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Funding Internationalisation of Education in Portugal: Evidence From Higher and Non-Higher Education Institutions

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ABSTRACT

This paper investigates how education and training institutions in Portugal fund internationalisation, moving beyond the traditional focus on higher education. Employing a convergent parallel mixed-methods design through a nationwide survey and interviews, it reveals a two-tiered system shaped by funding availability and diversity. Higher education institutions leverage a diversified portfolio of internal, national, and European funds to fuel ambitious, competitive agendas that reflect their complex missions. In contrast, the non-tertiary sectors (School, Adult and Vocational Education) are critically dependent on a single source, Erasmus+, a dependency that channels their efforts primarily towards mobility, constraining their strategic autonomy and creating a structural inequality within the national system. The study argues that funding is not a neutral facilitator but a powerful force that influences the scope and nature of internationalisation. It concludes by proposing future research avenues and policy actions to foster more equitable international engagement across sectors.

Globalisation has accelerated the internationalisation of institutions (Altbach and Knight 2007), reflected in growing student mobility (6.4 million in 2022) (OECD 2025), investment in international branch campuses (Healey 2015) or increasing international research collaboration (Aksnes and Sivertsen 2023), among others. A substantial literature addresses the internationalisation of education, particularly motivations and rationales (Seeber et al. 2016; Wihlborg and Robson 2018), national or institutional policies and strategies (Gao 2015; Knight and de Wit 1995; Matei et al. 2015), concrete activities (Bulnes and de Louw 2024; Seeber et al. 2020), and challenges (Buckner and Stein 2020; Galloway et al. 2020). Although often presented as universally beneficial, internationalisation is a complex

endeavour (Yousef 2024), raising questions about equity, purpose and benefits distribution across education sectors.

Definitions of internationalisation have primarily been advanced for higher education (HE) (de Wit et al. 2015; Knight 2003, 2015; Teichler 2004). Teichler (2004, 22–23) defines it as the set of internal transformations—knowledge transfer, physical mobility, cooperation and international research—that elevate cross-border activities within institutions. The HE literature covers a wide range of activities, spanning teaching and research activities: international student recruitment (Sin et al. 2021), student and staff mobility schemes (Breznik and Skrbinjek 2020), creation of branch campuses abroad (Healey 2015), joint degrees

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(Bamford 2020), adopting English as a teaching language (Borràs 2023), internationalisation at home (Beelen 2016), or international scientific and research collaborations (Woldegiyorgis et al. 2018).

Beyond HE, research on internationalisation is scarce (with few exceptions, e.g., Yemini 2012). Arguably, HE has been more receptive to globalisation and marketisation (Oliveira et al. 2025), given the role of internationalisation in institutions' prestige (Seeber et al. 2016) and its economic relevance in many countries (Engel and Siczek 2018).

Limited funding is a major barrier to internationalisation (Altbach and Knight 2007; Marinoni and Pina Cardona 2024; Liu et al. 2023; Matei et al. 2015). As Matei et al. (2015) observe, funding is the 'fuel' driving internationalisation, influencing its direction, motivations, and effectiveness. Yet, beyond studies on international student tuition revenue, there is little empirical analysis of how education institutions finance internationalisation, which activities receive support, and the rationales for these decisions.

This paper aims to deepen our understanding of how education institutions finance internationalisation in two key ways. First, it extends the focus beyond HE to other education and training sectors, for which empirical studies are virtually non-existent, while also adding to the sparse literature on funding HE internationalisation. Second, it connects two domains previously examined separately—internationalisation and funding. Using quantitative survey data and qualitative interview evidence from Portugal, the paper asks: How do Portuguese education and training institutions fund internationalisation? It addresses three sub-questions: What are the main funding sources and instruments supporting the internationalisation of Portuguese education institutions? Which activities are funded, and what do these choices reveal about the breadth and priorities of institutional internationalisation? How do funding patterns differ across sectors?

The paper is organised as follows. Section 1 reviews the literature on funding for internationalisation. Section 2 synthesises Matei et al.'s (2015) framework of internationalisation funding and reflects on key differences between HE and non-higher education (NHE) sectors. Section 3 outlines the mixed-methods design and data sources. Section 4 reports the results, while Section 5 discusses implications and concludes.

1 | Literature Review

This section relies exclusively on studies on HE, as the bibliographic search revealed no literature on funding for internationalisation in other education sectors/levels.

Several authors agree that insufficient funding hinders internationalisation (Liu et al. 2023; Marinoni and Pina Cardona 2024; Matei et al. 2015). In the 6th global survey of the International Association of Universities (IAU) (Marinoni and Pina Cardona 2024), limited funding emerged as the most common external obstacle/challenge to internationalisation globally and in all regions but North America. In Europe, 44% of the surveyed

institutions reported this obstacle, compared to 52% globally, 58% in North America, and 48% in the Asia-Pacific, suggesting a slightly better funding situation in Europe.

In a systematic review, Liu et al. (2023) identify various funding sources for HE internationalisation, including government funding, tuition fees, external (often competitive) funding, private philanthropic donations and public-private partnerships. They stress that government funding can be unstable, unpredictable and vulnerable to political shifts, undermining long-term sustainability. They also criticise the short-term orientation of internationalisation funding models (e.g., mobility programmes or external project funding), limiting long-term internationalisation strategies and consolidated partnerships (Liu et al. 2023). A further obstacle is the lack of coordination among funding agencies and with institutions, which may lead to fragmented institutional responses. These challenges are compounded by the high costs of internationalisation, such as hiring bilingual staff, establishing international partnerships, or creating specialised international programmes (Altbach and Knight 2007).

Portugal mirrors this scenario. While this study aims to disentangle how education institutions finance internationalisation, there are indications that funding is insufficient and fragmented. Since 2014, Decree-Law (36/2014) has allowed public HEIs to charge higher fees for international students, positioning these students as a potential revenue source. Portugal's only national strategy for the internationalisation of higher education, also from 2014, recommended, but never implemented, financial incentives through a variable in the funding formula of public HEIs recognising international collaboration (Sin et al. 2019). Portugal's low levels of government expenditure on HE and per-student expenditure among OECD countries (OECD 2025) may also translate into scarce internationalisation funding. International research collaborations depend heavily on competitive national and international funding, with limited success rates, and sustaining collaborations beyond the projects' lifespan remains challenging.

