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Article

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Contemporary Economics

Provided in Cooperation with:

University of Finance and Management, Warsaw

Suggested Citation: Nguyen Hoang Tien; Nguyen Minh Ngoc; Tran Thi Thuy Trang; Le Doan Minh Duc; Nguyen Phuong Mai (2022) : Sustainable development of higher education institutions in developing countries: Comparative analysis of Poland and Vietnam, Contemporary Economics, ISSN 2300-8814, University of Finance and Management in Warsaw, Faculty of Management and Finance, Warsaw, Vol. 16, Iss. 2, pp. 195-210,
<https://doi.org/10.5709/ce.1897-9254.477>

This Version is available at:

<https://hdl.handle.net/10419/297600>

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Primary submission: 14.11.2018 | Final acceptance: 02.06.2021

Sustainable Development of Higher Education Institutions in Developing Countries: Comparative Analysis of Poland and Vietnam

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ABSTRACT

This paper discusses sustainable development issues in the higher education sector from the value chain perspective. An adapted value chain is proposed for developing countries that would reflect the specific context of the higher education sector of Poland and Vietnam. Secondary data were collected from two universities in Poland and Vietnam to do a comparative analysis of how sustainability is integrated into the educational value chain. Our analysis shows that the two cases of Poland and Vietnam are quite different in most of the supporting and primary activities when integrating sustainability issues in the educational value chain, except for training. Then recommendations of value co-creation activities in the value chain for higher education institutions in both countries are raised towards achieving sustainable development.

KEY WORDS:

business higher education, developing countries, sustainable development, sustainability issues.

JEL Classification: M16.

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1. Introduction

Sustainable development (SD) is a new term for business and society as it was born in the 1980s (World Commission on Environment and Development [WCED], 1987). Sustainable development means that organizations serve present needs without compromising the future generation's ability to meet their own needs (WCED, 1987). Besides growth and long-term profitability, SD requires organizations to incorporate and pursue non-profitable social goals, specifically relating to sustainability issues, such as environmental protection, social justice, and local

community development (Dudzevičiūtė, 2012; Hart, 1995). All organizations should adopt those goals regardless of their activity, size, capability, and origin. Among others, the landscape of higher education institutions (HEIs) has also been changing to extend support and address the emerging challenges of sustainability (Findler et al., 2019). HEIs are supposed to integrate sustainability in their practices and operations (on and off-campus) (Zahid et al., 2020). For example, HEIs are expected to incorporate sustainability by initiating and developing their teaching, curriculum, research and campus operations, community outreach, and everyday activities (Sonetti et al., 2016).

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Higher education as a service industry has undergone significant changes worldwide, particularly in developing countries (Pathak & Pathak, 2010). Discontinuous changes occur in technologies, economic structures, socio-cultural and politico-legal environments of countries and regions. The fast pace of globalization has further increased academic ambiance complexities (Makkar et al., 2008). A state-funded non-profit educational entity's traditional role is replaced by a self-funded for-profit one. Traditional service characteristics of higher education and business models in the industry are changing (Poon & Lee, 2012). It has been noted that in developed societies, non-profit organizations such as universities are increasingly using modern systems and concepts to manage their organizations in a vibrant and volatile environment professionally. One of the prominent approaches to university governance to create competitive advantage is the value chain, which was initially proposed by Michal Porter (Porter, 1985), but with some modification to reflect the specific attributes of education service.

The emerging higher education institutions, both for-profit as well as not for-profit, are recasting their business models and evaluating the key thrust areas (Pathak & Pathak, 2010). The traditional model of HEIs as not-for-profit organizations is under question for its ability to create value and increase their efficiency in a battle for more discerning and demanding students and skilled human resources. Simultaneously, operations are being reorganized to meet the other two essential clients: funding agencies (to ensure seamless research activities) and higher education ranking agencies (to preserve national/international exposure and credibility).

As a result, HEIs appear to be under intense pressure to produce value and focus their efforts and limited resources on activities that provide value for their respective consumers. Thus, the value chain concept gains importance in higher education when HEIs are bound to isolate the activities performed into discrete components (Pathak & Pathak, 2010).

In addition to the challenge to become effective, HEIs are also expected to deliver better quality for sustainable development. As stated by the World Bank (2019), quality education is a crucial part of the 2030 sustainable development agenda of World Bank and

Sustainable Development Goal 4 (SDG4). Nevertheless, sustainability issues are still relatively new to developing countries, especially in the higher education sector. Many HEIs in developing countries are still not following and integrating sustainability practices (Zahid et al., 2020). Comparing to developed countries, Vietnamese HEIs have been so far practicing sustainable development to an inadequate extent (Tien et al., 2019). A similar situation is also recognized in Poland. It could be inferred that sustainability in HEIs is encountered with numerous issues in developing countries, including lack of institutional support and governance, among others (Filho et al., 2015). Policy failure and lack of commitment, readiness, consensus, guidelines, planning, leadership, infrastructure, resources, innovation, technology, and training and development are factors responsible for the failure of sustainability in the HEIs of developing countries (Zahid et al., 2020). However, the HEIs in developing countries are yet to incorporate sustainability in their culture, curriculum, operations, and planning (Adams et al., 2018). Furthermore, studies on the topic of sustainable development in the higher education sector remain very scarce. Consequently, there is a need and a research gap to examine sustainability practices in HEIs in developing countries where, relative to developed countries, the term is still evolving and in embryonic phases, even at the corporate level (Zahid et al., 2020).

