The Perceived Effect of Intellectual Capital on the Performance of a Higher Education Institution: A Case Study

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Abstract: During an increasingly competitive environment, where digital technologies play a crucial role, organisations began to seek competitive advantages in their intangible resources to survive. Therefore, organisations' intellectual capital (IC) is considered an essential source of competitive advantages. Higher Education Institutions (HEI) have also recognised the relevance of this phenomenon since these organisations use their IC to produce knowledge. In response to the call to analyse IC in practice, which includes emerging countries, this paper's goal is twofold. On the one hand, it aims to assess the perceptions of a Brazilian HEI's internal stakeholders regarding the relative importance of each IC dimension. On the other hand, it intends to understand how IC influences the performance of these organisations. Additionally, it intends to comprehend how internal stakeholders perceive and might measure performance. A case study was conducted at the Brazilian Federal Institute of Education, Science and Technology of Mato Grosso. The findings suggest that the three traditional IC dimensions are equally important to create competitive advantages, although there is no unanimity regarding which is the most important. They also show that IC influences, through several means, the performance of the HEI, although there was a focus on individual performance and also on negative issues, something which may, potentially, be caused by some lack of knowledge regarding the IC concept. Another finding is the lack of awareness regarding the importance of digital technologies in improving IC. Finally, an overlap between IC and performance indicators has been noticed. This study contributes to developing awareness about the relevance of intellectual capital in HEIs pertaining to emerging countries and its importance in improving their performance.

Keywords: Intellectual capital, performance, higher education, case study, stakeholders, digital technologies

1. Introduction

Currently, economic prosperity is deeply related to knowledge-based competitiveness, where "knowledge-based" resources play a crucial role in the development of the "modern organisation" (Guthrie, 2001; Shehzad et al., 2014). Knowledge sharing practices, knowledge development, networks that produce a good image, and information systems that support quality decision-making are critical success factors for a company (Chatterji and Kiran, 2017). Also, organisations are entering a digital transformation. This digital transformation and the development of digital tools mechanisms may help organisations sustain competitive advantage since the future is digital and the traditional management mechanisms are less appropriate for organisations to grow (Al Hakim et al., 2020). Hence, this study focuses on the concept of Intellectual Capital (IC), which has seen its popularity increase significantly in the last three decades. Different theories, such as the resource-based theory, the learning organisation theory, the information processing theory or the human capital theory, suggest that IC has the potential to create value and increase a company's performance (Shehzad et al., 2014). Although there is no unanimity regarding its definition, IC is traditionally categorised into three dimensions: human capital, structural capital and relational capital (Lee, 2010). Furthermore, organisational value creation depends on the interaction between these IC dimensions. The greater the interaction, the greater the ability to create value (Cabrita and Vaz, 2006).

This paper addresses IC in a specific context: the education sector in an emerging country: Brazil. Education is a crucial pillar in any economy, and its role in a country's success is indisputable (Chatterji and Kiran, 2017). However, on the one hand, the quality of education depends highly on the organisation's resources (namely

intangibles) to create IC. On the other hand, if the organisation does not have the proper resources to create IC, it will negatively impact its performance, namely regarding organisational innovations and competitiveness (Tjahjadi, 2022). Therefore, in this paper, IC is defined as a "dynamic system of intangible elements whose effective management is essential to enhance value creation in universities" (Ramírez et al., 2013, p. 27).

Higher education institutions (HEIs) can be considered providers of knowledge, innovation facilitators, promoters of entrepreneurial talent, economic and civic leaders, and especially knowledge pioneers (Bejinaru, 2017). These institutions play a key role in developing a knowledge-oriented society, using intangible resources as input to produce knowledge (Shehzad et al., 2014). Therefore, IC is one of the most important strategic resources for improving organisational performance (Tjahjadi, 2022).

However, research on the interrelationship between IC and performance is still scarce in the context of HEIs pertaining to emerging countries, something which is missing in the literature, and can allow cross-country analyses. Assessing this interrelationship in such institutions is highly important since the better the management of their internal resources (namely intangible ones), the better their performance will be (Tjahjadi, 2022). Also, managers tend to assess performance based on financial indicators, something which has been considered insufficient (see Zuñiga-Collazos et al., 2020). Therefore, the general goal of this paper is to analyse the perceptions of an HEI's internal stakeholders on the importance of IC and understand how IC influences an HEI's performance. Additionally, the paper aims to comprehend how internal stakeholders perceive and might measure performance, by exploring their opinions.

