refer to humans, but also ownership and dedication (Brouthers and Brouthers, 2003).

### 2.2 Asset Specificity Dimensions

Asset specificity refers to specific investments to deliver the best services. Ownership of asset specificity helps organizations disincentivize opportunistic behavior and secure consumer loyalty (Chiou and Shen, 2006; Cruz et al., 2014). Various scholars also define asset specificity dimensions differently.

The following table presents several asset specificity dimensions.

**Table 1: Dimensions of asset specificity**

Author	Dimensi Asset Specificity							Industry
	Human	Physical	Site	Dedicated	Brand Capital	Temporal	Procedural	
Joskow (1988)	√	√	√	√				Electric generation
Williams on (1985)	√	√	√	√	√	√		
Anderson and Weitz (1992)	√	√						Electronic
Nishiguchi (1994)	√	√	√	√				Electronic
Zaheer and Venkatraman (1995)	√						√	Insurance
Lyons (1995)		√						Engineering
Stump and Heide (1996)		√					√	Chemical
Dyer (1997)	√	√	√	√				Javanese firms
Coff (1997)	√							Firm
Adler et al. (1998)	√	√		√				Airforce
Houston and Johnson (2000)	√							Joint Ventures
Morrill and Morrill (2003)	√							Standard & Poor's Compustat financial
Brouthers and Brouthers (2003)	√			√				Manufacturing firms
Leiblein (2003)	√	√	√	√	√	√		Organizational Governance

Ghani and Khan (2004)	√	√	√					Auto industry
Brouthers and Nakos (2004)	√	√						SME
Brown and Potoski (2005)	√	√	√			√		Municipal service
Dibbem et al. (2005)	√							Sourcing of Application Services
Lamminmaki (2005)	√	√	√	√	√	√		Hotel
Chiou and Shen (2006)	√	√						Internet portal sites
De Vita et al. (2010)	√		√	√	√	√	√	Service industries
De Vita et al. (2011)	√	√	√	√	√	√	√	
Cruz et al. (2014)	√		√	√	√	√	√	Hospital
Pang et al. (2015)	√	√	√	√				Construction
De Vita and Tekaya (2015)	√	√	√	√	√	√	√	Hotel
Kim and Lee (2016)	√	√						SMEs
Lin et al. (2017)	√	√	√	√	√		√	Manufacturer
Espino-Rodríguez et al. (2017)	√	√						Hotel
Merkert et al. (2018)	√	√			√			Bus industry
Shi et al. (2018)	√	√		√		√		Construction industry
Pavez and	√	√	√	√	√	√		Fruit exporters

Codron (2018)								
Wang et al. (2019)	√	√						Offshore cooperation
De Souza Filho and Miranda (2019)	√	√			√	√		horticultural smallholders
Liu et al. (2020)	√	√		√		√		Manufacturing firms.
Bijman et al. (2020)		√			√	√		Agribusiness Firms (CFA)
Pettersen et al. (2020)	√	√				√		Pre-Hospital Healthcare
Cabral et al. (2021)			√	√				firm supplying petrochemical

Specificity of assets is not transferable, especially related to the specificity of human assets (Espino-Rodríguez et al., 2017). Human asset specificity refers to specific relationships from the knowledge exchanges between firms' personnel (Dyer, 1996; Dyer, 1997). Human asset specificity represents the degree of the uses of firms' expertise (Pettersen et al., 2020), knowledge, and experience that encompass unique and transactive skills and experience (Lamminmaki, 2005; De Vita et al., 2011) and adaptation levels from training (Brouthers and Brouthers, 2003; De Souza Filho and Miranda, 2019). Human asset specificity refers to personnels' skills and firms' human resource development costs to facilitate increased interactions in beneficial exchanges. Human asset specificity should be positively correlated with employees' concentration and intensity (Houston and Johnson, 2000).

Human asset specificity correlates with an increase in coordination intensity (De Souza Filho and Miranda, 2019), increased contract (Pettersen et al., 2020) and learning by doing (Williamson, 1985; Joskow, 1988; Pang et al., 2015). Services require highly human asset-specific investments (Dibbem et al., 2005) that how human resources are specifically invested in transactions through training or learning (Pang et al., 2015). Specific assets indicate the extent to which general-purpose assets are deployed for specific transactions (Chang and Ive, 2007). Customers do not switch because firms have invested much in invisible human assets (Chiou and Shen, 2006).

