FOREIGN EXPERIENCE

Beyond Teaching and Research: Stakeholder Perspectives on the Evolving Roles of Higher Education

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Abstract. Many scholars have observed that the traditional teaching and research functions ascribed to higher education have now expanded to involve a wider range of objectives and actors in response to changing internal and external demands. However, the available literature on the topic lacks accounts reflecting stakeholder perspectives. This paper aims to respond to this limitation by implementing a content analysis of 12 semi-structured interviews with European and international experts in the field of higher education. More specifically, it sketches their views on higher education institutions' roles considering current and emerging imperatives and the tensions and contradictions arising from the evolution of their conventional functions. The results show that higher education institutions are perceived to serve a combination of multiple roles: as enablers of skills and attributes, co-creators and users of knowledge, intermediaries between social actors, instigators of social change, and active agents of

their own transformation. This finding aligns with literature in terms of the diverse and relational nature of modern higher education institutions' operations. While desirable, their fulfilment generates several tensions and contradictions: such as responding to global vs. regional trends, adopting flexibility vs. standardization, pursuing excellence and competitiveness vs. inclusion, competing logics, and managing institutional inertia. The study can benefit educational managers and researchers by offering new insights into generating networked action and building ecosystems as higher education reconfigures its roles to navigate the changing social and economic landscape.

Key words: third mission, higher education institutions, ecosystem, engagement.

Introduction

The realm of higher education has undergone remarkable shifts over the last decades in response to its changing socio-economic context. Higher education institutions (hereinafter — HEIs) now face the imperative to not just engage in cross-border collaborations but also compete for resources and gain positional advantage as fuelled by the all-encompassing force of globalization [1]. The fast-paced evolution of advanced technologies has also prompted universities to adopt pedagogical and curricular adjustments to respond to new labour market demands. As work sectors, markets, and business opportunities were expanded by digital technologies, so did the skill sets and profiles demanded from the workforce[1]. Digital technologies have also triggered the unprecedented growth in data and computational capacity, requiring educational institutions to develop more complex and sophisticated processes of knowledge generation and management. Additionally, the discourse of social mobility has gained traction in recent decades, challenging HEIs to respond to social justice issues of access and equity [2].

European policy is well attuned to these trends. At the turn of the 21st century, there was a strong push for HEIs to undergo significant reforms in preparation for an international and knowledge-driven economy founded on information processing, knowledge production, and specialized services. Europe was adamant about developing a consolidated strategy to ensure that it could not only adapt but also to compete in the global market. Since the launch of the Lisbon Agenda in 2000, policy makers have sought to highlight the plural roles of higher education and the need to leverage its contributions to the economic and social growth[2].

These policy reconfigurations run parallel with academic scholars' observations on the evolving and expanding roles of HEI's in addition to teaching and research. Teaching is arguably the most prominent and longest running function of higher education, whereby universities served as training sites for the elite and skilled professionals [2]. Around the 19th century, research became a key feature of university activity as Professor Wilhelm Humboldt instigated important reforms at the University of Berlin [3]. More recently, an added dimension — often referred to as the "third stream" or "third mission" (hereinafter — TM) — has surfaced, prompting HEIs to provide societal value and engage with a wider pool of actors [4—6].

According to Laredo [7], the onset of the TM took place in the mid-1970s, and it was driven by commercial demands. Until then, knowledge generation in universities was essentially confined to fundamental research. As scholars began to develop new insights into the tacit element of knowledge and the importance of non-firm knowledge on firms' innovation processes, the case became stronger for industry and academia to establish closer relationships. He also added that this shift was a result of the reconceptualization of innovation as a product of networked collaborations and, hence, the value added of other stakeholders, such as academic researchers.

The economic-driven origins of higher education's TM continue to reverberate in contemporary interpretations of HEI's functions. Furthermore, its economic benefits are framed within a broader imperative of contributing to national and regional development and boosting the financial capacities of universities through a model of an "entrepreneurial university". According to Chatterton & Goddard [8], this phenomenon is driven by globalization, the increased value of non-material assets, such as knowledge, and the overarching view of regions as sites of political and economic importance. The entrepreneurial university "envisions an academic structure and function that is revised through the economic development alignment with research and teaching as academic missions" [9, p. 314]. This development further led to the emergence of the triple helix model with universities contributing to the knowledge-based society through human capital formation and the creation of new business ventures [9]. Technology licensing, university spin-offs and start-ups, science parks, incubators, business angels, and venture capital are just a few examples of activities that have materialized after this shift [10].