In such a context, this study discusses the sustainability issues in the higher education sector from the value chain perspective. We analyze and compare the educational value chain of two cases in Poland and Vietnam to explore the critical activities that need to be improved for the sustainable development of HEIs.

The paper is structured as follows. The first section introduces the topic and its significance in the context of developing countries. The second section presents the concept of sustainable development, value chain, and the value chain model in the higher education sector. The third section follows with the analysis of the educational value chain in the two cases of Poland and Vietnam and discussions and recommendations. The fourth section highlights the contributions and limitations of this study. Finally, section five concludes the paper.

2. Sustainable Development and Value Chain in the Higher Education Sector

2.1. Sustainable Development

The term sustainable development was first born in the 1980s and officially discussed at the conference organized by World Committee for Environment and Development in Brundtland in 1987 (WCED, 1987). Sustainable development is defined as the actions conducted to fulfill an objective that is not harmful to future development (WCED, 1987). Thus, WCED defines sustainable development as a kind of development that meets present needs without compromising the future generation's ability to meet their own needs (WCED, 1987). At the conferences concerning the global environment RIO92 and RIO92+5, the scientists supplemented the concept of sustainable development. Accordingly, sustainable development is formed by the integration, alternation, reconciliation, and compromise between three related systems: ecology system, economic system, and socio-cultural system. Sustainable development is understood as the result of relations and dependence between the three systems.

For businesses, sustainable development should base on a new management paradigm that leads to growth and long-term profitability. At the same time, it requires the firm to incorporate and pursue social goals, specifically relating to sustainability issues, such as environmental protection, social justice, and equity, local community development (Dudzevičiūtė, 2012; Hart, 1995). Sustainable development is a very popular business strategy that attempts to meet stakeholders' needs today without compromising resources and interests of the local community and tomorrow environment (Dyllick & Hockerts, 2002).

2.2. Value Chain

Value could be defined as the customer's perception about the whole bundle of benefits, either tangible or intangible, satisfies their needs timely, effectively, and efficiently. It must be borne in mind that "satisfaction" ought to be from the customer's perspective.

The definition of the value chain was first introduced by Michael Porter, who identified it as a mechanism for capturing the chain of activities carried out in a manufacturing organization and defining its interrelated nature (Pathak et al., 2010). There are five primary and four support services in the value chain proposed by Porter. The value chain model's primary activities are inbound logistics, operations, outbound logistics, marketing and sales, and services. The support services are human resources, technology, firm infrastructure, and procurement.

Kaplinsky (2000) describes the value chain as a whole range of activities needed to produce the product or service from conception through the intermediate phases of manufacturing, distribution to final customers, and final disposal after usage. A value chain is also considered as a systematic approach to examining the development of competitive advantage (van de Merwe & Cronje, 2004).

2.3. Value Chain in the Higher Education Sector for Sustainable Development

In the current era of a knowledge-driven economy, higher education plays a crucial role in the overall socio-economic growth of any region or country (Cunnane, 2011). No society can progress without knowledge and wisdom, and the importance of higher education cannot be under-emphasized (Makkar et al., 2008).

Higher education, particularly university education, is recognized as a key force for modernization and growth in developing countries. This has contributed to a rise in the demand for its entry, followed by a range of challenges. Several challenges in the business environment are emerging that need higher education institutions (HEIs) to adapt and quickly respond including (Rynca & Radomska, 2009; Todose, 2008; Barolli & Sevrani, 2009; Robertson, 2010; Bone, 2009):

- Mobility and easiness of student to access the different education services and opportunities;
- The necessity to apply the ICT achievements in the teaching process to deliver knowledge and skills at low cost to the flexible and dynamic labor market;

- Rising need for flexible adaptation of teaching programs (curricula) to the actual market situation;

- The corporatization, commodification, and commercialization of the higher education industry, mainly as a result of a growing socialization process of education;

- The need to build a strong brand and strengthen own reputation to secure and enhance long-term competitive position;

- The difficulty of reaching economic sustainability, especially when appearing low demographic.

HEIs in the twenty-first century, when facing the above-mentioned challenges, will be unlikely to succeed unless they can manage their operations effectively (King, 1995; Howard & Kai, 2012; Robertson, 2010). Changing dynamics of the higher education sector demands that competitive advantages be created as and when possible (Pathak et al., 2010). Thus, HEIs should integrate their activities to identify critical areas for improvement to build a competitive advantage. Recently, HEIs have progressed beyond the value exchange between teachers and students. A significant portion of the academic job has been fragmented, with the emphasis on teaching and learning being replaced by other value-creating activities (Gabriel, 2005; Makkar et al., 2008). In other words, HEIs seem to be under extreme pressure to generate value and concentrate their attention and scarce funds on activities that maximize value for their respective customers and other stakeholders (Goldworthy, 2008). The transformation of HEIs into competitive organizations is underway.