Physical asset specificity refers to investments to purchase machines, equipment, and supplies for firms' operating activities (Williamson, 1985; Dyer, 1996; Pang et al., 2015), with a significant investment in physical it will be able to increase the contract (Pettersen et al., 2020) dan associated with a higher intensity of coordination (De Souza Filho and Miranda, 2019). Physical asset specificity is more easily measured than human asset specificity that is highly complex and complicated (De Vita et al., 2011) which is represents investments in physical assets for specific transactions (Dyer, 1997; Lamminmaki, 2005; Bijman et al., 2020) with limited alternative uses because of their specific design or characteristics (Joskow, 1988; De

Vita et al., 2011). In this regard, organizational protections necessitate investments in physical assets (De Souza Filho and Miranda, 2019)

Site-specificity illustrates a situation where buyers and suppliers are involved in the “cheek-by-jowl” relationships due to the importance of the relationships in mitigating inventories and other related processing costs (Williamson, 1985; De Vita et al., 2011; Pang et al., 2015) or the proximity with buyers/ sellers (Lamminmaki, 2005), facility locations (Dyer, 1997), incurring the most economical costs in managing inventories and transportation (Joskow, 1988; Dyer, 1996; Cabral et al., 2021). Hence, site-specificity secures long-term relationships (De Vita et al., 2010).

Dedicated asset specificity is firms’ total sales from their customers’ purchases (Dyer, 1996; Dyer, 1997). Dedicated asset specificity includes all transactions from long-term relationships (Joskow, 1988; Lamminmaki, 2005; De Vita et al., 2011). Joskow (1988) defines dedicated assets specificity as involved parties’ dedication to facilitating exchanges that mutually benefit those involved in these transactional relationships. Dedicated asset specificity also refers to investments in general-purpose assets for certain transactions (Brouthers and Brouthers, 2003; Cabral et al., 2021) and commitments to serve more customers (Williamson, 1985; Pang et al., 2015)

Brand capital specificity is closely related to investments in reputations (Lamminmaki, 2005; De Vita et al., 2010; Bijman et al., 2020). Specifically, brand name asset specificity represents assurance (De Souza Filho and Miranda, 2019) and illustrates transactional relationships that involve activities directly and greatly affecting firm performance (De Vita et al., 2011). Investments in firms’ reputations are critical to preserving long-term relationships.

Temporal asset specificity refers to the importance of time (Pettersen et al., 2020) and coordination in transactional relationships (Lamminmaki, 2005; De Vita et al., 2011; Bijman et al., 2020). The importance of specific time depends on the ability to reach users by offering values in the exchanges despite limited time. Service quality remains important in transactional relationships, considering the service requirements and timeliness. As suggested by Masten et al. (1991), temporal specificity indicates the importance of time limits and critical processes in construction projects. They argue that contractors can threaten to stop construction projects at the last minute due to higher prices or more resources needed. The main source of coordination is temporal asset specificity (De Souza Filho and Miranda, 2019).

Procedural asset specificity indicates organizational routines and workflows in response to specific transactional relationships. Such routines and workflows are not easily modifiable to avoid value reduction (De Vita et al., 2010; De Vita et al., 2011). Firms’ ability to adapt to system and process changes is crucial in their transactional relationships. Firms invest in physical assets and routine operational activities (Espino-Rodríguez and Gil-Padilla, 2005) to generate procedures that help their production and operational processes.

### 2.3 Higher Education Performance

The strategic management literature has suggested that service quality is an important key to improve competitive advantage. Service quality-based competitive advantage is closely related to increased profits, positive sales, word of mouth, loyalty, and differentiation (Abdullah, 2005). In the higher education field, service quality becomes a critical element in effective educational service deliveries (Muhammad et al., 2018).

In education, especially in higher education, service quality has been an important agenda for developing human capital in education (Khalid et al., 2019). Higher education institutions exhibit different quality measurements than other service firms. Service firms generally employ the SERVQUAL concept to measure their service qualities that consist of five main dimensions: tangible, assurance, reliability, empathy, and responsiveness (Parasuraman et al., 1988). Many customer satisfaction studies have investigated SERVQUAL dimensions (Muhammad et al., 2018). However, educational institutions, especially higher education ones, have seen another approach that is considered more appropriate to measure higher education institutions' service performance than SERVQUAL labeled as higher education performance (HEdPERF) that more appropriate concept to measure service quality because it is a comprehensive measurement tool (Abdullah, 2005). Several studies recommend that needs to implement industry-specific models (Kara et al., 2016; Khalifa and Mahmoud, 2016; Krishnamoorthy et al., 2016; Daniel et al., 2017; Osman et al., 2017). HEdPERF have five dimensions (non-academic, academic, access, program issue, and reputation aspects) (Abdullah, 2005; Muhammad et al., 2018; Khalid et al., 2019) with the following details:

- a. The non-academic aspect represents important indicators to enable students to fulfill their academic obligations. The indicators are closely related to tasks performed by non-academic staff.
- b. The academic aspect illustrates lecturers' tasks and responsibilities.
- c. The reputation aspect consists of indicators that show the importance of higher education institutions to project professional images.
- d. Access aspect includes indicators related to scope, ease of making contacts, availability, and convenience.
- e. Program issues aspect emphasizes the importance of offering reputable academic or specialization programs with flexible structure and syllabus.