It is therefore unsurprising that institutions' own budgets are the main funding source for internationalisation: 63% of HEIs in the IAU's survey indicated it as very important (Marinoni and Pina Cardona 2024). A very high importance is also attributed to grants from national governmental agencies (59%) and international organisations and foreign governmental agencies (50%).

Without empirical evidence, it is difficult to unpack what 'own budgets' entail. However, international students' tuition fees are likely a key revenue source (Liu et al. 2023; de Wit and Deca 2020). Charging tuition fees is common in countries highly attractive to international students, usually Anglo-Saxon (Cantwell 2019; Marginson 2009). However, European countries have also turned to this revenue source by charging (higher) fees for international students, as in Finland (Kauko and Medvedeva 2016), Sweden (Lundin 2025), or Portugal (Sin et al. 2021).

External funding is easier to disentangle. The European Commission and national agencies fund various internationalisation activities across Europe. The Erasmus programme, launched in 1987 by the European Commission, expanded

with the Bologna Process, student and staff mobility now being integral to the Commission's internationalisation strategy (European Commission 2013). Internationalisation later evolved beyond an intra-European emphasis, with a funding programme dedicated to Erasmus Mundus joint degrees (Master and PhD) expanding university networks across the world (Marques et al. 2022).

Nowadays, Erasmus+ is a multifaceted initiative reaching beyond HE. The current cycle (2021–2027) is structured around Key Actions 1–3 (mobility, cooperation and policy support), with four horizontal priorities: inclusion and diversity, green transition, digital transformation and participation in democratic life. While intra-European student and staff mobility and the globally reaching Erasmus Mundus programmes target the teaching dimension, Erasmus+ also supports institutional development, financing strategic partnerships, knowledge alliances, and capacity-building projects across education sectors.

Acknowledging the importance of research for HEIs, the IAU survey highlights that, in Europe, funds from national and international organisations rank ahead of institutions' own budgets as a funding source for international research (Marinoni and Pina Cardona 2024), indicative of Europe's ambition to boost investment in R&D. Governments funded almost one-third (30.3%) of R&D expenditure in European countries in 2021, while the HE sector funded 1.2% (Eurostat 2024). Following the establishment of the European Research Area (ERA) in 2000, a more recent communication highlighted the role of research and innovation in ensuring the EU's prosperity, competitiveness and autonomy (European Commission 2020). The EU Framework Programmes, launched in 1984, have played a significant role in international research activities. The EU's 9th Framework Programme for Research and Innovation 2021–2027 has a budget of €95.5 billion, underscoring the importance of external funding in European research.

The IAU survey also suggests that the teaching/research orientation of HEIs shapes their capacity to secure grants. Predominantly research-focused HEIs are better positioned than predominantly teaching-focused ones, which must rely more on their own resources (Marinoni and Pina Cardona 2024). This reflects the tough reality of competitive project funding, with HEIs and researchers expected to seek external funds to conduct international collaborative research (Slipersæter and Aksnes 2010). However, in Norway, growth in international research collaborations outpaced increases in international research funding, suggesting that factors beyond funding also matter. While the EU Framework Programmes were the most significant funding source, reflecting European internationalism (Altbach and Knight 2007), the international business community and other organisations also contributed, suggesting that market mechanisms, alongside policy initiatives, promote international research (Slipersæter and Aksnes 2010).

2 | Conceptual Underpinning

To capture the complexity of funding for internationalisation, Matei et al. (2015) proposed a framework for HE, comprising

five elements. First are *sources of funding*—who funds it?—including public authorities, institutions, or other organisations. Second are the *types of internationalisation activities* funded—what is funded?—which can be studied alongside underlying motivations. Third is the *scope of the activities* funded—where do funds go?—for example, whether resources are allocated at the institutional, national, or international level. Fourth are *instruments of funding*—how is internationalisation funded?—such as scholarships, formula-based funding, excellence initiatives, or other mechanisms. Finally, *funding strategies* connect the how and what questions, examining the choice and use of instruments in relation to institutional, national, or regional policy objectives.

Although developed for HE, the framework's core contribution is to decompose internationalisation funding into generic questions that apply to any education institution undertaking internationalisation-related activities (e.g., mobility, partnerships, curriculum internationalisation, recruitment, international projects). We therefore use Matei et al.'s (2015) framework as a cross-sector heuristic grid to describe and compare funding patterns, rather than as a model assuming HE-specific governance or revenue structures. We operationalise three dimensions covered consistently by our data across institution types: (i) sources of funding (e.g., own funding, public funding agencies, private donations), (ii) funding instruments (e.g., project grants, mobility grants), and (iii) internationalisation activities (e.g., mobility, partnerships/projects) and stated motivations (improving education quality, reputation or revenue). The same top-level categories are applied to all institution types, while allowing sector-appropriate interpretations of which activities and sources are most salient given different mandates and autonomy levels.

Applying Matei et al.'s (2015) framework beyond HE has a key limitation: its categories (sources, instruments, activities, scope) may be too coarse to capture aspects of governance and institutional autonomy, which are often more constrained in NHE settings. We address this by pairing the framework with an explicit autonomy lens to avoid false equivalences between sectors and to recognise important differences in mission, autonomy and resources. How institutions seek funding and what activities they prioritise is influenced by how HE and NHE institutions define their core purpose to guide strategic choices (Bali and Higgins 2023; Tamassy et al. 2025). Mission statements are normative anchors legitimising operations and guiding decisions. For example, universities articulate multifaceted missions spanning teaching, research and societal relevance. The research mission is distinctive to HE, representing a core component of its identity and the primary marker of international prestige (Bello et al. 2023).

In contrast, NHE institutions (NHEIs) emphasise student learning and local development (Bali and Higgins 2023). Autonomy also differs. While HEIs enjoy ample autonomy and balance academic and market logics (Painsi et al. 2025), NHEIs operate under more centralised regulations and narrower curricular mandates. Finally, HEIs are better equipped to generate revenue and diversify funding, with a growing imperative to become entrepreneurial (Al-Maadeed and Yesuf 2025). They usually have dedicated structures to support internationalisation strategies

(Bulut-Sahin et al. 2023; Tran et al. 2020) and research/project support units that help academics compete for international funding. In NHE, support is less structured and the responsibility for internationalisation often lies with an employee alongside other responsibilities.