While having gained momentum in recent decades, several scholars contend that the HEI's TM goes beyond commercialization to involve a broader notion of engagement with non-academic actors [11]. Especially with sustainability challenges and planetary threats becoming more salient, universities' non-profit orientation and long-term thinking capacities are particularly valuable contributions [12]. This call to action is both global and regional, whereby universities' collaboration forms part of a number of social actions in the domains of strategic planning, sustainable development, city regeneration, and widening access to higher education [13]. Several authors also contend that universities engage externally not only for commercialization — as the previous notions of the TM and "entrepreneurial university" suggested — but also for a number of non-financially-driven rationales [8] [14]. As a result, a new vocabulary capturing the wider stream of higher education activities emerged, including terms such as the "engaged" and "sustainable" university [15]. Other models, such as the "relational" university [16] and universities as co-creators and transformers [12; 17] have likewise alluded to the expanded missions of the HEIs. In line with this, a largely commercial focus of the triple helix model of innovation has been expanded to incorporate social, democratic, and ecological dimensions as reflected in the development of the quadruple [18] and quintuple helix innovation models [19].

The evolving nature of HEI's plural roles[3] has received considerable interest from academic researchers. Indeed, there have been notable efforts to map the scope of studies on the topic through systematic literature reviews [4; 14; 15; 20; 21], historical analysis [7; 22],

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[3] Roles are used in this publication interchangeably with missions and functions.

and case studies [10; 23]. The extent and depth of this body of work offer valuable insights to define the scope of HEI's roles, more deeply understand the imperative for change, and provide critical perspectives in the assumption of its varied missions. However, to date, there is a lack of interpretive studies reflecting stakeholder perspectives on the nature of HEI's roles and their implications [24; 25]. This article aims to fill this gap by presenting European and international stakeholder perspectives on the roles ascribed to HEIs, the range of actors involved, and the tensions that may arise in the evolution of their conventional functions. It does not aim at mapping the full scope of universities' responsibility: rather, it seeks to tap into expert knowledge to illuminate the broad themes that characterize contemporary interpretations of HEI's most salient roles and outline the resulting tensions and contradictions.

This analysis is a part of a broader project on the implications of the European Pillar Social Rights4 on education policy and practice. It draws on qualitative data from 12 in-depth semi-structured interviews with leading European and international experts in the field of education and training. Experts have become an increasingly important source of data since the 1990s, reflecting a move toward hybrid forms of knowledge generation [26]. While there is no consensus on what constitutes an expert, we draw on a broad definition offered by Bogner & Menz, who view an expert as a person who possesses "technical, process, and interpretative knowledge that refers to a specific field of action" [27, p. 54]. The

scientific interest in this type of data is not the least based on the perceived authority of their knowledge but rather on "the social relevance of experts in modern life and their ability to affect people's practices to a significant degree" [28, p. 655]. More specifically, we are concerned with experts' interpretative knowledge, which "comprises not only (subjective) perceptions and descriptions of reality but also normative dispositions" [28, p. 658]. We find that this mode of data collection is particularly aligned with the paper's object of inquiry − HEI's changing roles − which itself is a product of meaning making and negotiated interpretations. By tapping on their explicit and implicit knowledge in the field, we are able draw insights that can inform policy and practical decisions toward enhancing the contributions of higher education to internal and external demands.

The article is structured as follows. First, it presents the broad themes reflecting the aggregate views of leading stakeholders in the field regarding HEI's contemporary roles. This is followed by a discussion of their interdependencies with non-academic actors. Lastly, several tensions and contradictions resulting from these reconfigurations are presented, as well as possible mitigating actions.