### 3. RESEARCH METHODOLOGY

The method used in this research is a semi-systematic literature review, this method aims to review a topic, semi-systematic reviews often look at how research in a chosen field has developed over time or how a topic has evolved across research traditions (Snyder, 2019). This study analyzes research related to asset specificity. We collecting the literature from the Scopus and Google Scholar databases to be reviewed to achieve the research objectives. The literature



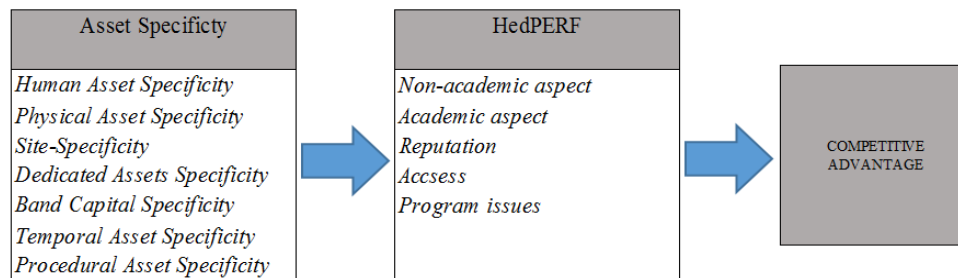
was taken from 1985-2021 to see and interpret asset specificity as an important factor in the success of organizations, especially universities.

#### 4. RESULTS AND DISCUSSIONS

##### 4.1 The Role of Asset Specificity in Enhancing Higher Education Institutions' Specific Quality

Higher education institutions deliver better quality depending on their abilities and resources. Asset specificity represents specific assets involved in higher education institutions to deliver better service performance. Investments in asset specificity enable higher education institutions to have specialized, different, inimitable, and superior resources. Uniqueness is the result of higher education institutions' unique processes in their culture and human resources. Brown and Potoski (2005) define specific investments as investments in certain products or services that are less adaptable in other products/ services.

**Figure 1. Conceptual Framework – The Role of Asset Specificity in Higher Education Performance**



Firm performance depends on firms' capability levels produced by their asset specificity (Kim and Lee, 2016). Higher education institutions' awareness of asset specificity investments – human asset specificity, physical asset specificity, site-specificity, dedicated assets specificity, brand capital specificity, temporal asset specificity, and procedural asset specificity will improve their service quality (HEdPERF).

##### 4.2 The Role of Human Asset Specificity in HEdPERF

Higher education institutions' investments in human asset specificity are critical to enabling them to deliver optimal services to their students. Highly specific investments in human assets are crucial in service industries (Dibbem et al., 2005). Consequently, higher education institutions need to hire lecturers and supporting staff with unique skills and experience and offer specific programs.

Highly specified human assets, including uniquely skilled, experienced, and knowledgeable lecturers and supporting staff, positively affect the interactions between higher education institutions and students. Lecturers must possess the following characteristics: expertise in their areas of specialization, communication skills, commitment and enthusiasm for teaching, proficiency with technology in the classroom, research prowess, and ethical and professional

conduct (Kara et al., 2016). Students expect lecturers' specific attributes (Kara et al., 2020). Chiou and Shen (2006) argue that investments in invisible human assets will keep customers loyal. Students satisfied with human assets' specific services are happy and eventually loyal to the higher education institutions. Hence, human asset specificity helps higher education institutions offer specific access and program issues and optimize their HEdPERF performance.

#### **4.3 The Role of Physical Asset Specificity in HEdPERF**

Physical asset specificity plays a similarly important role in higher education institutions to human asset specificity. Sapri et al. (2009) evaluate that students' satisfaction is affected by factors related to educational facilities. Physical appearance and cost structure are the main determinants of students' satisfaction (Mansori et al., 2014; Yusoff et al., 2015). Modern equipment, props, teaching methods, and service-related infrastructure are substantial components for students' loyalty and satisfaction (Shekarchizadeh et al., 2011). Hence, higher education institutions need to invest specifically in physical assets to achieve specific HEdPERF and build students' loyalty. Physical assets directly and indirectly affect students' intention to choose the higher education institutions and informs the good quality of these institutions to their colleagues. Furthermore, physical facilities have a major effect on students' satisfaction (Mansori et al., 2014), especially when these assets are specific, that can build competitive advantage due to their uniqueness and inimitability.