A value chain model is a helpful tool for defining a firm's core competencies and its activities to pursue a competitive advantage of cost and differentiation. The generic value chain model requires that a firm's activities be segregated into discrete components for value chain analysis to be performed. However, in the service sector, its four essential characteristics of intangibility, inseparability, non-inventory, and inconsistency interfere with the value chain's configuration. Earlier research addressed this weakness and suggested service sector-specific value chains. Thus, this definition

was the focal point for research on strategies in the service sector and, notably, higher education (Sison et al., 2000; Polese & Monetta, 2006; Makkar et al., 2008). Higher education as a service sector requires a clear and specific value chain model to clarify the value-added mechanism and components of this sector (Taiwo, 2015).

Some of the previous studies on this theme (Dorri, 2012; Makkar et al., 2008) have rejected the application of Porter's value chain in the context of higher education and proposed an alternate chain for HEIs. The arguments for rejection were; some components of the value chain, i.e., inbound and outbound logistics, cannot directly be applied, and the four primary characteristics of services make such application impossible. However, recent trends in higher education make it possible to unbundle the educational process into discrete activities (which have well-developed measures); distinguish between value driving and other activities; configure the value chain as per Porter's model to explore critical linkages between activities.

Sison et al. (2000) examined the processes of an educational institution using Porter's value chain as a framework, then described a system designed to support this education value chain. According to Sison et al. (2000), a modern university's value chain can be viewed as a network of activities centered on the functions of teaching, research, and community service, which in turn involve educational design, educational delivery, assessment, research and development, and outreach activities. Each of these processes adds value to the complete educational package offered to students, and the activities of recruitment, admission, enrollment, academic service, and alumni support help to promote these processes.

Nevertheless, Van der Merwe and Cronje (2004) presented the educational value chain as a "graphical tool" that developers can use in re-engineering efforts to detect potential bottlenecks and provide a path to follow when identifying the value-added parts by technology. They use a high-level process model, which is described as the structure that depicts all of the major processes and their relationships to achieve the modeling exercise's high-level

objectives. They stated that the processes included in an educational value chain should only comprise the high-level critical procedures required to achieve a specific outcome.

Makkar et al. (2008) proposed a specific value chain for the education sector as they insisted that the service industry needs co-create value. When the value is co-created, it implies that both service providers and users are involved.

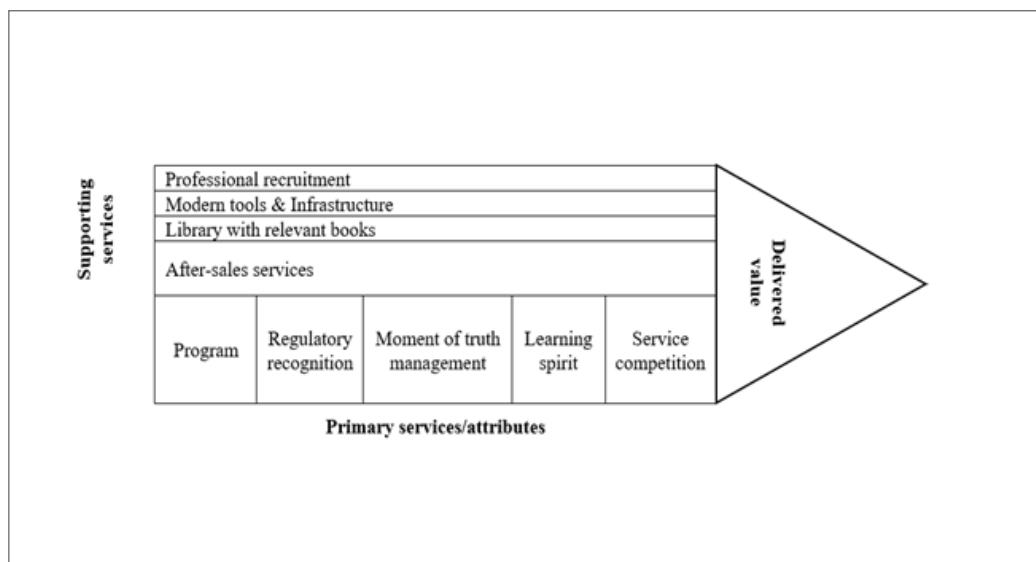
The model developed in Makkar et al. (2008) was used to analyze the HEIs in India and Tanzania to conceptualize a general value chain for services.