Material and methods

Semi-structured interviews among stakeholders were conducted between April 2018 and July 2019 using non-probability sampling. In this process, the 12 experts were identified based on accessibility (convenience sampling) and their related sectoral and geographical expertise (purposive sampling) [29]. Local stakeholders involved in this study are located in the Basque Country, a region classified in the European Regional Innovation Scoreboard as having moderate levels of innovation and demonstrating the largest percentage (8.8%)

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⁴ EPSR's first principle explicitly draws the relationship between quality and inclusive education, training, and lifelong learning for skills development geared towards full societal participation and successful management of transitions in the labour market.

Table 1. An overview of participants' sectoral and geographical profiles

Expert ID*	Gender	Age	Role	Sectoral affiliation	Geographical representation
EXP1	Male	+60	Independent Expert; Ex-Officer and Head of Unit of the European Commission	Governance	European (Netherlands, Belgium)
EXP2	Male	50-60	Head of Unit and Policymaker in European Commission	Governance	European (Portugal, Belgium)
EXP3	Female	30-40	University Researcher; Expert in Interactive and Inclusive Learning (Ikerbasque Fellow)	Academe	International (Spain)
EXP4	Male	+40	Policymaker in United Nations; Expert with proven track record in Lifelong Learning and Vocational Training policies	Governance	International (Mexico, France, Chile)
EXP5	Male	+40	Policymaker and Local Government Officer in the Basque Country; Senior Expert in Economic Development, Trade and Employment	Governance	Local; Regional (Basque Country)
EXP6	Female	30-40	Director of Innovation, Non-Government Organisation	Civil society	Local; Regional (Portugal)
EXP7	Female	40-50	University Faculty Member; Expert in Biosciences Engineering	Academe	Local; Regional (Belgium)
EXP8	Male	50-60	University Professor and Expert in Labour Market Studies, Industrial Relations and Resilient Societies; Expert with proven track record in Regional Economy, Citizenship, Democracy and Digitalization	Academe; Governance	European; Regional (Netherlands)
EXP9	Female	30-40	University Faculty Member; Expert in Digital Technologies and Remote Learning	Academe	European (Spain, Swiitzerland, Estonia)
EXP10	Female	+65	Civil servant and Senior expert of Science, Technology and Innovation Policy, University Professor, OECD	Academe; Governance	International (Japan)
EXP11	Male	50-60	Director, Social Enterprise; Expert with a proven track record in innovative employability solutions for people at risk of exclusion	Industry	Local; Regional; National (Basque Country, Spain)
EXP12	Male	50-60	Policymaker and Deputy Minister, Basque Government	Governance	Local; Regional (Basque Country)
* Expert IDs are used when referring to the experts in the analysis.					

of innovation change through time in Spain[5]. It is also where the authors primarily conduct their research work. Meanwhile, international stakeholders represent pan-European and other country perspectives. The experts were asked to sign an informed consent prior to participation.

Each interview lasted between one to one and a half hours. The interviews were carried

out either in English or Spanish, transcribed in their original language, and analyzed using an iterative process of conventional content analysis [30]. The first round of the analysis was carried out separately by the authors through a preliminary immersion with the first three transcripts. Open coding [31] was used and excerpts that suggest a driver of change, an actor, and an explicit or implicit role associated with it were tagged. Versus coding [31] was also done to code the tensions. Memos were made along the way to record salient concepts and analysis notes.

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[5] *European Commission. Regional Innovation Scoreboard.* Directorate General for Internal Market, Industry, Entrepreneurship and SMEs, 2019. Available at: https://ec.europa.eu/docsroom/documents/36064 (accessed: October 1, 2019).

The preliminary set of codes was then shared and collaboratively refined by the authors followed by a second round of coding. This step involved an attempt to limit the codes to the preliminary list and adding new codes if necessary [30]. The coded excerpts from this process were then extracted, the appropriateness of the codes was reviewed, and related or redundant codes were merged. The last round involved finalizing categories and subcategories and drawing the interrelationships between roles, agents, and possible tensions.