#### **4.4 The Role of Site-Specificity in HEdPERF**

Site specificity affects HEdFERP because strategic and accessible locations near the targeted population will affect higher education institutions' ability to attract students. Proper locations offer competitive advantages to organizations (Biswas and Pamucar, 2020). Hence, location selection is a critical, complex, and strategic decision (Karande and Chatterjee, 2018). Prospective students arguably consider higher education institutions' location when selecting higher education institutions (Misra, 2020). Location selection considers social and economic parameters (Biswas and Pamucar, 2020) and other specific factors according to higher education institutions' and students' interests. Location selection involves many factors, including economic benefits, ease of operation, reduced waiting time, and functional connectivity with demand and supply points (Athawale and Chakraborty, 2010; Jin et al., 2018). Organizations need to prioritize transportation time and disaster risks when selecting locations for their operational facilities. Parents or prospective students incorporate location when selecting higher education institutions. Consequently, higher education institutions need to determine site-specificity to optimize their HEdFERP by incurring the most economical costs for them and their students. Site specificity also preserves customer loyalty (De Vita et al., 2010) and long-term relationships with students (Cabral et al., 2021).

#### **4.5 The Role of Dedicated Assets Specificity in HEdPERF**

Higher education institutions as educational service firms need to create mutually beneficial relationships with their students through dedicated assets specificity. Related parties arguably consider dedicated assets when making contractual renewal (Cabral et al., 2021). Investments

in dedicated asset specificity are crucial to ensure customer loyalty and benefit from long-term relationships (Cabral et al., 2021). Dedicated asset specificity indicates higher education institutions' seriousness in creating specific relationships with students because they enable higher education institutions to build networks.

Relationships with other organizations and network establishments are examples of dedicated asset specificity (Williamson, 1985). Specifically, the immobility of dedicated assets increases the "inclination toward collaboration" while simultaneously decreases the "attractiveness of defection" (Hwang, 2006). Higher education institutions' dedicated asset specificity contributes to their HEdPERF. Their dedicated assets include supporting facilities for academic and non-academic activities, and student and alumni associations.

#### **4.6 The Role of Brand Capital Specificity in HEdPERF**

Brand name capital specificity refers to investment in reputation. Higher education institutions need to ascribe reputation to improve their performance and enhance their roles nationally and regionally (Woldearegay, 2021). Transactional relationships involving activities that directly and significantly affect firm performance indicate higher brand capital specificity (De Vita et al., 2011). Higher education institutions can enhance their reputation if they can invest in brand capital specificity effectively. Investments in brands help higher education institutions secure unique positions in the highly competitive higher education market. Higher education institutions need to display their reputations to their stakeholders (Woldearegay, 2021) because their brands establish a distinct identity (Jevons, 2006; Chapleo, 2011). Higher education institutions build their reputations by making their students satisfied and loyal. Reputation is crucial and affects HEdPERF and the survivability of higher education institutions, especially private ones. Loyalty helps them to attract more students through word-of-mouth promotion (Chong and Ahmed, 2015), and reputational quality affects their global competitiveness (Kwestel and Milano, 2020). In sum, reputation positively affects HEdPER.

#### **4.7 The Role of Temporal Asset Specificity in HEdPERF**

Temporal asset specificity represents vital assets for project completion (Lu et al., 2020) and transaction values (De Vita and Tekaya, 2015). In service industries, especially higher education institutions, these assets are closely related to service time. Higher education institutions need to offer educational services as scheduled with convenient time allocation for students and other stakeholders. Lack or incompatibility of service time (e.g., lecturers cannot teach fully) will result in negative images on service quality. Kara et al. (2020) argue that part-time teaching will arguably erode their professional quality. Stakeholders will not be satisfied with higher education institutions that cannot offer services with sufficient time, and the dissatisfaction will inevitably affect HEdPERF. The use of information technology helps organizations accelerate their service times.

Higher education institutions need to develop information systems encompassing all service-related needs to their stakeholders to make their services more reliable and timely. The ability to develop and utilize technology will improve firms' specific competitive advantage (Kim et al., 2019). Higher education institutions provide educational services that need to coordinate

with their stakeholders intelligently. Accurate and timely time management mechanisms and intense communication will help them achieve their common goals in the knowledge-sharing context (De Pablos Heredero et al., 2013). Higher education institutions also need to develop specific coordination to improve their competence quality.

#### **4.8 The Role of Procedural Asset Specificity in HEdPERF**

Investments in routine operational activities are crucial in asset specificity dimensions (Espino-Rodríguez and Gil-Padilla, 2005) to help organizations run their operations according to their transactional needs and minimize operational risks. Adaptability to systemic and regulatory changes represents investments in procedural asset specificity, and it is important to help higher education institutions design specific programs according to their customers' needs (students). Osman et al. (2017) suggest that programs affect students' satisfaction. Procedural asset specificity will greatly affect HEdPERF. Hence, higher education institutions need to offer unique programs different from others' because academic programs are increasingly similar nowadays (Wangenge-Ouma, 2008). Organizational routines and workflows need to fit transactional relationships by still considering process values (De Vita et al., 2010; De Vita et al., 2011). Higher education institutions should have service standards to ensure that services serve their core values. The standards are related to the types and time of service provision. Higher education institutions need to consider their routine operations that match thriving educational needs.