Bearing these differences in mind, this paper identifies funding patterns and their influence on the nature of internationalisation in Portuguese education institutions.

3 | Methods and Data

This study is part of a larger project, commissioned by the Erasmus+ National Agency in Portugal, to evaluate the internationalisation of the Portuguese education sector. We employed a convergent parallel mixed-methods design (Creswell and Creswell 2022), combining a survey with semi-structured interviews. The survey provided breadth and system-wide mapping across a range of internationalisation-related aspects, as detailed below, while the interviews provided depth on the same topics.

Our study universe comprised all Portuguese education or training institutions. We consolidated the national register of non-tertiary schools, the *Direção-Geral das Estatísticas da Educação e da Ciência's* (DGEEC) list of HEIs, and the list of all 2014–2020 Erasmus+ beneficiaries. After removing duplicates, a final list of 4665 unique organisations remained.

The survey instrument was developed following a literature review, informed by existing instruments capturing organisational internationalisation practices (including the EAIE barometer) and refined through dialogue with the commissioning body. It covered various internationalisation aspects, including understandings, objectives, activities, formal strategies, challenges and funding. Two pre-tests helped improve the wording (reducing ambiguity), response categories (covering typical organisational situations) and branching logic (reducing burden and avoiding irrelevant paths). Implemented in LimeSurvey using organisation-specific links, fieldwork ran from March to April 2023, yielding 747 valid responses (a 16% response rate). To address our research questions, we primarily draw on factual, single-item indicators from the funding section of the questionnaire (e.g., use of specific funding sources; approximate budget share allocated to internationalisation).¹

Quantitative analysis proceeded in two steps. First, we produced descriptive statistics by sector. Second, we estimated Poisson regression models for two count outcomes: the number of external funding sources and the number of internationalisation activities, controlling for sector, organisational size and public/private status. This enabled us to map sectoral patterns in funding and internationalisation activities and test whether differences persist once key organisational characteristics are considered. We used Poisson models because both outcomes are non-negative counts.

The respondent profile (Table 1) shows that two-thirds (66.7%) are from the School Education sector, with a majority from public institutions (62.3%). The definition of NHEIs follows the official categorisation available in the Erasmus+ Programme Guide

TABLE 1 | Distribution of responding organisations by sector (rounded to the tenths).

Sector	Frequency
School education	66.7%
Vocational education and training	41.5%
Adult education	19.8%
Higher education	9.2%
Total (N)	747

Note: Organisations could be active in more than one sector. Percentages indicate the share of responding organisations selecting each sector and may sum to more than 100%.

(European Commission 2025): School Education covers general education at the pre-primary, primary or secondary levels; Vocational Education and Training (VET) includes initial and continuing vocational education and training, whereas Adult Education includes organisations providing formal, informal and non-formal education for adults.

The sample broadly reflects the national distribution of Erasmus+ beneficiaries by sector and region and includes over half of all organisations that coordinated a project between 2014 and 2020. This assessment is based on comparisons with administrative data on Portuguese participation in Erasmus+ projects (Tables 2 and 3).

For the interviews, we selected participants to reflect the diversity across education and training institutions (levels and activity areas), including business associations and local authorities. We contacted organisations via addresses indicated on their websites or through previous contacts of the research team. In the event of a lack of response or unavailability, we contacted another organisation of the same type. Invitations for interviews were emailed to three private colleges, three public schools or school clusters, three vocational training entities, two business associations, four local government authorities, three public HEIs and four private HEIs. The set of participants comprised one private school, two public school clusters, two vocational schools, one business association, one local government authority (responsible for education) and four HEIs (one public university, one private university, one public polytechnic, one private polytechnic). In total, we conducted eleven semi-structured interviews with organisational representatives in management or responsible for international activities. Interviews took place between December 2022 and April 2023, lasting approximately one hour each.

The protocol mirrored the survey themes, drawn from relevant literature on the internationalisation of education (objectives, activities, strategies, funding, challenges). This study reports on the funding dimension. After securing written informed consent, sessions were recorded, transcribed, and anonymised. Transcripts were encrypted and analysed thematically in MaxQDA, using a coding frame that combined deductive nodes from the interview guide (funding was one node) with inductively generated categories. The funding-related categories (sources, funding activities, and sufficiency) and their codes are shown in Figure 1.

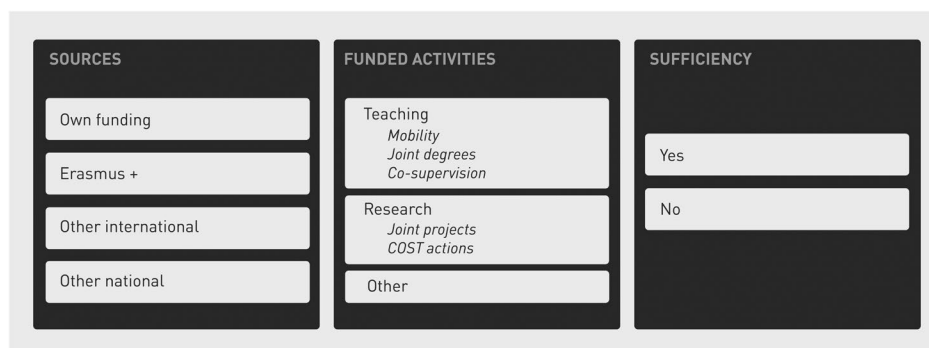
TABLE 2 | Comparison of the frequency of activity sectors of the organisations in the sample and in the Portuguese projects that obtained funding from the Erasmus+ 14–20 Programme (rounded to the tenths).

Sector	Sample		Funded projects	
	Coordinators	Partners	Coordinators	Partners
Higher education	11.6%	8.3%	12.8%	7.4%
School education	37.5%	47.3%	45.7%	54.6%
Adult education	16.9%	14.3%	13.8%	12.7%
Vocational education and training	34.0%	30.1%	27.8%	25.2%
Total (N)	491	784	900	432

Note: Percentages are calculated within each column (Coordinators/Partners) for the sample and funded projects separately.

TABLE 3 | Comparison of the frequency of regions of the organisations in the sample and in the Portuguese projects that obtained funding from the Erasmus+ 14–20 Programme (rounded to the tenths).