Regarding the paper's main goal, the following research questions were formulated:

Q1) How do an HEI's internal stakeholders perceive each IC dimension?

Q2) How IC influences the performance of an HEI?

An in-depth case study was carried out at the Federal Institute of Education, Science and Technology of Mato Grosso (Campus Juína) to answer these questions.

The remainder of the paper is structured as follows:The second section is devoted to the review of relevant literature. Next, the adopted methodology is described. In the fourth section, the results are presented and discussed. Finally, in section 5, some concluding remarks are made, and cues for future research are offered.

2. Literature review

2.1 Intellectual capital in higher education institutions

Higher education institutions (HEI) are increasingly immersed in a transformation process provoked by a need to become more flexible, transparent, competitive and comparable. These institutions are an important source of intangible resources, and, thus, they need to properly manage these resources and recognise the value of IC (Ramírez and Gordillo, 2014). Over the years, it has been debated the need for human resources to develop human digital capital skills as a way to organisations secure competitive advantage. Hence, it is necessary to elaborate mechanisms, which should be created through digital tools, to help efficiently manage knowledge and IC (Di Vaio et al., 2020).

Hence, to create value, it is essential for HEIs to identify IC measures, as well as to effectively manage and report it (Córcoles et al., 2013). HEIs can develop models (based on financial and non-financial indicators) specially designed to identify and provide information about their strategies, objectives, visions, activities and main intangible resources (Ramírez et al., 2017). Consequently, it becomes possible for HEIs to know the skills that most contribute to their performance, improve resource allocation, enhance synergies, and reach their goals. IC can be recognised as a fundamental strategic factor in facing competitive challenges (Ramírez et al., 2017).

Over the past three decades, several definitions of IC have emerged (see Dumay, 2016). In this paper, IC is considered a dynamic system composed of intangible resources, of which effective management is essential to create value for HEIs (Ramírez et al., 2013). This paper also adopts the traditional taxonomy applied in IC research, which considers IC composed of three dimensions: Human Capital (HC), Structural Capital (SC) and Relational Capital (RC). In the case of HEIs, human capital refers to the intangible value inherent to individuals' competencies, which, in short, encompasses the expertise, knowledge and experiences of researchers,

professors, technicians, and students (Secundo et al., 2015). Structural capital refers to the intangible resources pertaining to the institution. It includes, among others, databases, intellectual property, research projects, the research infrastructure, research and education processes, governance principles and the university culture (Secundo et al., 2015). Finally, relational capital encompasses HEIs' internal and external relations, such as contacts with public and private partners, their position and image in networks, their academic prestige, the partnerships with the business sector and regional governments, their links with the civil society, collaborations with research centres, networks and alliances, or their attractiveness as a place to study and work (Secundo et al., 2015). From another perspective, and in the context of the present digital economy, the digital transformation is a holistic concept that requires a change in all the organisation's processes by knowing which technologies are relevant and how they can improve the business and the value created to all stakeholders (Gabryelczyk, 2020). Therefore, IC dimensions should incorporate new technological and digital innovations. For example, employees need to acquire new digital skills (i.e. develop HC) (Gabryelczyk, 2020).

Regarding the relative importance of the IC dimensions, there is no unanimity. Ramírez et al. (2013) argue that HEIs' stakeholders generally consider RC the most important dimension, followed by HC and, finally, SC. However, Ramírez and Gordillo (2014) suggest a different order, stressing the importance of HC, followed by SC and then RC. Barbosa et al.'s (2016) study show another perspective, i.e., that the three dimensions have the same level of importance, according to the perception of different stakeholders.

IC is an evolving phenomenon (Martín de Castro et al., 2011). Therefore, different phases can be distinguished in terms of their investigation. IC research is currently expanding its vision and is thus heading into its fifth phase (Bisogno et al., 2018), which is concerned with how higher education institutions, as stakeholders in a broader ecosystem, can help solve social problems (Secundo et al., 2018). Therefore, measuring and monitoring HEIs' IC is a crucial task which can positively impact society (Pedro, 2020).