As the demand for sustainable development of HEIs is rising dramatically, it is suggested to use the value chain concept to describe the operations of HEIs and find ways to integrate the sustainability issues in the value chain. Consequently, for the multi- and inter-generational benefits of students and society, the sustainability of HEIs becomes a critical issue that revolves around three interrelat-

ed missions: (a) teaching students, (b) conducting research, and (c) serving the external community (see Figure 1).

The model's base is assigned to the operations dimension, which includes all institutional activities, including all resource consumption and human resource management processes. The upper level is related to the main channels through which an institution influences society; academic activities are assigned to the education & research dimension, and community outreach can be found in the public engagement dimension. Finally, at the center of the model, there is the administration dimension, which covers all policies, strategies, and high-level decisions influencing all other dimensions. This dimension, while uncommon in other sustainability frameworks, has been recognized as being an essential factor in the implementation of sustainability initiatives in HEIs, and is sometimes referred to as governance or organization (Velazquez et al., 2005). To illustrate how these

Figure 1
The Modified Value Chain for the Higher Education Sector



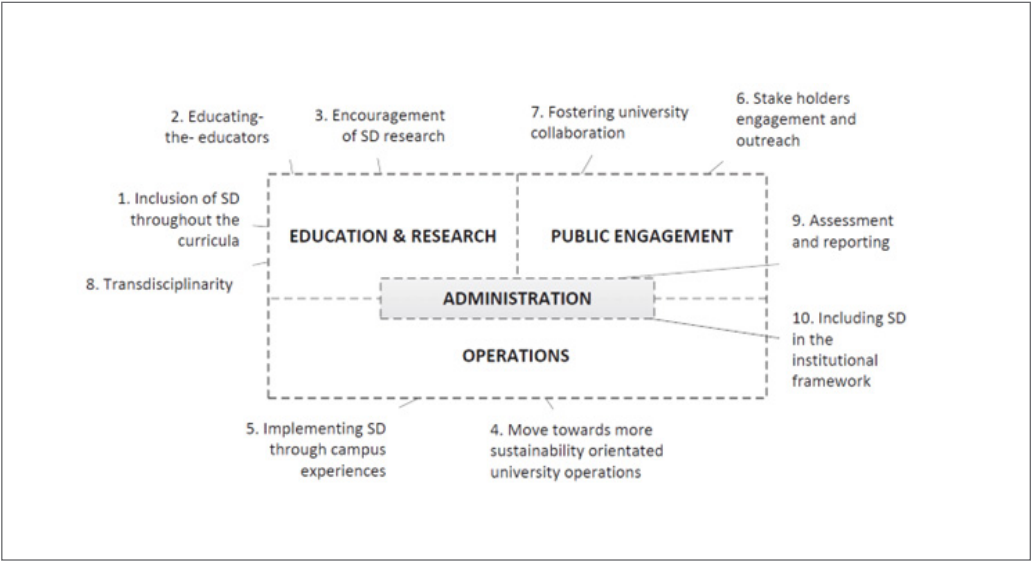
elements of sustainability might be interrelated in HEIs, they are represented as linked to their respective dimensions in Figure 1. It is important to highlight that these dimensions are interrelated (Cortese, 2003; Lozano, 2006), and that the sustainability effort requires an incremental integration of functions in an HEI's system.

For HEIs, sustainable development requires them to have sustainable competitiveness, and be able to coordinate primary activities and supporting activities to achieve the harmony of economic - social - environmental goals. Therefore, using the value chain approach to align HEI's activities and integrate sustainability aspects into that value chain would be an option for HEIs. It is noteworthy that there are several conceptual frameworks to evaluate the sustainability of HEIs. However, the value chain model seems to be easy and simple to access for practitioners and stakeholders of HEIs. Based on the value chain, we can assess whether HEIs are carrying out activities towards sustainable development and how the primary and supporting activities are connected to achieve sustainability. HEI initiatives and activities of this kind

occur in different areas (e.g., Fischer et al., 2015; Lozano et al., 2015): research, education, campus operations, community engagement/outreach, institutional framework, on-campus experiences, and assessment and reporting. On the other hand, they can be divided into different sustainability practices (environmental, economic, social/cultural, and institutional/educational/political) (Aleixo et al., 2016; Filho et al., 2015; Lozano, 2011). Therefore, the HEIs play a catalytic role in societies' engagement with sustainability (Lehmann et al., 2009).

Developing countries face several formidable challenges concerning their higher education institutions and systems. Some of these arise because of external changes such as the world's knowledge and technology revolutions and the process of globalization (Bloom & Rosovsky in Forest and Altbach, 2007). Others are more closely connected to internal issues, such as management and organization, curriculum reform, educational finance, and the rapidly growing demand for higher education. Considering the context of HEIs in developing countries, we propose an adapted value chain for sustainable development as follows.

Figure 2
Sustainability Elements Linked to the Dimensions of the Higher Education Institution System



As shown in Figure 3, our proposed value chain is adapted from the study of Makkar et al. (2008) and Gómez et al. (2014) to ingrate the SD issues in HEI's activities. In our proposed framework, four primary activities are identified and integrated with the SD issues. The supporting activities in the value chain of HEI include five dimensions that are related to key stakeholders of a HEI. Several SD issues that could be integrated into the primary and supporting activities are adopted from the study of Gómez et al. (2014) and Blanco-Portela et al. (2017).