Region (NUTS II)	Sample		Funded projects	
	Coordinators	Partners	Coordinators	Partners
North	39.6%	39.6%	36.0%	33.1%
Centre	20.4%	20.8%	19.6%	25.1%
Lisbon Metropolitan Area	22.6%	23.6%	26.5%	31.0%
Alentejo	8.5%	8.1%	7.1%	6.3%
Algarve	4.7%	3.6%	3.9%	1.6%
Autonomous Region of Madeira	1.9%	2.8%	4.2%	1.9%
Autonomous Region of the Azores	2.2%	1.5%	2.7%	1.1%
Total (N)	491	784	805	378

**FIGURE 1** | Themes and codes for the funding of internationalisation.

4 | Results

Guided by Matei et al.'s (2015) framework, the results are organised around the research questions. The first section examines funding sources and instruments, addressing the first sub-question. The second section analyses motivations, activities and funding, addressing the second sub-question. Throughout both sections the third sub-question is addressed by comparing patterns across sectors. Survey results are complemented with interview statements to illustrate and deepen our understanding of general trends.

4.1 | Funding Sources and Instruments

We analyzed the survey data separately for HE and NHE and, for NHE, distinguished School Education, Adult Education and VET. HEIs report a higher average budgetary allocation to internationalisation (average 15%; median 10%), suggesting greater prioritisation and financial capacity. In contrast, School Education and VET allocate less, with averages around 14% and much lower medians (2% and 5%, respectively). Adult Education shows wide dispersion, with a high average (19%) but a low median (6%), suggesting outliers drive the average. NHEIs,

TABLE 4 | Percentage of organisations, by sector, using each funding source to pursue internationalisation objectives from 2014 to 2020 (rounded to the tenths).

Sector	Own funding (1) (%)	Erasmus+ (%)	Other EU funding or cofunding (2) (%)	Other public sources (3) (%)	Private foundations (%)	Other private sources (4) (%)	Total (N)
Higher education	80.4	98.2	46.4	0.0	16.1	1.8	56
Non higher education	36.1	92.2	19.6	2.4	3.4	1.0	587
School education	30.9	91.7	16.0	2.8	3.1	1.4	424
Adult education	50.0	95.4	30.0	1.5	8.5	1.5	130
Vocational education and training	44.0	93.8	28.6	1.1	3.7	1.1	273
All sectors	40.0	92.7	21.9	2.2	4.5	1.1	643

Note: Since the sources of funding indicated are exhaustive, only the answers that identified at least one were considered. (1) Own funding—Institution-managed budgetary resources; for public institutions, this includes core public funding (block grant) plus own-source income (e.g., tuition/fees incl. international, services/consultancy). (2) POISE—Social Inclusion and Employment Operational Programme; POCH—Human Capital Operational Programme; POCI—Competitiveness and Internationalisation Operational Programme; OP—Operational Programmes; Horizonte 2020, others. (3) Central and local authorities. (4) Private donations.

TABLE 5 | Average of the (reported) approximate budget weight of funding sources for the pursuit of the internationalisation objectives of organisations by sector (rounded to the tenths).

Sector	Own funding (%)	Erasmus+14–20 (%)	Other external sources (%)	Total (N)
Higher education	23.1	67.3	9.6	44
Non higher education	10.8	83.6	5.6	504
School education	9.2	86.4	4.4	370
Adult education	14.3	74.5	11.2	114
Vocational education and training	11.7	81.6	6.8	240
All sectors	11.8	82.3	5.9	548

Note: Answers that did not add up to 100% were ignored.

particularly in School Education, appear more constrained in their funding for internationalisation.

Regarding funding sources, almost all institutions across all sectors have benefited heavily from Erasmus+ funding (Table 4). However, HEIs diversify more, leveraging ‘own funding’ (80.4%) and other EU sources (46.4%) much more often than NHEIs (36.1% and 19.6%, respectively).

Table 5 reinforces that Erasmus+ is not only the most frequent but also the dominant funding source, accounting for 67.3% of the HE budget and an even higher 82.3% across NHE sectors. HEIs contribute more of their own funding (23.1%) than NHEIs, where average own funding is significantly lower (9.2% for School Education and 11.7% for VET). Other external sources play a minimal role across sectors, with slightly higher contributions in Adult Education (11.2%). This illustrates how a single source can shape an entire sector’s activity profile (Matei et al. 2015).

These patterns indicate greater reliance on single funding sources in NHE, potentially increasing vulnerability to policy or budgetary changes. NHE sectors, particularly School Education,

may lack the resources or expertise to access diverse funding sources, limiting their flexibility and scalability in internationalisation efforts.

Interviews echo these patterns. The representatives of NHEIs mostly referred to Erasmus+, described by the representative of a vocational cooperative school as ‘a huge reference in the panorama of opportunities that are available (...) from what we know, from where we move’. At the same time, ‘the other programmes are small programmes, little dots around this huge circle’. Limited size, experience and internal capacity were cited as constraints: ‘we know that they exist and we are trying to create conditions so that we can also submit applications in the future’ (Business association).

To make up for a lack of funding, a private school, for example, transferred the mobility costs for exchanges outside Erasmus+ to families:

‘We have done different projects, but without funding. That is, we did bilateral projects, some already, with an Italian school. We also did a project involving a

youth agency in Poland... but this kind of project we always did by passing on the costs to the parents. I am not aware of any other sources of funding apart from the national Erasmus+ agency.

(Private School)

An exception to the dominance of Erasmus+ was offered by the vocational cooperative school, which mobilised funding from projects whose execution involved international partnerships, although the main purpose was not internationalisation (e.g., Active Citizens Fund/Gulbenkian Foundation, European Voluntary Service, European Economic Area (EEA) Grants). The following statement refers to a network aiming at social and professional integration of young people at risk, which also results in internationalisation:

So we are present through a Mediterranean network [...] in North Africa, also in the Middle East, in Jordan and so on. We also have strong collaborations with Brazil and with Japan, interestingly, because there are some universities in Japan with whom we collaborate regularly. Anyway, additionally, for example [...] there are some processes that evidently are not yet quite consolidated, but in Africa, for example, with some Portuguese-speaking countries, such as Cape Verde and even São Tomé and Príncipe, some collaboration processes are being developed.