2.2 Intellectual Capital and Performance in Higher Education Organisations

Two main reasons justify performance measurement in HEIs: to help improve education quality and help HEIs meet the demands of their stakeholders (Chen et al., 2009). For a long time, effectiveness and efficiency were the most used standards to measure organisational performance. However, HEIs' performance has a multidimensional nature. Its evaluation requires appropriate indicators and methods to measure different dimensions (Cricelli, 2018). These indicators should allow the control and measure of education's quality, provide information to policymakers, and allow references for managing and allocating educational resources (Chen et al., 2009). Thus, it becomes crucial for HEIs to know their stakeholders' opinions about their goals and the performance indicators to be used.

Considering that knowledge is both an input and output for HEIs and that their most valuable resources encompass professors, researchers, staff, students, their relationships or their routines, it is possible to claim that their performance is directly associated with IC (Ramírezet al., 2017; Bratianu and Orzea, 2013). In recent years, literature has considered IC a "strategic variable in achieving adequate performance in the universities" (Iacoviello, 2019, p. 2). Several initiatives and models have been developed, namely since 2004. Leitner (2004) gave a significant contribution by developing a framework with the following reasoning: IC development is a consequence of the established political goals and the HEI's goals. This framework distinguishes six performance processes which impact the HEIs' stakeholders. Other initiatives were also conducted, namely in Spanish Universities. It can be stressed the IC Program (ICP) project in Madrid, the Observatory of the European University (OEU) at the Autonomous University of Madrid, or the Knowledge Management Project at the University of the Basque Country (Ramírezet al., 2017). Córcoles et al. (2013) also developed a model to identify the most common intangibles present in HEIs. Thus, this paper adopts a concept of organisational performance, which considers the combined results between individual, team and program performance (Lusthaus et al., 2002). Accordingly, an HEI must have its performance measured by the ability of its academic staff to transfer their competencies and, consequently, a graduate must have his success measured by his ability to "develop" their own competencies (Sultanova et al., 2018). This means that performance management and IC reporting (through different indicators) overlap to some extent (Leitner, 2004). In fact, Ramírez and Gordillo (2014) proposed a model based in the traditional IC taxonomy, which can be adopted to measure HEIs' performance. They used the following intangible elements: academic and professional qualifications of staff; teaching capacities and competencies; mobility of teachers and researchers; scientific productivity; management quality; effort in innovation; intellectual property; graduate employability; student satisfaction; efficiency of graduate teaching; relations with the business world; collaboration with other universities; and university's image.

Over the past few years, some authors have endeavoured to research the relationship between IC and performance in HEIs since "intellectual capital can improve HEIs' performance because of their ability to transfer knowledge" (Tjahjadi, 2022, p.3). For example, Mumtaz and Abbas' (2014) study showed a significant effect of IC on the performance of Pakistainese private HEIs, stressing the importance of HC. Alain (2015) assessed the effectiveness of IC and academic performance and its relationship in HEIs pertaining to the Kingdom of Saudi Arabia. The study suggested a positive and significant relationship between IC (and all its dimensions, namely HC) and academic performance. Barbosa et al.'s (2016) study addressed the perceived importance of each dimension of IC and its contribution to HEIs' performance. Their findings suggest that HC, SC and RC influence performance in an interconnected way. Also, Chatterji and Kiran (2017) explored the organisational and relational capital and their effects on northern India HEIs' performance, providing useful insights to policymakers. The results suggest that HEIs need to interact closely with government institutions and private industries to improve their relational capital. Anggraini et al. (2016) assessed the effect of IC and its dimensions (human, structural and relational capitals) on the performance of 8 public HEIs in Indonesia. They found a significant relationship between IC (and its dimensions) and HEIs' performance, with relational capital having the strongest influence.

In resume, HEIs should manage their IC as a whole (Pedro et al., 2022). However, according to Pedro et al. (2022, p.255), HEIs "should also pay greater attention to how HC may represent the dimension with the greatest room for improvement". Moreover, they also consider that stakeholders keep a good perception of the positive and significant relationship between an HEI' IC and its performance. These various examples show that although IC must be considered as a whole variable that can influence performance, different dimensions can have stronger or weaker influences.

