

Transnational Educational Migration: A Comparative Review of Policy Responses to Internationalisation in Germany and the Netherlands

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Abstract

Internationalisation of higher education has become increasingly connected with international student mobility, migration and labour-market policy. This study examines how Germany and the Netherlands responded to these developments. Although both countries operate within a shared European higher education and migration environment, their policy responses have developed in different directions. A similar system design was used to compare these two cases. The analysis draws on a corpus of 37 legislative, parliamentary and policy documents and combines descriptive statistics, text-as-data analysis and critical discourse analysis based on Fairclough's three-dimensional framework. Policy documents were examined across four broad policy orientations; attraction, management, retention and labour and fourteen related policy instruments. The comparison shows that Germany has developed a comparatively expansive approach to internationalisation. International students are increasingly viewed not only as participants in higher education but also as a potential source of skilled labour in response to demographic change and workforce shortages. The Netherlands has followed a more managed and selective approach. While the academic and economic value of internationalisation continues to be recognised, greater attention has been given to housing pressures, institutional capacity, language and access for domestic students. These differences suggest that the policy divide cannot be reduced to a simple distinction between open and restrictive systems. Instead, national responses reflect different combinations of labour-market needs, demographic pressures, institutional capacity and domestic social priorities. The study highlights the need for internationalisation policies that balance educational openness with sustainable institutional capacity, labour-market needs and broader social considerations.

Keywords: Transnational Educational Migration, International Student Mobility, Internationalisation of Higher Education, Comparative Policy Analysis, Policy Divergence, Policy Discourse, Germany, The Netherlands.

1. Introduction

International student mobility has become a prominent feature of contemporary higher education and an increasingly prevalent form of transnational migration. Students move across borders for several reasons, including access to specialised or higher-quality programmes, international academic experience, better employment prospects, and the opportunity to build longer-term careers abroad. As higher education has become more internationalised, student mobility has also become closely associated with globalisation, international labour mobility, and competition for skilled human capital (Luo et al., 2023). A systematic review by Gutema et al. (2023) has recognised that host-country policies, tuition fees, scholarships, visa regulations, employment opportunities, institutional characteristics, and social and cultural conditions are vital to students' decisions when choosing a study destination abroad.

International students, meanwhile, also generate significant academic, social, and economic benefits for host countries. They contribute to cultural diversity, knowledge exchange, research collaboration, and local economic activity. More importantly for policymakers, international education can provide a pathway into the host-country labour market. International graduates who remain after completing their studies can further continue to contribute through employment, taxation, and social security contributions. However, a rapidly growing international enrolment creates challenges. A sharp expansion can place pressure on accommodation, institutional resources, teaching capacity, public infrastructure, and student-support systems. Such developments show why international student mobility has increasingly become a public-policy issue rather than merely an institutional strategy.

With a significant increase in international education migration, the policy environment concerning international student mobility has changed considerably. Earlier approaches to internationalisation often focused on attracting students, expanding English-taught programmes, developing international partnerships, and strengthening the global competitiveness of universities. International students were largely viewed as contributors to academic internationalisation, institutional reputation, and economic growth.

The rising volume of mobility has complicated this approach. Governments now face questions not only about how to attract international students but also about how to regulate, support, integrate, and potentially retain them. Luo et al. (2023) argue that research on international student mobility increasingly needs to consider the wider consequences and changing contexts of student movement rather than focusing only on individual motivations. Predictably, this shift has become particularly visible in countries experiencing rapid growth in international enrolments. Concerns about accommodation shortages, institutional capacity, language, public infrastructure, and access insecurity for domestic students have encouraged governments to reconsider whether continued expansion is sustainable. As a result, internationalisation policy is moving from primarily focusing on attraction and expansion towards a broader framework involving recruitment, regulation, integration, and retention.