(Social Cooperative School)

HEIs, in contrast, used a broad range of funding sources in a creative and complementary way to support mobility, research projects and capacity development. It is noteworthy that only competitive funding instruments were referred to. For research, international funding instruments, such as Horizon Europe, Marie Curie Actions, COST networks, La Caixa Foundation, etc. were mentioned:

This year we had a project approved by the La Caixa Foundation, which involves research with Spanish partners. We have been involved in one or another application through one of our teachers for Horizon Europe projects.

(Private Polytechnic)

National funding sources were also mentioned by HEI representatives, who again employed competitive funding instruments such as the COMPETE programmes, the Recovery and Resilience Plan and the POCH. These streams generally target innovation and institutional transformation and, although nationally funded and focused on specific aspects such as institutional branding or pedagogical innovation, the interviewees highlighted that they also enable the institution's internationalisation, involving partnerships with foreign institutions:

For example, there are those COMPETE projects, Portugal 2020... we are in two [...] And they are national projects, but with European funds, of course, but which privilege the internationalisation of universities,

basically the possibility for universities to [...] enhance actions in recruitment fairs, market research missions [...] And then there are other projects that, not being necessarily internationalisation, also allow internationalisation. For example, I am thinking about POCH projects, we now have two or three recent ones [...] related to pedagogical innovation, whose objective is not exactly internationalisation, but within the project itself there are activities for establishing partnerships with foreign universities and sharing good practices, visits to foreign universities.

(Private University)

Centralised Erasmus+ actions managed directly by the European Commission (Capacity Building, Erasmus Mundus Joint Masters and policy development support) were mentioned almost exclusively by HEIs, suggesting limited awareness beyond HE, despite their capacity building component:

We also have a joint master, a capacity building, but they are different actions and, therefore, the funding has very different purposes. We would like departments to participate more because if teachers and research groups manage to create synergies and dynamics for this type of project, it will be easier to grow. For example, right now, in this last call, a department submitted a project, a capacity building project [...]. To basically collaborate with the University of São Tomé and Príncipe.

(Public University)

Several interviewees reported using own funding for different internationalisation activities, such as international promotion or the co-financing of mobility activities:

We have two events, one is the [name of the event], which is for training non-teaching staff, and the other is the International Week, which is basically for marketing the institution. These events, although people pay a symbolic amount (...), are also financed by the institution itself, because there are lunches, dinners, trips around the region, coffee breaks.

(Public Polytechnic)

Survey responses on the number of external funding sources by sector confirm that HEIs use the widest range of funding sources (average of 1.7; maximum of 6). In contrast, NHE sectors report averages close to 1.0, with fewer institutions reaching higher counts. This highlights the relatively limited funding diversification in NHE sectors compared to HE. Still, the median is 1.0 across sectors, underscoring the centrality of Erasmus+ funding.

Poisson regressions on the number of external funding sources illuminate institutional characteristics associated with a higher number of external funding sources (Table 6). HEIs draw on roughly 72% more external sources than School-Education providers and 49% more than NHEIs overall. Regardless of sector,

TABLE 6 | Regression results for the number of external funding sources (Poisson).

Explanatory variables	Number of external funding sources	Number of external funding sources
Higher education	0.543*** (0.131)	0.399*** (0.125)
School education	— —	— —
Adult education	0.169* (0.0937)	— —
Vocational education and training	0.202** (0.0809)	— —
Number of staff (100s)	0.0414*** (0.0114)	0.0450*** (0.0111)
Number of students (100s)	−0.000811* (0.000422)	−0.000834** (0.000416)
Private	0.0486 (0.0831)	0.103 (0.0818)
Intercept	−0.131** (0.0633)	−0.0140 (0.0519)
Number of observations	661	661
Pseudo R ²	0.0332***	0.0248***

***1%.

**5%.

*10%.

staff size matters: each additional hundred employees is associated with a modest but significant rise in diversification, whereas student numbers have a small, negative effect. A positive staff coefficient and a negative student coefficient indicate that organisational capacity, rather than enrolment pressure, might drive the number of funding sources.

These findings suggest structural advantages for HEIs, even after controlling for size, perhaps due to greater capacity, expertise, and support structures in navigating funding opportunities (Bulut-Sahin et al. 2023). The modest positive effects for VET and Adult Education vis-à-vis School Education suggest a potential for improvement with targeted support that addresses their specificities. These results indicate the need for capacity-building initiatives in NHEIs to improve access to external funding, particularly for smaller organisations with fewer staff resources.

In fact, across all sectors, the most significant perceived barriers to internationalisation include a lack of financial resources (3.49 in HE, 3.66 in NHE, on a scale of 1–5), a lack of human resources (3.67 in HE, 2.90 in NHE), and high competition for external funding (3.60 and 3.48, respectively). HEIs also cite bureaucratic

barriers (3.25), reflecting systemic inefficiencies and indicating the complexity of accessing and managing a diverse funding portfolio (Liu et al. 2023). In NHEIs, the lack of linguistic competences (2.97) also stands out.

Overall, results show disparities in the allocation, sources, and diversification of funding for internationalisation. HEIs allocate larger budget shares to internationalisation, mobilising diversified sources. In contrast, NHEIs allocate less of their budgets to internationalisation, relying predominantly on Erasmus+ and struggling with diversification.

4.2 | Motivations, Activities and Funding

The second component of Matei et al.'s (2015) framework concerns activities and what they reveal about underlying motivations. Survey findings show clear differences between HE and NHE (Table 7), consistent with their respective missions (Bali and Higgins 2023; Tamassy et al. 2025).

The most common drivers for HEIs are preparing students for a global world (85.0%) and improving research and development (81.7%), reflecting HE's teaching and research dimensions. HEIs also cite greater competitiveness (28.3%) almost twice as often as NHEIs. In contrast, NHEI's dominant motivations are preparing students for a global world (77.4%) and improving the quality of education services (75.0%), indicating a primary concern with learning outcomes. Nearly half of NHEIs (49.2%) mention staff training, a relatively marginal motivation among HEIs (8.3%), which have invested more in the professionalisation of international offices. NHEIs also mention serving the local community three times more often than HEIs, reflecting their local embeddedness (Bali and Higgins 2023).