3. Methodology

In this study, an exploratory in-depth single-case study was conducted to analyse the perception of the internal stakeholders of an HEI specific Campus (Campus Juína) about the importance of IC and its dimensions, as well as its effect on performance. According to Yin (2017), adopting the case study method is ideal for analysing contemporary phenomena in their specific context. Campus Juína is located in the Amazon biome and pertains to the Federal Institute of Education, Science and Technology of Mato Grosso (IFMT), which encompasses 19 campuses. According to IFMT's registries, 841 students were enrolled in Campus Juína, of which 332 attended a higher education course and 32 a post-graduation one. Furthermore, its staff comprises 44 administrative technicians, 50 permanent professors, and 12 contract professors.

Data were collected through semi-structured interviews, complemented with document analysis and direct observation. The semi-structured interviews used open questions and were preceded by the following steps: 1) development of an interview guide which was composed of eight questions, aiming to assess the interviewees' opinion towards the IC concept and the relative importance of each IC dimension, to know how the internal stakeholders perceive organisational performance, and to assess how IC influences performance. The guide also included an additional question where was asked the interviewees to name some indicators that they consider important for assessing the Campus performance; 2) scheduling the interviews (by e-mail or in-person), and 3) collecting the signature on the free and informed consent form for the audio recording of the interview to be authorised.

Between the 3rd of July and the 17th of August 2018, 25 face-to-face interviews were conducted: 10 with middle and higher-level administrative technicians, 9 with professors, 3 with coordinators of higher education courses, and 3 with students representing higher education courses. The interviews had an average duration of 40 minutes. The study's theme and objective were explained at the beginning of the interviews. Since most interviewees did not fully comprehend IC, this concept was also briefly explained. All interviews were audio-recorded. Then, they were fully transcribed. During the interviews, notes were also taken. Direct observation of the context was also carried out, that is, of the Campus itself. Finally, to characterise the HEI, documents were analysed, specifically the current Institutional Development Plan (PDI 2014 – 2018) and the Law for the Creation of Federal Institutes. It was still necessary to use electronic correspondence to access additional information, such as the number of students enrolled during the research period and the number of effective servers (technicians and professors). Finally, the data was subject to content analysis and a codification process.

4. Results and discussion

Regarding the first research question (how an HEI's stakeholders perceive the relative importance of IC dimensions), it is important to stress that most interviewees were not aware of the concept. That is why a brief explanation of the concept was provided. Nevertheless, opinions were divided. About half of the interviewees considered that the IC dimensions are equally important, which is in line with Barbosa et al. (2016), who consider that HEI's stakeholders tend to perceive all IC dimensions to have the same importance level.

However, the other half stressed the importance of HC and RC. For example, in line with authors such as Ramírez and Gordillo (2014), who stress the role of HC in HEIs, INT14 suggested that: "[first], you need the human capital (…) so that you can apply [new] knowledge in your institution (…), and that knowledge you will [develop the organisation]. This interviewee considered that relationships result from human and structural capital development. INT17 also stressed the importance of HC, claiming that "it is very important when the personnel is committed. Consequently, teaching can be effective even if it occurs under a tree. Structural capital only would be important to maintain the basic rules". In INT 7 words, "if I do not have a good relationship with the students, it is no use". Conversely, other interviewees consider relational capital the most important IC dimension, which is in line with Ramírez et al.'s (2013) study. For example, INT3 considers that "some assistant technicians enter the organisation without knowing it. Therefore, relationships with others can foster better knowledge of the organisation. According to this interviewee, some people have knowledge but cannot potentiate it, while others with fewer skills can do much better due to the relationships they create". These findings show that some interviewees only perceive relationships as internal ones, such as the ones between teachers and students or other internal actors, something which is not in line with Secundo et al. (2015), who stress the importance of both internal and external relationships. Only a few interviewees highlighted both internal and external relationships. INT18 had a particular opinion: "I think relationships have a higher impact. For example, it is complicated to fix human relationships, whether internal or external. It [can] take years; it depends on the person".

Furthermore, almost all interviewees considered that the IC dimensions complement each other and should be addressed in a balanced way. Such fact is in line with Pedro et al. (2022), who argue that IC should be viewed as a whole. As INT15 puts it: "[all IC dimensions] must be intertwined and intrinsic; otherwise, [it] does not work. They must be in harmony". INT19 considers that "good relationships, the company's culture and peoples' skills and knowledge (…) are factors that complement each other (…). Together, they can improve the institution as a whole". This interaction was illustrated both positively and negatively. For example, according to INT3 "[an employee] went on a process mapping course. This fact had a structural impact because now [we can] map our processes". This example illustrates how HC is related to SC. However, negative effects can also be verified, as mentioned by INT4: "A PhD thinks he is so superior to others, that he does not treat people with respect here, affecting the students [and] the colleagues". The stakeholders' perceptions are in line with Barbosa (2016) and Bratianu and Orzea (2013), who argue that there must be an interaction between the dimensions of IC. However, not always value is created.