The use of specific assets will produce specific service quality for higher education institutions. Consequently, they can offer excellent educational services to students and other stakeholders with their resources. Their specificity also helps higher education institutions differentiate from others and eventually achieve competitive advantages. As suggested by the resource-based theory, competitive advantage is embedded in firms and inimitable. Asset specificity enables higher education institutions to achieve HEdPERF optimally because they can achieve competitive advantage criteria. Barney and Clark (2007) also suggest that asset specificity adds to higher education institutions' positive values that are inimitable, unique, and irreplaceable.

Services to students will affect students' satisfaction and loyalty to higher education institutions. Loyal and satisfied students are more motivated to preserve their campuses' reputations. Besides, service quality will improve student co-creation, where students are more involved and active in student activities and other campus activities. Students' involvement and activities will improve their academic performance and self-development (Duque, 2014).

## **5. CONCLUSIONS**

Service quality in higher education is a crucial and valuable asset which face more intense competition, especially resources will largely affect their ability to offer services. Hence, the institutions need to exploit specificity from their educational services to develop their competitiveness. Specific services are the consequences of specific assets. Investments in asset specificity will eventually make higher education institutions' educational services more

specific and different from others. Specific service quality is the basis of higher education institutions' competitiveness.

The higher the level of asset specificity, the better of performance will be, because these activities will have a higher quality so that the more likely these activities become a source of competitive advantage for universities. Because it is very important to understand the unique resources that will really be able to increase the competitive advantage for universities whether it concerns human asset specificity, physical asset specificity, site-specificity, dedicated assets specificity, brand capital specificity, temporal asset specificity, and procedural asset specificity.

Students' satisfaction with higher education institutions' services is a valuable experience. They will make strong relationships with their higher education institutions, even when they are alumni. Students and alumni will communicate their higher education institutions' competitiveness to society that will further enhance higher education institutions' reputation. Students will consider higher education institutions' reputations when selecting campuses. Asset specificity is the key concept in make-or-buy decisions (Espino-Rodríguez et al., 2008).

## **6. IMPLICATIONS**

Theoretical implications of this research are asset specificity based on the resource based theory, where in asset specificity consisting of a combination of tangible and intangible assets it can be developed to produce quality services for a university so that it has a competitive advantage. The specificity of the realization of assets in resource based theory is increasingly widespread because it can be applied to various types and organizations in achieving excellence.

The managerial implications of this research are expected to make a practical contribution to universities in developing certain frameworks by using their specific assets so that universities are able to provide specific and comprehensive services to achieve competitive advantage. This study provides an accurate description of the specificity of assets in universities, because the characteristics of universities are different from other organizations, especially those with a profit motive.

## **7. LIMITATIONS**

This study does not empirically observe the issue because it focuses on analyzing the existing literature on the research issue. We then advise future studies to use empirical data to investigate the relationship between asset specificity and HEdPERF. Further studies also need to develop asset specificity indicators that better represent higher education institutions and their specific service quality.