Priority activities also differ between HEIs and NHEIs. While a high proportion in both sectors value student mobility (88.3% and 71.0%), participation in international networks (91.7% and 64.5%), and development of international partnerships (83.3% and 62.4%), HEIs prioritise a wider array of activities, for example, publication of research in foreign journals (76.7%), joint programmes (56.7%), and internationalisation of curricula (38.3%), reflecting their broader missions (Tamassy et al. 2025). Activities such as recruiting international employees or development cooperation are rarely priorities in NHE sectors, likely reflecting not only resource limitations but a local and regional orientation and a narrower scope of internationalisation goals.

The interviews corroborate that dedicated funding instruments enable HEIs to pursue activities aligned with their various missions, whereas in NHEIs, mobility is almost the only internationalisation activity. In HEIs, mobility stands out within the teaching mission. While Erasmus+ is perceived as the major European programme, the interviewees highlighted other programmes, with 'a much smaller financial significance', such as Fulbright grants for teachers and researchers, Santander grants that allow establishing links with South American countries, and Science without Borders grants for Brazilian students. The Iacobus Programme grants, fostering cooperation between Galicia and Northern Portugal, were also mentioned for teaching and administrative staff.

TABLE 7 | Motivations for internationalisation of organisations, by sector (rounded to the tenths).

	Higher education	Non-higher education	School education	Adult education	Vocational education and training
Improving the quality of education services	55.0%	75.0%	80.1%	76.4%	76.1%
Preparing students/trainees/learners for a global world	85.0%	77.4%	81.3%	70.3%	87.4%
Employee training	8.3%	49.2%	51.0%	50.0%	47.4%
Improving the institution's research and development	81.7%	12.8%	10.2%	16.9%	12.3%
Increase the institution's competitiveness	28.3%	14.4%	8.8%	18.2%	20.6%
Improve the institution's reputation	8.3%	15.6%	12.9%	16.2%	18.7%
Obtaining financial or tax benefits	8.3%	2.3%	1.8%	4.7%	2.9%
Serving the local community better	8.3%	29.1%	28.1%	37.2%	25.2%
Responding to demographic change	8.3%	2.9%	2.8%	2.0%	2.3%
Total (N)	60	687	498	148	310

Additionally, within teaching, joint degrees with foreign institutions or co-supervision of doctoral and post-doctoral studies were mentioned:

I would also add that, currently and for some time now, we have also had collaborations with various foreign universities. I would say with a special focus, perhaps here, in Brazil, at the level of doctoral or post-doctoral programmes (...) the Polytechnic [name], besides already having two doctoral programmes in association, (...) guides students in the context of doctoral and post-doctoral programmes.

(Public Polytechnic)

Regarding research, the interviewees mentioned participation in research projects, comprising a diversity of activities at an international level (events, dissemination, knowledge creation, international partnerships) and COST actions:

And so we are involved in dozens of projects, many of them associated with the research units themselves and often involving teachers and researchers who effectively participate internationally, whether in the context of scientific events or in the interaction with other partners and peers, for the development of the project and the presentation of concrete results.

(Public Polytechnic)

...if we think about research, which is also a vehicle of internationalisation, (...) we have and had many research projects, for example Horizon 2020, now in Horizon Europe, which started in 2021, COST..

(Private University)

In contrast, NHEIs primarily focus on mobility for learners and staff, with Erasmus+ as the key driver. The following accounts exemplify the variety of actors that benefit from mobility in the NHE sector:

In the field of adult education, we have mobility opportunities for staff, that is, for members of organizations that offer vocational courses, allowing them to update their knowledge (...) whether in digital skills, communication skills, or foreign languages (...) Then, at the level of adult learners, we also have mobility opportunities (...) focused on digital, linguistic, and basic 'know-how' skills.

(Local government authority)

In recent years, Erasmus projects have mainly taken place in the Pre-School Education Department. However, we had already invested in vocational education, and this year we are once again investing in vocational training. We have hosted participants

from other countries (...) for training as well, mostly teachers and early-childhood educators.

(Public School Cluster 2)

Institutions have proven creative in carrying out diverse activities and in seeking alternatives to Erasmus+. For example, one public school representative mentioned that the school acted as an ambassador of the European Parliament and as an associated school of UNESCO:

We are a European Parliament School (...) The European Parliament School has lots of competitions, which are publicised. So you have the chance, you know, throughout the year (...) to participate in contests, in activities (...) And, therefore, every year we have groups, once or twice, of twenty-something students, participating in activities of the European Parliament.

(Public School Cluster 1)

Overall internationalisation appears transversal across HE missions—teaching, research and institutional transformation and innovation—supported by tailored and diversified

funding and institutional capacity. In contrast, NHEI's pursuit of internationalisation is rather restricted, channelling efforts into developing skills and intercultural competences, mostly through mobility and with heavy reliance on Erasmus+ funding. Due to their feeble internationalisation structures, they pursue easily fundable priorities, such as student and staff mobility, while limiting their engagement in more complex activities, such as institutional development through international cooperation. This also raises questions about the extent to which NHE sector's understanding of internationalisation may be framed by existing funding sources. Would they seek internationalisation through different activities if other funding streams were available and accessible? Supporting NHEIs with capacity-building and funding diversification could help expand their scope of internationalisation, enabling participation in high-impact activities.

Poisson regressions confirm that HEIs engage in significantly more internationalisation activities (Table 8): about 62% more than School Education and 48% more than NHEIs in general. Organisations offering VET undertake 13% more activities than School Education, while Adult Education shows a weaker, less consistent link. Every additional external funding source is associated with about 17% more activities, underscoring the

TABLE 8 | Regression results for the number of internationalisation activities (Poisson).

Explanatory variables	Number of internationalisation activities	Number of internationalisation activities
Higher education	0.484*** (0.0660)	0.395*** (0.0621)
School education	— —	— —
Adult education	0.0719 (0.0471)	— —
Vocational education and training	0.124*** (0.0398)	— —
Number of external funding sources	0.151*** (0.0227)	0.169*** (0.0222)
Number of workers (100s)	0.00846 (0.00601)	0.00926 (0.00595)
Number of students (100s)	-2.68e-05 (9.25e-05)	-3.01e-05 (9.20e-05)
Private	0.00793 (0.0407)	0.0359 (0.0401)
Intercept	1.237*** (0.0364)	1.283*** (0.0340)
Number of observations	661	661
R ² (Pseudo-R ²)	0.0624***	0.0575***

***Significant at: 1%.

importance of diversified funding for broader internationalisation efforts.