Finally, and surprisingly, no interviewee tackled the importance of new technologies and digital processes to improve the HEI's IC.

Regarding the second research question (how IC influences the performance of an HEI), all respondents considered that IC influences the overall performance of Campus Juína. For example, INT19 considered that "if [the institution] has people with skills, with good knowledge, an organisational culture shared by everyone, and good relationship between the members, then there is a better chance of having a good performance". However, according to INT5: "performance is about results, and to have results, you must have goals (…). So, I think [IC] is (…) a crucial factor in achieving performance, both positively and negatively". These illustrations are in line with Mumtaz and Abbas (2014), Alain (2015), Barbosa et al. (2016) or Chatterji and Kiran (2017), which suggest that IC affects HEIs' performance, both positively and negatively.

In fact, several interviewees focused on the negative side of performance. INT14 illustrated such an effect, claiming that "the relationship between teacher and student can affect the institution's performance. (…) From the moment you have friction, for example, which happens in higher education courses, some classes can be affected (...). This [can] cause demotivation, which [can lead to the] dropping out of several students due to the fact of not having a good relationship with the teacher". INT7 also considers that "sometimes we are not

effective in the structural part. For example, I participated in a committee focused on student retention and success. We spent a long time studying, researching and discussing, and we did a project with improvement actions. [However, this project] stopped. We start something and do not finish it". These illustrations show that performance can be addressed not only at the institutional level but also at an individual one, as conceptualised by Lusthaus et al. (2002).

Also, the findings suggest that each IC dimension can impact organisational performance. For example, according to INT7, RC has the greatest effect on performance among the three IC dimensions. As he claimed, "I have a good relationship with a company (…), and recently we have been able to send them some interns, we have been able to do research there, have field classes and now, finally, we have received donations from them. All of this came from that relationship. [Inversely] we see several problems of teachers with relational problems with the class, and [consequently] students have low performance because they do not have a good relationship with the teacher". These findings are in line with Anggraini et al. (2016). They suggest that the IC has a significant influence on the global performance of HEIs and emphasises that relational capital contributes with a strong influence compared to human capital and structural capital. Hence, contrary to Pedro et al's (2022) claim that HC may be the dimension with more potential for improvement, in some cases, RC and SC should also be stressed.

Other perceptions were still found, highlighting human capital as the one with the greatest effect. For example, according to INT9, "if a teacher arrives in my classroom who is just graduating and has no experience in the classroom or is not prepared to teach a class, I think this will influence his students' performance (...). So, I believe that if he does not have a certain experience, he will not be able to transmit the knowledge in a way that the students can understand, and this will affect the students' performance". Once again, there is a focus on performance at an individual level (see Lusthaus et al., 2002). Also, the interviewees did not address the importance of new digital tools or new digital human skills to improve performance.

Finally, to comprehend how the HEI's internal stakeholders might measure performance, some examples of indicators were provided by them. Then, these performance indicators were divided into different dimensions, specifically: technicians; teachers; higher education courses; research; services; and financial. The results show that most proposed indicators have a non-financial nature, in line with Ramírez and Gordillo (2014). Also, according to Leitner's (2004) conclusions, the results show an overlap between IC and performance indicators, which is exemplified in Table 1.

Table 1: Educational Performance Indicators

Educational Performance Indicators		
Indicators for evaluating technicians' performance	**Indicators for evaluating teachers' performance**	**Indicators for evaluating the performance of higher education courses**
Student satisfaction with attendance	Participation in events and projects	Student satisfaction with the course
Participation in extension activities	Number of papers produced	Number of graduates employed in the area
Punctuality	Number of participations in commissions	Number of surveys related to the course
Participation in training, capacity building, congresses or lectures	Student satisfaction toward the teacher	Students' interest during the courses
Quantity of tasks performed	Number of supervisions	Teachers' qualifications
Assiduity	Punctuality	Number of graduates employed in the area
Relationship with colleagues	Teacher-student relationship	Withdrawal rate
Relationship with supervisors	Participation in training, capacity building, congresses or lectures	Professional qualification
Initiative capability	Elaboration of summaries	Number of practical classes
Assistance quality	Participation in events	Campus Assessment
Compliance with the assistance schedule	Publication of papers	Investment spent by number of graduating students
Number of people who attended the library	Relationship between teachers and coordinators	Number of teachers hired