Our proposed model is different from Makkar et al. (2008) since we add leadership and funding as two supporting activities in the educational value chain. These two supporting activities are critical for sustainable development in the context of developing countries. For example, Blanco-Portela et al. (2017) found that lack of leadership for sustainability is one of the key barriers in HEIs. In comparison, Alexio et al. (2016) insisted that funding is the second most often referred sustainability challenge HEIs partly due to the dwindling of public funding for HEIs.

3. Sustainability Issues of the Higher Education Sector in Poland and Vietnam from the Value Chain Perspective

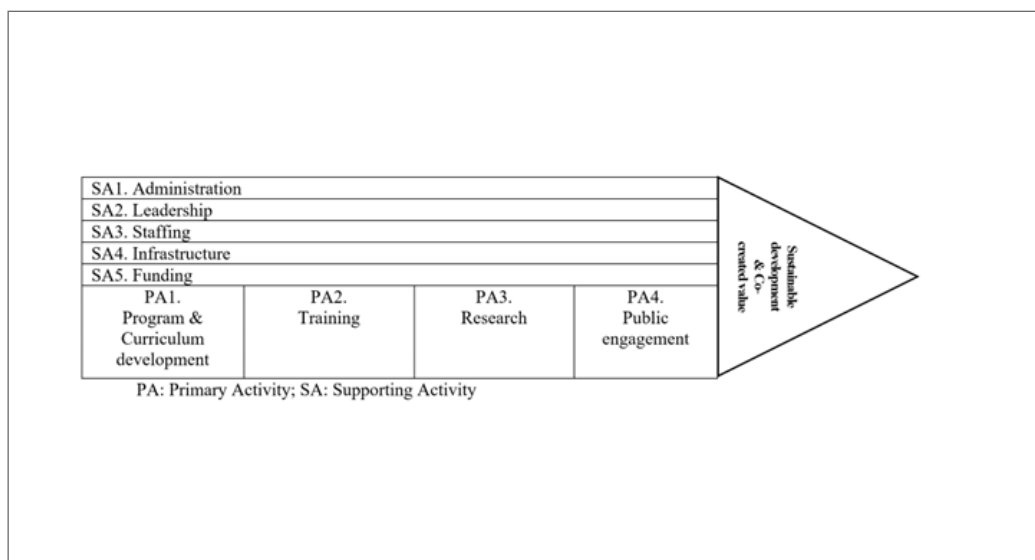
3.1. Context of Higher Education Sector in Poland and Vietnam

Amongst countries in Eastern Europe, we select Poland, and amongst countries in South-East Asia, we select Vietnam because both of them are being in different stages of the transformation process from the centrally planned economy towards a market economy.

Secondly, their higher education systems are quickly evolving to adapt to the changing societies and national economies and expected standards of education set by the Western world.

Thirdly, Poland and Vietnam are perfect to represent the two continents as they are perceived not as developed nations (still as transforming economies) and not as underdeveloped nations (regarding so far impressive social development and economic growth) in line with standards within each of the continents. Besides, both countries represent the middle development level of

Figure 3
The Adapted Value Chain for HEIs in Developing Countries



higher education in Eastern Europe and South-East Asia.

Higher education institutions (HEIs) in Poland, named by T. Wawak (2015) as “universities at a cross-roads,” are perceived as organizations without a management system adjusted to the contemporary tasks they should perform (Kwiek, 2015). The Minister of Science and Higher Education in Poland has acknowledged that science and higher education face many new challenges. They include demographic decline, the adaptation to new technologies, the international competition for funds for research and, competition between universities for international students (Ejdys et al., 2018). To adapt to these challenges, the Ministerial Programme for the Development of Higher Education and Science for the Years 2015-2030 was adopted in 2015. Justifying the need for the change, the Minister pointed out that “We want (...) to contribute to the better use of the potential of universities and science for the development of social and economic life in the country and to lead the way for the development of a strong international position of Polish universities”.

Similarly, the higher education system in Vietnam is in a phase of rapid and sustained change (Hayden & Thiep, 2010). Since 1993, when the Fourth Plenum of the Communist Party Central Committee declared that education was a priority area for national investment, the proportion of the relevant age group participating in higher education has increased from 2 percent to over 13 percent. Moreover, a higher system comprised of small, specialized institutions has been transformed into one in which the leading universities are large, multidisciplinary, and progressively developing a research capability (Hayden & Thiep, 2010).

For the above arguments, comparative analysis between Poland and Vietnam might be fruitful and reveals some interesting findings.