This does not necessarily represent a rejection of internationalisation. Rather, it reflects a change in how its benefits and costs are understood. The policy question is increasingly not whether international students should be welcomed, but under what conditions internationalisation can remain academically valuable, economically beneficial, and socially sustainable. Roshid and Seraj (2023) further highlight the importance of examining how institutions and governments respond to the needs and vulnerabilities of international students, particularly during periods of disruption. Internationalisation therefore involves a policy trade-off. Governments seek the academic and economic benefits associated with international students while also having to consider housing, institutional capacity, social integration, domestic accessibility, and post-study employment.

Terms such as international student mobility, transnational educational migration, and long-term labour integration appear several times throughout this study, emphasising the importance of establishing their meanings and applications. International student mobility can be interpreted as the cross-border movement of individuals seeking education in another country. Transnational education migration is a more comprehensive term that pertains to such cross-border movements for educational purposes, including all related policy processes such as admission, residence, integration, post-study transition, and potential retention in the host country. While the term International student mobility primarily describes the act of educational mobility itself, transnational education migration encompasses the policy

frameworks and the possibility that the move may extend beyond the period of study. It, however, does not imply that all international students intend to remain in the host country permanently.

Educational migration must be understood separately from labour migration and other forms such as family, humanitarian, or irregular migration. The primary motivation for international student movement is education, whereas labour migration is mainly driven by employment opportunities or aspirations. However, these two types of mobility can become institutionally linked when host countries perceive incoming international students as prospective skilled workers of the future. When conceptualised as such, governments of host countries provide pathways for international students to transition into employment after graduation. Such pathways are facilitated through policy instruments like post-study visa extensions, residence permits, relaxed employment rights during studies, and support for language learning. This distinction, and the link between the two, is especially pertinent to this study, which compares Germany and the Netherlands, where internationalisation policies increasingly interacted with skilled migration, labour-market transitions, and retention objectives. Therefore, rather than treating international students as equivalent to labour migrants, this study considers labour-market transition and retention as potential objectives and pathways within the broader management and policy framework governing international student mobility.

Understanding the growing attention to this link and the balancing rationale concerning internationalisation is fundamental for evaluating how nations are currently reconfiguring their strategies. Germany and the Netherlands provide a highly illustrative comparative context for analysing these evolving policy priorities and methodologies. Both have highly internationalised higher education systems, attract substantial numbers of international students, and operate within the broader European higher education and migration environment. Yet the policy concerns emerging in the two countries are markedly distinct.

Germany has sustained a robust interest in the recruitment of international students, concurrently associating international education with skilled migration. Its comparatively affordable public higher education and opportunities for graduates to enter the labour market have contributed to its appeal as a study destination. This strategy is especially pertinent in the

context of Germany's demographic shifts and skilled labour shortages. International graduates who choose to remain in Germany can integrate into the nation's skilled workforce, thereby underscoring the importance of student mobility in long-term labour market planning (DAAD, 2025).

The Netherlands exhibits a somewhat different policy trajectory. It has proactively supported internationalisation efforts, notably through English-taught programs and international recruitment initiatives. Nevertheless, the swift rise in international student enrolment has elicited concerns regarding housing availability, institutional capacity, language barriers, accessibility anxieties for domestic students, and the sustainability of ongoing growth. The recent deceleration in international enrolment growth, coupled with a heightened focus on managing internationalisation, reflects this evolving policy approach (Nuffic, 2024, 2025).

The disparity between the two nations should not be construed merely as a dichotomy between an “*open*” Germany and a “*restrictive*” Netherlands, given that both continue to recognise the academic and economic significance of international students. The more critical difference is the underlying policy priorities. Germany has strong incentives to connect international education with labour-market needs and skilled migration, whereas the Netherlands has faced stronger pressure to balance internationalisation with institutional capacity, housing, language considerations, and domestic accessibility. Comparing these countries can therefore reveal how similar internationalisation pressures can produce different policy responses. It also allows international student mobility to be examined as part of a wider relationship between higher education, migration, labour markets, demographic change, and domestic politics.