## References

1. Abdullah, F. (2005). "HEdPERF versus SERVPERF: The quest for ideal measuring instrument of service quality in higher education sector." *Quality Assurance in education* Vol. 13(Iss 4 ): pp.305 - 328.
2. Adler, T. R., R. F. Scherer, S. L. Barton and R. J. J. o. A. M. S. Katerberg (1998). "An empirical test of transaction cost theory: Validating contract typology." *7*: 185-200.
3. Anderson, E. and B. Weitz (1992). "The use of pledges to build and sustain commitment in distribution channels." *Journal of marketing research* 29(1): 18-34.
4. Anderson, S. W. and H. C. Dekker (2005). "Management control for market transactions: The relation between transaction characteristics, incomplete contract design, and subsequent performance." *Management science* 51(12): 1734-1752.
5. Athawale, V. M. and S. Chakraborty (2010). "Facility Layout Selection Using PROMETHEE II Method." *IUP Journal of Operations Management* 9(Issue 1/2): p81-98.
6. Badrinarayanan, V., T. Suh and K.-M. Kim (2016). "Brand resonance in franchising relationships: A franchisee-based perspective." *Journal of Business Research* 69(10): 3943-3950.
7. Barney, J. B. and D. N. Clark (2007). *Resource-based theory: Creating and sustaining competitive advantage*, Oxford University Press
8. Bijman, J., I. Mugwagwa and J. Trienekens (2020). "Typology of contract farming arrangements: a transaction cost perspective." *Agrekon* 59(2): 169-187.
9. Biswas, S. and D. Pamucar (2020). "Facility location selection for b-schools in indian context: A multi-criteria group decision based analysis." *Axioms* 9(3): 77.
10. Brouthers, K. D. and L. E. Brouthers (2003). "Why service and manufacturing entry mode choices differ: The influence of transaction cost factors, risk and trust." *Journal of management studies* 40(5): 1179-1204.
11. Brouthers, K. D. and G. Nakos (2004). "SME entry mode choice and performance: A transaction cost perspective." *Entrepreneurship theor practice* 28(3): 229-247.
12. Brown, T. L. and M. Potoski (2005). "Transaction costs and contracting: The practitioner perspective." *Public Performance/Management Review* 28(3): 326-351.
13. Bunzel, D. L. (2007). "Universities sell their brands." *Journal of Product & Brand Management* 16(2): 152-153.
14. Cabral, S., P. F. Ribeiro and S. Z. Romão (2021). "Determinants of contract renewals in business-to-business relationships." *RAUSP Management Journal* 55: 473-489.
15. Chapleo, C. (2011). "Exploring rationales for branding a university: Should we be seeking to measure branding in UK universities?" *Journal of Brand Management* 18(6): 411-422.
16. Chiou, J. S. and C. Droge (2006). "Service Quality, Trust, Specific Asset Investment, and Expertise: Direct and Indirect Effects in a Satisfaction-Loyalty Framework." *Journal of the Academy of Marketing Science* 34(4): 613-627.
17. Chiou, J. S. and C. C. Shen (2006). "The effects of satisfaction, opportunism, and asset specificity on consumers' loyalty intention toward internet portal sites." *International Journal of Service Industry Management* 17(1): 7-22.
18. Chong, Y. S. and P. K. Ahmed (2015). "Student motivation and the 'feel good' factor: An empirical examination of motivational predictors of university service quality evaluation." *Studies in Higher Education* 40(1): 158-177.

19. Coff, R. W. (1997). "Human assets and management dilemmas: Coping with hazards on the road to resource-based theory." *Academy of management review* 22(2): 374-402.
20. Cruz, A. M., G. L. Haugan and A. M. R. Rincon (2014). "The effects of asset specificity on maintenance financial performance: An empirical application of Transaction Cost Theory to the medical device maintenance field." *European Journal of Operational Research* 237(3): 1037-1053.
21. Daniel, D., G. Liben and A. Adugna (2017). "Assessment of Students' Satisfaction: A Case Study of Dire Dawa University, Ethiopia." *Journal of Education Practice* 8(4): 111-120.
22. De Pablos Heredero, C., J. L. M. Botella and I. S. Los Santos (2013). "Coordination and university results: an evaluation model." *Pensee* 75(12).
23. De Souza Filho, H. M. and B. V. Miranda (2019). "Asset specificity, intensity of coordination, and the choice of hybrid governance structures." *Journal of Agribusiness in Developing Emerging Economies* Vol. 9( 2): pp. 139-158.
24. De Vita, G. and A. Tekaya (2015). "Hotel outsourcing under asset specificity: "The good, the bad and the ugly"." *Tourism Management* 47: 97-106.
25. De Vita, G., A. Tekaya and C. L. Wang (2010). "Asset specificity's impact on outsourcing relationship performance: A disaggregated analysis by buyer–supplier asset specificity dimensions." *Journal of Business Research* 63(7): 657-666.
26. De Vita, G., A. Tekaya and C. L. Wang (2011). "The many faces of asset specificity: A critical review of key theoretical perspectives." *International Journal of Management Reviews* 13(4): 329-348.
27. Dibbem, J., W. W. Chin and A. Heinzl (2005). "The impact of human asset specificity on the sourcing of application services." *European Conference on Information Systems (ECIS): Paper* 114.
28. Duplat, V. and F. Lumineau (2016). "Third parties and contract design: The case of contracts for technology transfer." *Managerial Decision Economics* 37(6): 424-444.
29. Duque, L. (2014). "A framework for analysing higher education performance: students' satisfaction, perceived learning outcomes, and dropout intentions." *Total quality management business excellence* 25(1-2): 1-21.
30. Dyer, J. H. (1996). "Does governance matter? Keiretsu alliances and asset specificity as sources of Japanese competitive advantage." *Organization science* 7(6): 649-666.
31. Dyer, J. H. (1997). "Effective interim collaboration: how firms minimize transaction costs and maximise transaction value." *Strategic management journal* 18(7): 535-556.
32. Espino-Rodríguez, T. F., P. Chun-Lai and A. M. Gil-Padilla (2017). "Does outsourcing moderate the effects of asset specificity on performance? An application in Taiwanese hotels." *Journal of Hospitality and Tourism Management* 31: 13-27.
33. Espino-Rodríguez, T. F. and A. M. Gil-Padilla (2005). "The relationship between leisure outsourcing and specificity: performance and management perception in hotels in the Canary Islands." *Journal of Hospitality Tourism Research* 29(3): 396-418.
34. Espino-Rodríguez, T. F., P. C. Lai and T. Baum (2008). "Asset specificity in make or buy decisions for service operations." *International Journal of Service Industry Management* Vol. 19 pp. 111-133
35. Ghani, J. A. and J. H. Khan (2004). "Network relationships and asset specificity in Pakistan's automotive industry." *Journal of the Asia Pacific Economy* 9(1): 84-100.
36. Houston, M. B. and S. A. Johnson (2000). "Buyer–supplier contracts versus joint ventures: Determinants and consequences of transaction structure." *Journal of Marketing Research* 37(1): 1-15.