Table 9 details the sources, whether own funds, Erasmus+, or other external funding, utilised to support the various

internationalisation activities respondents declare to undertake. Erasmus+ is a dominant source, particularly for student mobility (89.5% in HE and 84.2% in NHE), international staff mobility (87.3% and 79.9%) and development of partnerships (74.5% and 72.2%). HE relies more heavily on own funding for

TABLE 9 | Sources of funding for a selection of internationalisation activities (rounded to the tenths).

Internationalisation activities	Own funding		Erasmus+		Other external	
	HE	NHE	HE	NHE	HE	NHE
International mobility or study exchanges of students, trainees or apprentices	42.1%	18.5%	89.5%	84.2%	8.8%	5.0%
Total (N)	57	519	57	519	57	519
Attracting international students, trainees or apprentices	78.9%	34.5%	15.8%	38.8%	21.1%	11.5%
Total (N)	57	139	57	139	57	139
Recruitment of foreign employees	63.0%	56.1%	14.8%	28.1%	11.1%	7.0%
Total (N)	27	57	27	57	27	57
International (temporary) staff mobility (for training or teaching)	23.6%	13.7%	87.3%	79.9%	3.6%	4.3%
Total (N)	55	437	55	437	55	437
Training employees for internationalisation	52.4%	30.7%	52.4%	64.0%	14.3%	8.7%
Total (N)	21	150	21	150	21	150
Internationalisation of curricula	64.3%	44.4%	57.1%	46.3%	7.1%	3.7%
Total (N)	28	54	28	54	28	54
Distance, online or hybrid learning	78.8%	58.0%	30.3%	25.4%	6.1%	14.5%
Total (N)	33	138	33	138	33	138
Creation of foreign language training opportunities	75.0%	37.5%	30.6%	48.7%	2.8%	9.8%
Total (N)	36	224	36	224	36	224
Improve the organisation's position in relevant rankings	62.5%	43.1%	37.5%	33.9%	16.7%	11.9%
Total (N)	24	109	24	109	24	109
Creation of joint programmes	53.7%	37.6%	63.4%	55.6%	4.9%	6.8%
Total (N)	41	133	41	133	41	133
Development of partnerships with institutions in other countries (institutional transformation and innovation, sharing of good practices, etc.)	52.7%	27.1%	74.5%	72.2%	14.5%	8.8%
Total (N)	55	454	55	454	55	454
Participation in projects and networks with partners in other countries	59.6%	27.5%	70.2%	71.2%	19.3%	9.5%
Total (N)	57	476	57	476	57	476
Publication of research in foreign journals with partners from other countries	79.6%	39.5%	26.5%	53.5%	24.5%	4.7%
Total (N)	49	43	49	43	49	43
Cross-border education (franchising, twinning, campus abroad)	40.0%	35.0%	0.0%	48.7%	10.0%	10.3%
Total (N)	10	117	10	117	10	117
Development cooperation (support to other countries and students with fewer training offers and possibilities)	59.5%	41.7%	32.4%	35.2%	2.7%	14.8%
Total (N)	37	108	37	108	37	108

certain activities, such as publication of research in foreign journals (79.6%), signalling research output as an indicator of international prestige; attracting international students (47.4%), telling of the importance of international recruitment as a source of revenue; and internationalisation of curricula (64.3%) in response to an ever more culturally diverse student body. In contrast, NHEIs depend almost exclusively on Erasmus+ for core activities such as mobility and partnerships, with minimal use of their own or other external funding sources.

Taken together, these findings support the view that funding availability influences internationalisation activities (Matei et al. 2015) and that institutional missions and capacities mediate this influence. HE benefits from greater funding diversification and engages in diverse activities, supported by substantial internal resources, which aligns with the IAU survey findings (Marinoni and Pina Cardona 2024). NHEIs rely more on Erasmus+ and allocate a smaller share of their budgets to internationalisation. The heavy reliance on a single funding source, primarily for student and staff mobility, highlights NHEI's vulnerability to policy or funding shifts. Expanding access to external funding sources, ensuring their relevance to NHEIs and improving their capacity to allocate internal budgets strategically might enable the sector to engage in a broader range of impactful internationalisation activities beyond those directly supported by Erasmus+.

5 | Discussion and Conclusion

This study investigated the financial architecture underpinning internationalisation across Portugal's education system, moving beyond the traditional focus on HE. Guided by the research questions on funding sources, the relationship between funding, motivations and activities as well as sectoral differences, and drawing on a nationwide survey of 747 institutions and 11 interviews, we showed that funding patterns are markedly stratified. Rather than a single approach, the evidence points to a two-tiered system of internationalisation, shaped by the availability and diversity of financial resources.

The first tier, comprising HEIs, reflects the existing literature on the variety of internationalisation pursuits in HE (Altbach and Knight 2007; Marinoni and Pina Cardona 2024). HEIs draw on a high degree of autonomy (Painsi et al. 2025) to combine funding sources in ways that match the breadth of their missions (Tamassy et al. 2025). HEIs in Portugal operate with diversified funding portfolios, combining internal budgets, Erasmus+, competitive EU research funding and national programmes, supported by professionalised research support and internationalisation offices (Bulut-Sahin et al. 2023). HEIs' motivations are geared towards global competitiveness and research and development—goals that require substantial and flexible investment. Financial autonomy and funding diversity fuel ambitious internationalisation strategies, as national and European funding bolster institutional visibility and partnerships abroad, testifying HEIs' entrepreneurial attitudes (Al-Maadeed and Yesuf 2025). Consequently, their activities extend beyond mobility to international student recruitment, joint degrees and

participation in global research networks. Yet, the patchwork of the funding landscape and reliance on competitive instruments suggest a fragmented and uncertain environment, mirroring Liu et al.'s (2023) findings and underscoring the challenge of sustaining internationalisation costs (Marinoni and Pina Cardona 2024). By connecting the literature on internationalisation and funding, our study shows how diverse funding sources and strategic orientations, combined with autonomy, place HEIs in a favourable position to embed internationalisation across missions through varied activities.