3.2. Comparative Analysis of the Educational Value Chain: Cases of Poland and Vietnam

3.2.1. Case Selection and Data Collection Methods

To conduct a comparative analysis of the educational value chain, we select the Warsaw School of Economics (WSE) in Warsaw and the National Economics University (NEU) in Hanoi to present Poland and Vietnam. We chose these two universities for three reasons. Firstly, they are public universities with long-term traditions and

experiences of teaching and research. Secondly, they are the oldest national academic institutes and best business schools that pioneer in educating numerous entrepreneurs, economic experts, strategists, and policymakers, serving the national development in the era of globalization. Thirdly, they rank the highest in the two countries' higher education sector, and they are both facing typical sustainable development issues in developing countries.

We use information from internal and external sources for comparative analysis. Internal sources of information include unpublished reports prepared by staff members and unofficial interviews with school managers, education experts, professors, and emeritus professors of the selected universities. External materials include Internet sources, newspapers, reports, textbooks, conference articles, periodicals published during the period from 2016 to 2019.

3.2.2. Comparative Analysis of Primary Activities in the Value Chain

In our proposed adapted value chain, four primary activities are considered core activities contributing to value co-creation and sustainable development of HEIs. Table 1 below shows the list of activities, which have been conducted with the integration of sustainability in the two selected universities of Poland and Vietnam.

It is observed from Table 1 that WSE and NEU are building their competitive advantages with a focus on sustainability through different ways of conducting the primary activities. Among the 11 activities, WSE and NEU are different regarding four activities, including “design sustainability-related programs” (PA1.1), “transfer research results to the business to serve the society” (PA3.3), “collaborate with other HEIs on sustainability issues” (PA4.1) and “carry out some sustainability outreach campaigns” (PA4.3).

Regarding the training activity, we find that WSE and NEU are identical in all three activities to co-create value for the society and integrate sustainability issues in the value chain. However, in terms of research, WSE advances NEU in transferring research results to the business to serve the society (PA3.3).

Notably, universities' cooperation activities with other partners seem to add more value and contribute to their sustainability. In terms of domestic collaboration, which will complement the international cooperation, Vietnam differs very much from Poland. After a boom-

ing period, Polish universities are now confronting the phase of mergers and acquisitions to cut costs and retain sustainability. In the meantime, Vietnamese universities need more cooperation and expansion than consolidation due to the rising population and the ongoing urbanization process. The public engagement of WSE is recognized to be better than NEU.

3.2.3. Comparative Analysis of Supporting Activities in the Value Chain

As mentioned in Figure 3, our adapted value chain for the higher education sector in developing countries identified five activities that support the value co-creation process among the education service providers and customers. In addition, we collected information from the Warsaw School of Economics (WSE) and Na-

tional Economics University (NEU) from the websites. We also interviewed school managers, education experts, professors, and emeritus professors to compare. Table 2 below demonstrated the current practices of these two HEIs, focusing on value creation and sustainable development.

As shown in Table 2, we can see 8 out of 16 activities of WSE and NEU are different. For many activities, WSE and NEU share their common approach. Both HEIs are trying to integrate sustainability in their supporting activities, particularly in administration and funding activities. WSE and NEU are different in leadership activity (SA2), staffing (SA3), and infrastructure (SA4).

First of all, the faculty leading position is also a controversial topic in the educational value chain. Table 2 shows the opposite practices of WSE and NEU in select-

Table 1

Integrating Sustainability in Primary Activities in the Value Chain: Cases of Poland and Vietnam

		Activity	WSE	NEU
PA1. Program & Curriculum development	PA1.1	Design sustainability related programs	✓	N/I
	PA1.2	Integrate sustainability issues into the training curriculum and syllabus	✓	✓
PA2. Training	PA2.1	Deliver the training courses with some contents of sustainability issues	✓	✓
	PA2.2	Accept students from a low socio-economic background	✓	✓
	PA2.3	Adopt and integrate the sustainability issues and millennium goals into the lectures	✓	✓
PA3. Research	PA3.1	Conduct sustainability-related research	✓	✓
	PA3.2	Use research grants to boost scientific research related to sustainability	✓	✓
	PA3.3	Transfer research results to the business to serve the society	✓	N/I
PA4. Public engagement	PA4.1	Collaborate with other HEIs on sustainability issues	✓	N/I
	PA4.2	Engage in some kinds of social responsibility coordination	✓	✓
	PA4.3	Carry out some sustainability outreach campaigns	✓	N/I

Note: WSE = Warsaw School of Economics, NEU = National Economics University, N/I = No information

ing the faculty leader. In many business universities in Vietnam and at NEU, some department heads' position is temporarily filled in with experienced entrepreneurs. It reflects the school's principals' changing mindset to renovate the educational value chain for sustainable development. On the contrary, at WSE, high qualified academic professors with exemplary publication achievements are more favored for the leader position. In the case of Vietnam, foreign professors and expatriates are also welcomed for top managerial positions at NEU.