Results and Discussion

Following the analysis, it was determined that expert interpretations of HEIs' roles aligned with the missions identified by academic literature: teaching, research, social engagement, and societal development. The findings also confirm the networked and multi-stakeholder dynamics needed for the fulfilment of these roles — with governments, businesses, and civil society, including individuals, being identified as key collaborators. Interestingly, another relevant yet distinct role has emerged: HEIs being agents of their own transformation. The following subsections will provide a more detailed discussion of these dimensions, culminating in the tensions and contradictions that emerged in the reconfiguration of HEIs' conventional functions.

Higher education institutions' redefined roles

Experts' interpretations of HEIs' roles involve elements of their traditional functions. Teaching was primarily depicted as the development of skills and attributes for students' democratic and work lives. Meanwhile, their research mission is understood as the knowledge use and co-creation with other actors. The commercialization dimension of the TM was not as prominent in the data analysed, which may be explained by the predominance of social actors among the expert pool and the social framework of the broader research project focusing on EPSR's implications. HEIs' responsibility for social engagement involves teaching, research, and management dimensions toward collaborative curriculum and pedagogies, knowledge generation, and social transformation. Lastly, the role of acting as its own agent of transformation surfaced as a relevant yet distinct role from the ones identified in other studies, providing an interesting insight into the continuously evolving scope of HEIs' functions.

HEIs as enablers of skills and attributes

Experts viewed HEIs' teaching function as the key in preparing students for the digital demands to become even more salient in response to the digital economy and the salience of transitions as a facet of modern life. Experts identified the importance of developing students' specialised skill sets (especially for highly technical roles) on the one hand and more transversal skills on the other, including science, technology, engineering, arts, and mathematics (STEAM) (EXP1, EXP9, EXP12), digital skills (EXP1, EXP5, EXP8), oracy, communication, and negotiation skills (EXP3, EXP7), critical and creative thinking (EXP2, EXP3, EXP4, EXP5, EXP9, EXP12), complex reasoning (EXP3), emotional intelligence (EXP12), resilience (EXP5, EXP8), adaptability and flexibility (EXP5, EXP12), and entrepreneurship (EXP8). These transversal skills will allow students to navigate the digital world not just in professional contexts but also to adequately participate in the social and political domains (EXP2). These are in line with the broad remit accorded to HEIs for human capital formation and social cohesion[6].

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[6]   *European Commission Working Document: Analytical Underpinning for a New Skills Agenda for Europe.* SWD, 2016. 195 Final, Part 1/4.

Meanwhile, several experts like EXP5, EXP11, and EXP12 employ the term "values" as a central element of HEI's teaching activities. Social responsibility (EXP5, EXP11), critical and autonomous thinking (EXP5), and ethical decision-making (EXP12) were identified as key attributes for the future workforce — both for employees and employers. To achieve these aims, educators must update their pedagogical practices toward active methodologies such as problem-based learning (EXP12) and experiential and work-based learning arrangements like dual training programmes (EXP4, EXP11). Several studies corroborate the importance and benefit of such learning arrangements, especially regarding students' development of transversal skills needed for the entrepreneurship [32; 33]. Experts also envision a curriculum that incorporates social and community projects (EXP3, EXP4), efforts that have been found to boost motivation by offering practical experience and valuable skills [33] as well as higher student satisfaction with the opportunities they present for expanding their professional contacts [34].

Another salient theme in this regard is HEIs' role in raising students' awareness of the reality of transitions. As EXP2, EXP6, EXP9, and EXP10 pointed out, recalibrating students' employment expectations to match the certainty of change is paramount. EXP6 notes: "In terms of education and preparation, the biggest thing we can do is to make it clear that the whole concept of a job has changed a lot in the last few years, and it needs to change even more. People are still preparing for having a stable full-time job for the rest of their lives. They expect some pattern, or a routine, and I think this is probably what we need to deconstruct in the future because this won't happen".

This finding runs parallel with Tomlinson's [35] contention on the role of HEI's in the expectation management and raising students' awareness on the non-linearity of contemporary work trajectories.