37. Hwang, P. (2006). "Asset specificity and the fear of exploitation." *Journal of Economic Behavior and Organization* 60(3): 423-438.
38. Jevons, C. (2006). "Universities: a prime example of branding going wrong." *Journal of Product Brand Management* Volume 15 466–467.
39. Jin, H., M. Zhang and Y. Yuan (2018). "Analytic network process-based multi-criteria decision approach and sensitivity analysis for temporary facility layout planning in construction projects." *Applied Sciences* 8(12): 2434.
40. Joskow, P. L. (1988). "Asset specificity and the structure of vertical relationships: empirical evidence." *Journal of Law, Economics, Organization* 4(1): 95-117.
41. Kara, A. M., E. Tanui and J. M. Kalai (2016). "Educational service quality and students' satisfaction in public universities in Kenya." *International Journal of Education and Social Science* Vol. 3.
42. Kara, A. M., E. Tanui and J. M. Kalai (2020). "Lecturer Quality In Public Universities In Kenya." *European Journal of Education Studies* 7(10).
43. Karande, P. and P. Chatterjee (2018). Desirability function approach for selection of facility location: A case study. *Proceedings of the International Conference on Industrial Engineering and Operations Management, Paris, France.*
44. Khalid, S. M., K. A. M. Ali and Z. K. b. M. Makhbul (2019). "Assessing the effect of higher education service quality on job satisfaction among lecturers in premier polytechnics using HEDPERF model." *LogForum* 15: 425-436,.
45. Khalifa, B. and A. B. Mahmoud (2016). "What forms university image? An integrated model from Syria." *Business: Theory Practice* 17(1): 46-55.
46. Kim, H.-m. and H.-h. Lee (2016). "Asset specificity and capability of e-Trade performance: evidence from Korea." *Journal of Korea Trade* Vol. 20(Iss 1): pp. 2 - 20.
47. Kim, H., S.-Y. Park and W.-I. Joh (2019). "A study on technology development performance and technology commercialization performance according to the technology development capability of smes focusing on a comparative analysis of technology business groups." *Journal of Open Innovation: Technology, Market, Complexity* 5(3): 65.
48. Krishnamoorthy, V., A. Aishwaryadevi and B. Bharathi (2016). "An examination of influence of higher education service quality on students' satisfaction: An Indian perspective." *Indira Management Review* 10(2): 95-102.
49. Kwestel, M. and E. F. Milano (2020). "Protecting Academic Freedom or Managing Reputation? An Evaluation of University Social Media Policies." *Journal of Information Policy* 10: 151-183.
50. Lamminmaki, D. (2005). "Why do hotels outsource? An investigation using asset specificity." *International Journal of Contemporary Hospitality Management* Vol. 21(Iss 1): pp. 7-23.
51. Leiblein, M. (2003). "The choice of organizational governance form and performance: Predictions from transaction cost, resource-based, and real options theories." *Journal of management* 29(6): 937-961.
52. Lin, C.-W., L.-Y. Wu and J.-S. Chiou (2017). "The use of asset specific investments to increase customer dependence: A study of OEM suppliers." *Industrial Marketing Management* 67: 174-184.
53. Liu, R., J. Yang and F. Zhang (2020). "Managing technology transfer between cooperative firms: the roles of cooperation, asset specificity and justice." *Journal Of Business & Industrial Marketing* Vol. 36(ahead-of-print): pp. 765-781.