Existing research provides substantial evidence on the reasons driving international student mobility, the role of host-country policies, and the educational, social, and economic effects of internationalisation. However, comparatively less attention has been given to why countries operating within a similar European context respond differently to the pressures created by international student mobility.

While there is an abundance of existing literature examining aspects such as the reasons underlying international student mobility, the effects of host-country policies and the socio-economic impacts of internationalisation (Gutema et al., 2023; Luo et al., 2023), the changing

nature and rapid rise in international student mobility have highlighted underexplored gaps. For instance, how governments respond to the changing landscape of international student mobility, especially when education policy becomes increasingly intertwined with broader migration concerns, labour-market objectives and domestic capacity considerations, has received relatively little attention.

As discussed earlier in the section, the sharp increase in international student mobility has deepened entanglement with transitions into the labour market in host countries and with long-term migration. It has also fuelled concerns about pressures on institutional capacity, housing, language, and domestic accessibility. Conventional literature has largely focused on individual students, higher-education outcomes, educational institutions, and single national contexts. *This reveals a comparative policy gap that emerges regarding governments' defined internationalisation objectives and the subsequent translation of these objectives into specific policy instruments.* While such instruments may emphasise attraction, management, integration, and retention of international students, their adoption and implementation intensity are dictated by the policy goals established by the governments. *A key factor in comprehending the divergent policy responses to transnational educational migration is the manner in which governments interpret the benefits and trade-offs associated with internationalisation.* These varying policy responses are particularly visible in countries that receive a high volume of international students, such as Germany and the Netherlands. Using them as comparative cases of policy divergence, this study examines:

“How have Germany and the Netherlands responded to the changing landscape of transnational educational migration through their internationalisation policies?”

This study makes three principal contributions. Firstly, it conceptualises international student mobility as more than merely a recruitment concern. It encompasses the entire policy process, including attracting students, regulating mobility, supporting integration, and facilitating potential transitions into the labour market. This methodology reflects the interconnected educational, economic, migration, and social dimensions identified in recent scholarly investigations (Gutema et al., 2023; Luo et al., 2023). Secondly, it advances the understanding of policy divergence. Germany and the Netherlands face several similar pressures but have

developed different policy priorities. Comparing them provides an opportunity to examine how labour-market needs, demographic conditions, institutional capacity, housing, language, and domestic political concerns influence policy choices. Finally, this study has a practical policy contribution. International student mobility can generate substantial benefits, but policies focused mainly on increasing enrolment may overlook the conditions required for sustainable internationalisation. Issues such as accommodation, institutional capacity, integration, and post-study employment are equally important. By comparing Germany and the Netherlands, this study seeks to identify how governments can maintain the benefits of internationalisation while responding to its social and institutional costs.

Overall, the comparison highlights a broader transformation in internationalisation policy: the central challenge is no longer simply how to attract more international students, but how to manage international student mobility in ways that remain academically valuable, economically productive, and socially sustainable.

2. Literature Review

International student migration has long been regarded as an internal matter for universities and has been considered a route for academic exchange, institutional esteem and a medium of intercultural learning (De Wit & Altbach, 2021). Transnational educational migration is defined as ‘the movement of students across borders to study and reside in a host country for a certain period or permanently’ (Gomes, 2021); however, it has expanded well beyond that definition. Waters and Brooks (2021) note that student migrants, in addition to being motivated by acquiring qualifications and skills, have increasingly considered future career prospects and aspiring long-term residence. Some of the variables driving the choices of study destinations have been recognised to be the immigration and visa regulations, tuition structure, funding and future employment prospects of the destination country (Gutema et al., 2024; Nikou et al., 2025). This has prompted student mobility to become increasingly interlinked with the labour-market policy as opposed to being restricted to solely the educational policy. Therefore, Luo (2023a) and Luo et al. (2023b) have stressed the growing need to explore the broader ramifications of student mobility for the host countries. Brunner et al. (2024) reinforce this

proposition by designating international students as student migrants, highlighting that their residence and integration are often riddled with uncertainty. They have argued that the existence of this uncertainty drives the need for a coordinated approach across sectors, encompassing the policies pertaining to education, labour-market integration, housing and immigration. Hence, student mobility, which was once a concern primarily for the education institutions and sector, has now evolved into an issue for the broader public policy and several related sectors.