Co-creators and users of knowledge

In addition to the evolving nature and focus of HEI's teaching function, as described above, two experts specifically alluded to the reinforced role of universities in generating societal impact through knowledge creation and application (EXP3, EXP7). For EXP3, part of this process involves moving away from the conventional notion of academia as the sole source of authoritative knowledge. Instead, she points to the emerging imperative for HEIs to make science available and accessible to everyone by breaking the hierarchy between the researcher and the "researched". This is viewed as an important dimension of tackling inequalities in the field of education participation and knowledge creation. EXP3 highlighted the need for university staff to reflect on and recognize higher education's privileged position in generating knowledge and making a shift toward a stance of co-creation and epistemological equality for the social good: "It is about making research available not only to teachers, but also to families, involving all the agents around a dialogue of what positive effects we have observed in those schools and in those communities that are already involved in making open access to science a right. It is a lever of change - an engine that enables people's first-hand access to research results, their involvement in new research processes, and their participation in knowledge generation in a way that is impactful and beneficial to their own communities".

The co-creating function being increasingly ascribed to and embodied by HEIs reflects what Trencher et al. [12] view as a synergistic

combination of the economic and social paradigms of the universities' TM. This approach, which Aranguren et al. [17] refer to as the co-transformative university model, leverages open innovation and competitiveness to contribute to inclusion and sustainability.

Intermediaries between social actors

The experts' consensus also lay on HEIs' function as intermediaries between social actors happening at the interregional and international levels (EXP1, EXP8), between educational systems of compulsory, post-compulsory, and higher education (EXP4, EXP12), between academic disciplines through interdisciplinary dialogue (EXP7), and across social domains through intersectoral engagement with governments, businesses, families, communities, and teaching staff (EXP3, EXP4, EXP9, EXP10). HEI's engagement with the wider community reflects teaching and research elements and manifests in a number of ways: as curricular activities involving hands-on and practical experience in the community and the workplace (EXP4, EXP10); as a venue for collective thought and the establishment of common objectives (EXP3, EXP11); and the establishment of linkages and alliances especially with businesses (EXP9). These connections may require regulated arrangements — such as the case of dual training programmes, service learning embedded in the curriculum, and official memberships in networks — or through ad-hoc and informal approaches such as engaging in dialogue and discussions with other actors. In practice, formal and informal activities characterize university engagement [21] and that a combination of them has been shown to maximize knowledge valorisation in specific fields, such as robotics and pharmacy [36].

Establishing linkages with the private sector is also perceived by EXP9 to provide direct contributions to students' individual work outcomes by expanding students' social capital and job choices, increasing companies' awareness of the value and relevance of education and training programs, and allowing for the co-definition of skills demand. Additionally, keeping communication lines open can allow HEIs to detect new sectors and adjust in their educational offerings (EXP12). Overall, academic-business partnerships have been shown to boost positive outcomes not just for students [37] but also for companies [38].

Instigators of social change

For many experts, HEIs' research, teaching, and engagement activities are now expected to serve social ends and promote inclusion (EXP1, EXP2, EXP3, EXP5, EXP7, EXP8, EXP9, EXP10, EXP11). This runs parallel with the more recent models of higher education delivery that incorporate social dimensions to HEIs' traditional missions [12; 16; 17]. EXP3 and EXP10 contend that adopting more social and participatory approaches to the research process not only enhances academia's awareness of actual societal issues but also boosts individual action and empowerment. With regard to teaching, education managers and staff are encouraged to invest more heavily in strengthening the service-oriented functions to develop a broad range of skills and values (EXP7), generate more awareness and responsive capacities in preparation for the work they will do upon study completion (EXP7), promote lifelong learning and permeability between vocational and university systems through the recognition of prior learning (RPL) (EXP1, EXP4), enhance students' capacities to provide innovative solutions to social problems (EXP4), and strive to produce transformative and socially responsible leaders (EXP3). Aside from the value contribution of higher education to society, EXP3 also identifies the reciprocal

benefit of engaging in such initiatives, boosting institutional prestige, and contributing to their own organizational learning by incorporating community and citizen knowledge.

Other experts highlight the importance of leveraging technology in fulfilling HEIs' role as instigators of social change. Cross-border online learning, while already in place, can be further developed and promoted to reach those with geographical, mobility, or time constraints (EXP5). The use of advanced technologies, such as learning analytics and artificial intelligence, can also enable the creation of individualized training solutions and allow students to envision a unique learning and career path which can be later adapted based on their changing needs and circumstances (EXP2, EXP9).