Second, regarding the faculty staffing activity (SA3), WSE and NEU have pretty opposite approaches. Universities are not just the education centers that function on a commercial basis, connecting teachers and

students. The universities' competitiveness with a mission of going global is based on their highly qualified human resources competent at teaching and doing research. To develop and compete with others, a university must, based on long-term contracts and commitment, look for talents, invest in staff development. Such a policy has been carried out in many European universities for a long time before the 2008 global crisis. When the economy is heading down, many cuts are executed, including in the higher education industry. The economic downturn has compelled many enterprises to cut costs by replacing long-term labor contracts based on working hours. Polish universities, including WSE, have to reduce long-term tenure contracts and shift to

Table 2
Integrating Sustainability in Supporting Activities of the Value Chain: Cases of Poland and Vietnam

		Activity	WSE	NEU
SA1. Administration	SA1.1	Integrate sustainability in the HEI's vision and mission statement	✓	✓
	SA1.2	Invest in e-learning technology rather than open branches in the city and outside to reach more students	✓	✓
	SA1.3	Formulate and implement sustainability policies	N/I	N/I
SA2. Leadership	SA2.1	Promote highly qualified academic professors to be school leaders	✓	✓
	SA2.2	Recruit entrepreneurs or business managers to be members of the faculty leadership	N/I	✓
	SA2.3	Hire foreign professors or expatriates for top managerial position	N/I	✓
	SA2.4	Focus on internal promotion to elect managerial position	✓	✓
SA3. Staffing	SA3.1	Extend tenure contracts in line with the sustainable development of the HEI	N/I	✓
	SA3.2	Invest in the personal growth of faculty for the sustainability of HEI	✓	N/I
	SA3.3	Pay more incentives for extraordinary teaching and research performance	N/I	✓
SA4. Infrastructure	SA4.1	Apply energy and water efficiency measures in HEI's campus	✓	✓
	SA4.2	Use the hazardous waste management system in HEI's campus	✓	N/I
	SA4.3	Promote 3Rs (recycling – reducing – reusing) activities within HEI's campus	✓	N/I
SA5. Funding	SA5.1	Get decreasing fund from the State	✓	✓
	SA5.2	Gain revenue from executive training	✓	✓
	SA5.3	Distribute revenue to sustainability outreach programs	✓	N/I

Note: WSE = Warsaw School of Economics, NEU = National Economics University, N/I = No information

the teaching hour basis to save money to survive. As a result, they do not extend tenure contracts and invest in the personal growth of faculty. Incentives for extraordinary teaching and research performance are also very limited.

ASEAN is a different history. Despite the impact of the global slump, together with the booming population, rising middle class and, the pressing urbanization processes, the number of students and the need for education are increasing. Thus, higher education is the most crisis-proof and the least vulnerable industry. Many universities in ASEAN and specifically in Vietnam, represented by NEU, in a bid to improve their competitiveness and sustainability, are striving to attract foreign teaching staff by offering them, lucrative, long-term tenure contracts. They cooperate with Western universities in the hope of boosting their reputation and brand. In general economic headwinds, this is a solely bright spot in the economy, generally understood as a transfer process from the West to the East.

Third, another supporting activity in the educational value chain is the infrastructure. In the WSE and NEU cases, as both are public universities, they possess the best location in the city and public investment in the facilities for further development. Thus, both HEIs are investing in not only tangible assets but also intangible assets for long-term development. Furthermore, our observation in the websites and interviews with WSE and NEU managers reveal that the two universities are different in integrating sustainability issues in the infrastructure. While WSE has a variety of activities to protect the environment, NEU is left behind its counterpart. Some activities like recycling, reducing, and reusing are still not very popular at NEU.

Finally, funding activity also plays a critical role in generating value and supports the sustainability of HEIs. Education is treated as a public good, so it should be publicly funded to create a long-term benefit for the whole society. Free-of-charge higher education is crucial for improving society (Reel & Block, 2013). Thus, Poland's HEIs are more or less funded by the state budget to educate the national workforce and produce public goods to generate returns in terms of productivity and taxes. Unfortunately, in Vietnam, the above-mentioned standpoint is being fiercely questioned on economic (equal market competition between private HEIs and public HEIs) and political (societal compe-

tition for public sources) grounds. Another viewpoint is raised and accepted. Accordingly, education is perceived mainly as a private good and subject to taxation, so funding should be adjusted (Reel & Block, 2013; Friedman, 1983). Furthermore, the so-far long-lasting economic stagnation finalized by the global economic crisis in 2008 led to many severe cuts, and educational institutions increasingly have placed the responsibility to pay for the education on its beneficiaries (students, the users of services).

Notably, executive education on a commercial basis and fundraising are popular sources of university funding in the Western world. MBA programs require the most sophisticated infrastructure and faculty composition and are very volatile and unstable in terms of income, which may reduce 10% during the economic recession. Fundraising by alumni, organizations, and partners' endowment can be generous but also very volatile and concerns only the top and most prestigious national business universities such as WSE and NEU. In both Poland and Vietnam, executive education contributes a significant part of university funding, while the tradition of fundraising is hardly ever seen there. The most crucial activity of universities stated by their mission, besides teaching students, is to produce knowledge (by carrying out researches) and transfer them (R&D results) on a commercial basis for practical use in businesses. Being public universities, both WSE and NEU have access to national research projects funded or partly funded by the government. However, this source of revenue is contracting over time. To retain sustainability, universities in Poland and Vietnam should carry out practical research projects for different business entities and find a way to commercialize their research findings and outputs.