Educational Performance Indicators		
Indicators for evaluating technicians' performance	**Indicators for evaluating teachers' performance**	**Indicators for evaluating the performance of higher education courses**
Books layout	Workload compliance	Ratio between the number of students entering the courses and the number of students leaving the courses
Receptivity in the service	Average of students	Number of vacancies filled
Speed of service	Degree level	Monitoring of graduates during a given period
Control of the diaries	Absenteeism rate	Number of scholarships for assistance and permanence
Relationship with the public	Availability for student attendance.	Students' scientific production
Relationship with other sectors	Publication of books	Infrastructure of higher education courses/appropriate lighting/technological resources
Teachers' satisfaction regarding the technical assistance	Active methodologies in classes	Number of visits to the library/laboratories
Fulfilment of tasks	Compliance with the work plan	Participation in scientific events
Compliance with deadlines in the delivery of documents	Quantity of practical classes	Approval rate of students in the subjects specific to their area of study
Capacity of initiative	Compliance with the syllabus	Biannual evaluation to evaluate the students' performance
Participation in projects within the institution		Students' satisfaction with the course teachers
Respect for hierarchy		Relationship of the courses with the community
Sector organisation		Number of students who came from other cities
Number of participations in commissions		Average individual and class grades during the course
		Final exam prepared by the course coordinators

5. Concluding remarks

This study aims to assess the perceptions of the internal stakeholders of an HEI, regarding the relative importance of each IC dimension, as well as to comprehend the effect of IC on its performance. It is possible to conclude that the HEI's internal stakeholders consider that all IC dimensions are important, should be approached in an interconnected way and can influence the institution's performance. However, there was no unanimity regarding which IC dimension was considered the most important. Although most of the interviewees considered that all IC dimensions are equally important, the remainder stressed the role of RC and HC. Also, most stakeholders focused on the internal relationships, something which suggests that they were not totally aware of the IC concept, even after a brief explanation.

Regarding the stakeholders' perception concerning the effect of IC on performance, there was no consensus on the dimension considered most important in this aspect. However, all dimensions may have the potential for improvement. Furthermore, the paper suggests that although performance can be conceptualised according to different levels, most interviewees addressed it at the individual level, with a particular focus on students and teachers. A negative view of performance was often highlighted, something which may be explained by the context: a specific HEI in an emerging country.

Finally, when asked to suggest performance indicators perceived as ideal for evaluating the HEI, most interviewees suggested non-financial indicators. Also, it was possible to observe some overlapping between performance and IC indicators. Also, and surprisingly, the interviewees did not address the theme of new technologies and digitalisation. In fact, implementing such indicators through IT systems could help increase HEI's performance. It could help achieve a continual improvement of the organisation through automatic tools, thus developing HC and SC. Also, through social media, the communication of results to the stakeholders could increase RC.

This paper provides important contributions. In the specific case of HEIs in emerging countries, stakeholders may have limited knowledge about IC. However, they can provide some illustrations after a brief explanation, despite a tendency to focus on individuals. Also, although they have a close perception of IC, they tend to have different

opinions regarding the relative importance of each dimension. Furthermore, when the context is problematic, they tend to focus on the negative aspects of IC and performance. Finally, assessing the effect of IC on performance is not easy since IC and performance indicators may overlap. In practical terms, this study contributes to raising awareness about the importance of measuring and managing IC, instigating HEIs and their managers to define how they will guide their investments in IC to maximise their performance.

Finally, it should be noted that this study is not free from limitations. First, since a single case study was carried out, results can only be generalised theoretically. Second, the concept of performance was approached in a broader way. Third, further research should address the effect of IC on performance on other HEIs, namely comparing the ones pertaining to developed economies with those pertaining to emergent economies. Also, future studies should take an individual perspective of how people's performance can impact HEI's performance. Lastly, future studies should address this theme from a sustainable point of view, namely addressing social, environmental and economic types of performance.

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