Active agents of organizational transformation

The evolving mission of HEIs, as described in the literature, alludes to an increasingly outward orientation that seeks to enhance and transform the environment where it operates. However, the analysis of expert interviews undertaken in this study points to the growing imperative for universities to look inward and develop a meta-capacity for agile organizational change. As EXP10 and EXP12 point out, the rapidly evolving context has been made incompatible with the stable and enduring nature of HEIs' operations. In essence, the teaching, research, and engagement roles previously described are encapsulated in the broader imperative for universities to become attuned to changes and be able to make timely changes whenever necessary. Specific

adjustments include the use of technology-enabled platforms to boost engagement with other actors (EXP5), the creation of flexible and personalised educational paths through learning analytics and artificial intelligence (EXP2, EXP4, EXP6, EXP9, EXP12) and the provision of alternative educational offerings such as nanodegrees and module-type curricula (EXP5). Concomitantly, this would require the development of flexible yet comparable structures of validation and recognition of qualifications (EXP2, EXP4), as well as credential recognition tools like blockchains (EXP8). More broadly, HEIs are called to adopt a dispositional shift toward a more open (EXP10), systems-based, and socially-oriented approach to educational management (EXP5).

HEIs' interdependencies with other actors

The discussion in the previous section illustrates the networked nature of HEIs' roles. The experts' views converge in that a range of non-academic actors all contribute to the fulfilment of higher education's missions in conjunction with stakeholders working within education. Based on the interviews, three main non-academic actor groups were identified: governments, business, and civil society including individuals.

Governments

For EXP4, EXP6, and EXP8, HEI's social and economic contributions go alongside the role of governments as the equalizer of opportunities and protector of rights. By monitoring disadvantaged groups' specific needs in relation to education and training, social

Table 2. An overview of expert views on ET's redefined roles

	1	2	3	4	5	6	7	8	9	10	11	12
enablers of skills and attributes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
intermediaries between social actors	✓		✓	✓			✓	✓	✓	✓		✓
instigators of social change	✓	✓	✓		✓		✓	✓	✓	✓	✓	
co-creators and users of knowledge			✓				✓					
active agents of organizational transformation		✓		✓	✓	✓			✓	✓		✓

welfare, and work, they create a reinforcing dynamic that boosts HEI's role as an instigator of social change and inclusion. Efforts such as mobilizing funds for individualized training accounts to encourage and incentivize people to up-or re-skill (EXP2, EXP8), stipulating lifelong learning as a standard feature of work contracts (EXP8), and addressing teaching staff's competence, commitment, and job satisfaction (EXP12) are some of the relevant measures that the public sector can adopt in the supply side. Additionally, governments are also expected to address imbalances in the demand-side by driving job creation (EXP6), promoting social entrepreneurship (EXP8), developing data intelligence for job matching (EXP8), and regulating markets in order to ensure fair competition, work quality, and the sustainability of products and services (EXP1), especially in the age of exponential growth in the sharing and gig economy (EXP5). In relation to this role, EXP8 and EXP12 contend that public leaders should act as visionaries of sustainable human development and strive for cross-border collaborations and policies that encourage the move toward green and social economies.

Vertical and horizontal policy alignment and harmonization is another aspect that several experts identified to be an important area of action for the public sector. For EXP4, aligning policies vertically and horizontally is of paramount importance to ensure that instruments for permeable pathways, individualized learning, and RPL may be achieved. This involves boosting transparency and qualifications recognition through a common framework at the European level (EXP2), harmonizing governmental competences between different departments at the national level (EXP4), and creating pathways between VET and higher education systems (EXP2, EXP4, EXP5, EXP12). Lastly,

governments are viewed as intermediaries between social actors – just like educational institutions. For instance, they are expected to be attuned to emerging work sectors (EXP12), align HEI's efforts not just with supranational but also regional sectoral priorities (EXP4, EXP8), co-define skills needs in the labour market (EXP1, EXP10), and leverage technology to create networks for inter-institutional communication and information sharing among entities (EXP12).