3.3. Discussions and Implications

In this study, we adopted and adapted the value chain concept in the higher education sector to propose a framework for comparison between Poland and Vietnam. Then we have investigated and analyzed how both WSE and NEU are in the process of achieving sustainability in their daily functional and managerial activities. The above analysis of the value chain in two HEIs of Poland and Vietnam implies some significant issues concerning the sustainable development of HEIs in the two countries.

First of all, it is a must to critically review the value chain of HEIs in Poland and Vietnam to identify how sustainability issues have been integrated in their activities. Our analysis in this study with WSE and NEU as two cases implies that although two countries have different socio-economic background, sustainability is their common concern and several activities have been conducted to address the sustainability in HEIs. However, more effort should be put on issuing the sustainability policies in Polish and Vietnamese HEIs. For Vietnamese HEIs, it is recommended that they should invest more in energy and waste management system. In addition, the 3Rs (recycling – reducing – reusing) practices should also be of top priority to achieve sustainability in Vietnam.

Secondly, to achieve both economic and social sustainability in the long term, HEIs are required to be more innovative to find funding sources and diversify their training activities. Teaching and researching activities should be flexible, diversified, and practically oriented. Furthermore, to retain economic growth and enhance social development, higher education is also popularized to various social stratifications to boost its intellectual level. In addition, higher education plays a critical role in preparing young people to join the labor market soon. It also has a role in training and developing people who are already at work and intend to advance their careers. Therefore, it is recommended to make part-time executive education internationalized as the national economy is being opened up to the world, to support and be supported by practical R&D activities to solve social problems and concerns.

Regarding the research and development (R&D) activities, HEIs in Poland and Vietnam need to continually strengthen their research potential to conduct sustainability-related programs and projects. Achievements in R&D could enhance prestige and reputation nationwide, and as such, they are marketing instruments to attract more students and partners. Consequently, HEIs will have more funding for sustainability-related research and outreach activities.

Last but not least, in Vietnam's current context and conditions, community and public services are pretty novel to HEIs and other businesses. In an advanced market economy and due to globalization, HEIs and businesses' role is to serve students, customers, and the whole community. Public and private universities are

increasingly under pressure to respond to social needs and deal with this community challenge. Different universities have different approaches and solutions to carry out this new social mission. For universities to be influential in business, education, and social services, they need multilateral collaboration and a strong network with different business and social entities at a national and international level to boost value co-creation and value exchange. Therefore, we need to develop universities to tackle pressures associated with ongoing economic transformation and global development trends in the higher education industry.

4. Contributions and Limitations

This study has contributed both theoretical and empirical aspects to the management and higher education sector. We offered an adapted theoretical framework for analyzing the sustainability of HEIs from the value chain perspective. Our case analysis highlighted the sustainability issues of HEIs that should be integrated into their missions of teaching, researching, and community engagement. Thus, we contributed to the existing literature by discussing the sustainable development concept in the higher education sector in the context of two transition economies.

Moreover, by using the proposed theoretical framework, we have fully presented and analyzed how sustainability issues of the HEIs have been integrated into their value chain, represented by the best and oldest business universities in Vietnam compared to Poland. Both the countries share similar developmental backgrounds and institutional settings. As a result of our analysis, multiple recommendations are put forward, and solutions are proposed for HEIs to improve the sustainability of the fast-changing and globalizing higher education industry in Poland and Vietnam. To a certain extent, our study and its contributions could serve as fundamentals for further investigation in developing countries' education systems.

However, this study has several limitations. Document analysis is the fundamental method in this study, which cannot provide an in-depth analysis of the effectiveness of activities in the value chain of Polish and Vietnamese HEIs. Findings from the two case studies highlight some prevailing sustainability issues but might not give a holistic view of the two countries' whole higher education systems. Further

studies should use an empirical approach to evaluate the sustainability of the higher education sector. Moreover, cross-country studies can be expanded with more countries to be included for investigation.

5. Conclusion

The increasing attention of HEIs worldwide to improve their sustainability practices and performance can be supported along with the use of assessment tools that allow comparison among institutions. Value chain framework can be used as one helpful tool. The value chain has been widely used in many industries but is still new for the education sector, particularly in the high demand for sustainable development. In the case of Poland and Vietnam, it is necessary to adapt the educational value chain to analyze how HEIs in these two countries might have carried out some practices to integrate sustainability issues in the value chain.

By proposing a value chain framework and use it for the two cases in Poland and Vietnam, this study highlights the similarities and differences in the way to address sustainability issues and co-create values in two contexts. The differences between the two countries may suggest improvements in the future and areas for further research.

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