54. Lu, W., W. Guo and Q. Zhu (2020). "Effect of justice on contractor's relational behavior: Moderating role of owner's asset specificity." *Journal of Construction Engineering Management* 146(4).
55. Lui, S. S. and H.-Y. Ngo (2005). "The influence of structural and process factors on partnership satisfaction in interfirm cooperation." *Group & Organization Management* 30(4): 378-397.
56. Luo, Y., Y. Liu, Q. Yang, V. Maksimov and J. Hou (2015). "Improving performance and reducing cost in buyer-supplier relationships: The role of justice in curtailing opportunism." *Journal of Business Research* 68(3): 607-615.
57. Lyons, B. R. (1995). "Specific investment, economies of scale, and the make-or-buy decision: A test of transaction cost theory." *Journal of Economic Behavior Organization* 26(3): 431-443.
58. Mansori, S., A. F. Vaz and Z. Ismail (2014). "Service quality, satisfaction and student loyalty in Malaysian private education." *Asian Social Science* 10(7).
59. Masten, S. E., J. W. Meehan Jr and E. A. Snyder (1991). "The costs of organization." *Journal of Law, Economics, & Organization* 7: 1.
60. Merkert, R., C. Mulley and M. M. Hakim (2018). "Trade-offs between transaction cost, operation cost and innovation in the context of procurement and asset specificity—The example of the bus industry." *Research in Transportation Economics* 69: 173-179.
61. Misra, D. (2020). "A path-dependent analysis of the effect of location on the development of new universities." *Higher Education* 80(2): 289-304.
62. Morrill, C. and J. Morrill (2003). "Internal auditors and the external audit: a transaction cost perspective." *Managerial Auditing Journal* Volume 18( 6/7).
63. Muhammad, N., S. J. Kakakhel and F. A. Shah (2018). "Effect of Service Quality on Customers Satisfaction: An Application of HEDPERF Model." *Review of Economics Development Studies* 4(2): 165-177.
64. Nishiguchi, T. (1994). *Strategic industrial sourcing: The Japanese advantage*, Oxford University Press on Demand.
65. Osman, A. R. D., J. B. Sarkar and E. M. S. Islam (2017). "Revisiting Student Satisfaction Through SERVQUAL: Private Tertiary Education Perspective." *British Journal of Education* 5(11): 119-137.
66. Pang, H. Y., S. O. Cheung, M. C. Choi and S. Y. Chu (2015). "Opportunism in construction contracting: minefield and manifestation." *International Journal of Project Organisation Management* 7(1): 31-55.
67. Parasuraman, A., V. A. Zeithaml and L. Berry (1988). "SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality." *Journal of Retailing* 64(1): 12-40.
68. Pavez, I. and J.-M. Codron (2018). "Contractual Price Provisions and Their Determinants in Conditions of Uncertainty: The Case of Chilean Fruit Exports." *Management international* 22(4).
69. Pettersen, I. J., K. Nyland and G. Robbins (2020). "Public procurement performance and the challenge of service complexity—the case of pre-hospital healthcare." *Journal of Public Procurement* Vol. 20(No. 4): pp. 403-421.
70. Rumelt, R. P. (1984). "Towards a strategic theory of the firm." *Competitive strategic management* 26(3): 556-570.
71. Sa Vinhas, A. and J. B. Heide (2015). "Forms of competition and outcomes in dual distribution channels: The distributor's perspective." *Marketing Science* 34(1): 160-175.
72. Sapri, M., A. Kaka and E. Finch (2009). "Factors that influence student's level of satisfaction with regards to higher educational facilities services." *Malaysian Journal of Real Estate* 4(1): 34-51.

73. Shi, C., Y. Chen, J. You and H. Yao (2018). "Asset specificity and contractors' opportunistic behavior: Moderating roles of contract and trust." *Journal of management in engineering* 34(5): 04018026.
74. Snyder, H. (2019). "Literature review as a research methodology: An overview and guidelines." *Journal of business research* 104: 333-339.
75. Stump, R. L. and J. B. Heide (1996). "Controlling supplier opportunism in industrial relationships." *Journal of marketing research* 33(4): 431-441.
76. Wang, L., F. Jiang, J. Li, K. Motohashi and X. Zheng (2019). "The contingent effects of asset specificity, contract specificity, and trust on offshore relationship performance." *Journal of Business Research* 99: 338-349.
77. Wangenge-Ouma, G. (2008). "Higher education marketisation and its discontents: the case of quality in Kenya." *Higher education* 56(4): 457-471.
78. Williamson, O. E. (1985). "1985 The economic institutions of capitalism. New York: Free Press."
79. Williamson, O. E. (1996). *The mechanisms of governance*, Oxford University Press.
80. Woldearegay, A. G. (2021). "Reputation of Addis Ababa University in the Eyes of Students: A College-Level Perspective from Teacher Preparation Programs." *Education Research International* 2021.
81. Yusoff, M., F. McLeay and H. Woodruffe-Burton (2015). "Dimensions driving business student satisfaction in higher education." *Quality Assurance in Education* 86-104.
82. Zaheer, A. and N. Venkatraman (1995). "Relational governance as an interorganizational strategy: An empirical test of the role of trust in economic exchange." *Strategic management journal* 16(5): 373-392.
83. Zhao, Y. and G. Wang (2011). "The impact of relation-specific investment on channel relationship performance: evidence from China." *Journal of Strategic Marketing* 19(1): 57-71.