The private sector

Alongside governments, businesses are also expected to contribute to positive social and economic outcomes. The experts have identified three lines of action through which this may be achieved. Firstly, the private sector is deemed as a driver of growth and social impact (EXP8). By creating jobs and designing business plans around the social economy, businesses can tackle societal issues while generating paid employment, which also reduces the strain on social security. Secondly, employers are seen as contributors to fairness and sustainability by observing hiring practices that give way to job access for qualified participants from traditionally underrepresented backgrounds (EXP11), contributing to workers' professional development as part of their work contract (EXP8), and aligning organizational missions with sustainable goals (EXP1). Additionally, businesses are also considered active participants in an ongoing dialogue with governments and HEIs regarding the detection of new sectors and demand for skills (EXP1, EXP12) and modifying training offers to reflect labour market needs (EXP12).

Civil society and individuals

For several experts, the community at large plays a key and complementary role in the current dynamic. EXP5 alludes to the importance of cities as agents, which allows

local and grassroots initiatives to flourish alongside more top-down policy and decision-making. EXP9 also points to the active involvement of families as knowledge seekers, educating themselves and their children regarding career options. Moreover, the individuals themselves are seen as important advocates of the self-growth by developing awareness of their evolving needs (EXP9), assuming responsibility for their learning (EXP1), and upholding the inclusion of lifelong learning opportunities as part of their employment contract (EXP8).

Reconciling tensions: toward generating complex and multi-stakeholder ecosystems
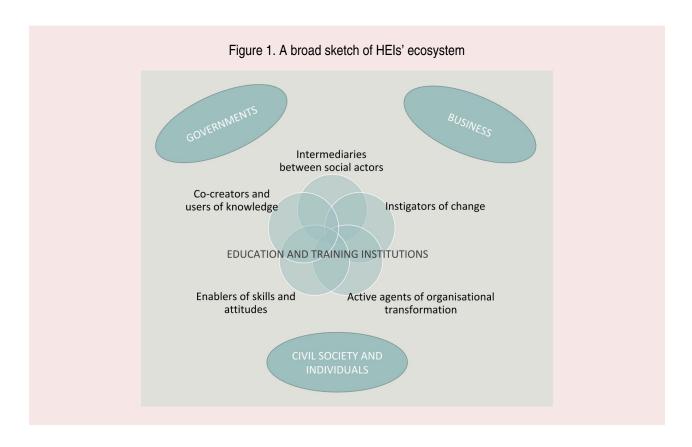
The interviewed experts identified several tensions and contradictions that may arise from the fulfilment of HEI's reconfigured roles. Firstly, there is an important tension between orienting HEIs toward global or regional needs. Many of the experts are of the view that, while there is a general pattern of growth in the ICT sector and among highly qualified jobs, labour markets continue to be shaped by regional and national (as sectoral specializations) rather than global contexts (EXP4, EXP8). It may also happen that HEIs' academic offerings fail to match employers' needs or become subject to country directives or regulations [20]. As such, there is an onus on universities to adopt a "glocal" outlook by being deliberate about staying abreast with global trends while being responsive to local realities. More specifically, this involves targeted funding, capacity building, training, and research initiatives reflecting a dual perspective.

Another theme that emerged in the interviews involves the binary between flexibility and standardization. While HEIs are called to be more open and flexible in teaching and curriculum design by creating individualized paths when mapping out learning programmes

and career planning, the process of assessment and evaluation requires a contrasting approach. The specifics of skills and competences, the harmonization of qualifications and degree equivalency, and the standardization of learning assessments all present a fundamental conceptual conflict to the diversity and flexibility principles needed in modern educational arrangements (EXP4). Recognizing this tension is important, especially that it is likely to generate ethical and practical dilemmas to educators and educational managers.