The second tier, consisting of NHEIs (School, Adult and Vocational Education) represents this paper's most significant contribution, filling a major gap in the literature, as internationalisation outside HE is scarcely studied, let alone in relation to funding. These institutions rely heavily on a single external source, Erasmus+. While Erasmus+ is a powerful engine for internationalisation, this single-source model channels NHE internationalisation primarily towards student and staff mobility. This aligns with motivations focused on improving educational quality (Bali and Higgins 2023), here understood as preparing students for a global world. However, their capacity to act and pursue other objectives relevant to their identity and mission, such as internationalising the curriculum or building deep institutional partnerships beyond mobility schemes, is constrained by the parameters of accessible funding and by internal capacity. This reliance creates a dual vulnerability: first, to shifts in Erasmus+ priorities or budget, and second, to limitations on their ability to engage in more complex, resource-intensive activities. Viewed through Matei et al.'s (2015) lens, the HE–NHE contrast involves not only divergent sources and instruments, but also distinct activities, motivations and scopes, confirming the framework's explanatory reach.

Answering our central research question, internationalisation in Portuguese education institutions follows a two-tiered model that foregrounds the relationship between funding availability and internationalisation activities. The primary difference between sectors lies in funding diversification and the scope of activities, which reflect their differing rationales and capabilities. For HEIs, funding is a strategic tool for global competitive advantage. For many NHEIs, funding is a lifeline enabling basic international experiences. Although financial and human resources constrain the entire system, they are more pressing for NHEIs, underscoring a structural inequality in the capacity for internationalisation within the Portuguese education system.

Portugal reflects a broader European pattern. National Erasmus+ evaluation reports for Slovakia, the Netherlands, and Spain point to a fragile funding system for internationalisation across national education sectors (Brestenská 2024; NRO 2024; SEPIE 2023). Across these cases, Erasmus+ plays a dominant role, while limited resources and implementation capacity constrain the number of supported projects. Where funding diversification exists, it is associated with institutional scale, accumulated expertise, and national co-financing mechanisms that remain largely concentrated in HE. Although synergies with other EU or national funds are encouraged, national reports converge on the practical difficulty of operationalising multi-source funding, which remains the exception.

These findings make three contributions. Conceptually, they bridge internationalisation with funding, showing that funding sources and instruments influence how and why institutions internationalise, substantiating the framework of Matei et al. (2015). Empirically, they provide the first system-wide map of funding configurations beyond HE, revealing blind spots that aggregated sector-level statistics obscure. Practically, the study identifies actionable points for policymakers: first, targeted co-financing instruments to encourage diversification in NHE sectors; second, capacity-building to help smaller institutions identify and secure alternative funding sources (national, philanthropic or other European funds, as highlighted by some of the more resourceful interviewees); third, a reconsideration of Erasmus+ rules to reduce administrative hurdles that disproportionately burden under-resourced organisations.

The discrepancy between HE and non-HE sectors may have downstream consequences for the former. Since other sectors feed into HE, constraints on NHE internationalisation reduce students' early exposure to global perspectives, possibly affecting later experiences and learning in increasingly diverse environments. Mapping both sectors also contextualises apparent HE exceptionalism. The NHE findings highlight that HEIs' relative success is due not just to academic culture but to funding diversity and structural autonomy. The NHE mirror also suggests that the breadth of HE internationalisation may be a precarious privilege: if funding diversification declines, HEIs could regress towards the more limited models observed in NHE. Finally, the findings point to a potential role for HEIs as local mentors to under-resourced NHEIs, adding a potential dimension to the third mission: helping to bridge sectoral inequality.

Some limitations temper these conclusions. The cross-sectional design cannot capture how funding portfolios evolve. Future research may adopt longitudinal approaches and extend the analysis to other EU countries to test the generalisability of the diversification–activity link. Although this study suggests that an association exists between available funding and internationalisation activities, it raises the question of whether funding effectively dictates how institutions pursue internationalisation, thereby shaping institutional identity. Additionally, qualitative comparative case studies could unpack context-dependent causal mechanisms: does a broader funding base prompt wider activity, or do ambitious activity agendas attract more funders? We also know little about internal matching costs (staff time, administrative overheads, co-financing) and whether these costs drain resources from the very missions (teaching/research) they are meant to support. Additionally, the internal governance and micro-politics of how HEIs decide which funds to pursue could illuminate how they approach and operate with diverse funding portfolios. Finally, although Liu et al.'s systematic review (2023) mentioned private philanthropic donations and public-private partnerships as funding sources, the role of these actors is a blind spot in the European context. Studies are needed to determine whether and how private actors (e.g., philanthropic foundations or alumni) play a role in internationalisation.

Despite these caveats, we demonstrate that funding is not a neutral facilitator of internationalisation: it can influence its nature, scope and ambition. By extending the analytical lens

to the under-researched NHE sectors, this study provides a more complete and nuanced understanding of how internationalisation is enacted. The Portuguese case reveals a system of contrasts, in which the financial capacity and autonomy of HEIs enable a strategic and varied approach, whereas financial constraints on NHEIs foster a more limited, mobility-centric model. Recognising and addressing the sectoral inequities documented here is therefore indispensable for countries aiming to internationalise education in ways that are both ambitious and equitable.

Author Contributions

Cristina Sin: conceptualization, investigation, writing – original draft, methodology, writing – review and editing, formal analysis. **Diogo Lourenço:** conceptualization, investigation, writing – original draft, methodology, writing – review and editing, formal analysis, funding, project management. **Cosmin Nada:** methodology, validation, investigation, data curation, formal analysis. **Joyce Aguiar:** data curation, formal analysis, validation, methodology, investigation. **Luis Fernandes:** methodology, validation, investigation, data curation, formal analysis. **Orlanda Tavares:** methodology, validation, investigation, data curation, formal analysis. **Ricardo Biscaia:** methodology, validation, investigation, data curation, formal analysis, project management.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Endnotes

¹ Internal-consistency reliability metrics (e.g., Cronbach's alpha) are not directly applicable to most key variables reported. We strengthened reliability through instrument standardisation (closed-ended formats where possible), iterative pre-testing, and appropriate routing of the online questionnaire.

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