Similarly, achieving the goal of inclusion in a context shaped by the excellence and competitiveness imperative poses challenges. Elitism is a particularly strong barrier (EXP1, EXP7) as is the pressure for HEIs to secure positional advantage. Additionally, educational access and participation remain problematic (EXP2) in a meritocratic context where academically underperforming students are at a disadvantage. Even among well-meaning institutions that show a willingness to become more inclusive, the lack of financial resources to support the additional manpower and capacities required for creating comprehensive inclusion programmes make the achievement of this goal particularly elusive. This is where governments can take a leading role as equalizers of opportunities (EXP4, EXP6, EXP8) by providing targeted funding for staffing needs, capacity building, and the development of technological tools to promote inclusion.

The long-standing competing logics between actors' spheres of action also present another fundamental challenge to HEI's fulfilment of its redefined roles. This manifests in the diverging ways with which knowledge is incentivised between these practice fields. For instance, enabling critical and creative thought for employment and citizenship is a desirable

Figure 1. A broad sketch of HEIs' ecosystem

academic outcome, yet some employers prefer obedience over innovation as a worker's attribute (EXP12). For EXP8, these tensions can only be addressed if stakeholders are able to establish common objectives to reduce trade-offs. Other experts further pointed to the importance of engaging in the intersectoral dialogue (EXP12) and creating opportunities for a joint awareness of how these modern skills can be leveraged in the workplace (EXP9). These views invoke a sense of reciprocity and collaboration – principles that are embodied in something which Karalash & Baumol [39] identify as an educational ecosystem. More specifically, it involves "an intersectional system of an educational community, its environment and stakeholders... as well as the interdependence and mutual requirements of the stakeholders" [39, p. 107]. In this sense, the reconfigured roles and relevant actors, discussed above, comprise HEIs' ecosystem depicted in figure 1 below.

Powell & Walsh [40] contend that an ecosystem approach is underpinned by a broader understanding of HEIs' societal impact beyond commercialization. It features dynamic collaborations characterized by "mutuality and shared goals" [40, p. 574], and it views stakeholders as partners. For such an arrangement to emerge, Weerts & Sandman [41] identified the central role of "boundary spanners" to support universities' engagement. These key individuals mediate and negotiate within and between different spheres, representing ideas and concerns from all sides to draw commonalities.

Lastly, several experts allude to the friction generated by institutional inertia amid rapid contextual change. Fear and attitudinal resistance, especially in the midst of proposals for fundamental shifts, lead to slower uptake (EXP5, EXP7). In the innovation literature, this phenomenon is referred to as the institutional dissonance, which can manifest itself internally

— as an actor's withdrawal or disinvestment as a result of the mismatch between individual beliefs and institutional action or ethos [42]. The ease with which change is accommodated was also viewed by EXP11 to be shaped by the cultural dimension, pointing out that more egalitarian systems are more likely to meet less resistance toward collaborative dynamics than hierarchical societies. With the changes required and the resistances that universities need to confront, there is the danger for HEIs to suffer from the "mission overload", thereby straining and overstretching HEIs' capacities [5; 43]. This reality poses important points for reflection among education managers as to how to mobilize their internal ecosystem toward establishing a shared vision and pursuing collaborative and win-win solutions.

Conclusion

Overall, the empirical evidence presented in this analysis aligns with the existing body of literature in the observation that HEIs are nowadays expected to cover a wider scope of roles beyond their conventional teaching and research functions. Additionally, the analysis illuminates the importance of harnessing universities' transformational capacity — a dimension that goes beyond how the TM is conceived. Replacing the ivory tower with collaborative dynamics, however, leads to several tensions. We have identified several possible measures to address them, including finding complementary roles with other stakeholders to offset drawbacks, identifying individual actors that can mediate and represent the interests of the parties involved, and the cultivation of mutually beneficial and collaborative relationships rooted in the achievement of shared goals through an ecosystem in collegial and collective ways. Indeed, higher education has a unique societal position that must be leveraged by enhancing their capacity for collaborative engagement and institutional transformation [44].

The insights that emerged from this discussion prompt several topics for the future research. For instance, the reliance on experts' views may be expanded to include a higher number of participants and a wider range of stakeholders. It would also be worthwhile to gather the views of non-European stakeholders and analyse how could they be compared to the interpretations presented in this study. In general, we hope that we shed some light on the normative aspects of HEIs' operations and prompted a thoughtful reflection on how to fulfil the various facets of higher education's remit in a truly impactful way.

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