Promoting international education has grown from a policy into a strategy for increased competitiveness, contributing to innovation and the acquisition as well as development of human capital (Brooks & Waters, 2021; Kerr, 2020). Students are increasingly valued for their contributions to research productivity, knowledge exchange, participation in the workforce and their tuition fees (Lipura & Collins, 2020). The results of which are reflected in the funding of educational institutions and the broader economies of the host countries. The OECD (2024) observed that international students are the perfect solution to address labour and skill shortages to a great extent and referred to the post-study work rights and residence pathways as vital instruments to ensure their retention. The perspective of “War for Talent” has framed this strategy as a competition among states to attract, recruit and retain highly skilled individuals, particularly for places experiencing demographic decline and skilled worker shortages (Choudaha, 2018). In the case of Germany, studies demonstrate the positive impact of reforms on the gap between graduation and subsequent employment (Mayer et al., 2012; Hoffmeyer-Zlotnik & Grote, 2019). Kerr (2020), however, cautions against conflating the attraction of students with actual labour-market integration, highlighting that the success of these policies must be judged not based on the enrolment volumes but the workforce retention of the graduates.

The growing academic discourse pertaining to internationalisation discusses the pressures resulting from it. Critiques have raised concerns about differing national rationales regarding internationalisation (Kapfudzaruwa, 2025; Rumbley et al., 2023). Institutional pressures documented in Germany (Varga, 2024) have been discussed in terms of the limitations of internationalisation and how administrative complications, fiscal stress and language have

become barriers for certain groups (Mayer et al., 2012; Hoffmeyer-Zlotnik & Grote, 2019; Rifat, 2026). It is also noteworthy that the concentration of mobilities in specific places leads to compounding social and housing pressures. Weber et al. (2024) have elucidated how Dutch institutions and cities are confronted with such infrastructural issues stemming from large-scale gentrification owing to the rapidly growing migration. Linguistic and domestic concerns continue to remain prominent as well; the expansion of English-medium instructions has prompted debates regarding the position of national languages in higher education (Hultgren & Wilkinson, 2022; Yıldız, 2021). This in turn has contributed to anxieties relating to accessibility and inclusion or lack thereof for domestic students. Lastly, several authors argue that the majority of internationalisation policies have continued to focus on recruitment alone, rather than on the integration, inclusion and well-being (Kolster & Van Der Wende, 2026) of the incoming students, often leaving them exposed to deep uncertainty and insecurities. These issues need to be understood and accounted for analytically, as they are crucial factors in shaping the policy rationales and priorities of governments. Furthermore, they will also lay at the crux of any policy shifts towards capacity, accessibility and sustainability rather than an isolated focus on attraction.

National governments regulate international student migration through a set of instruments that determine who is allowed to enter, study and subsequently remain in their countries. These instruments consist of tools such as admission and enrolment rules, tuition and scholarship regimes, language requirements, visa and residence regulations, recruitment strategies and pathways of long-term migration for skilled workers (Brunner et al., 2024; OECD, 2024). The different combinations of such instruments deployed by a national government reveal their underlying policy reasoning, priorities and objectives towards internationalisation. For instance, the language or medium of instruction as a tool is a critical factor in dictating the access to education. Provision of courses in the English medium can expand the access to a wider range of international students, whereas specific national language requirements or restrictions on foreign languages can negatively impact accessibility (Hultgren & Wilkinson, 2022; Schiltmans, 2024). Inter-governmental coordination across different levels and administrative structures also plays an integral role in both promoting accessibility and relieving the pressures of migrant concentration in particular regions. The German federal

government coordinates with the different states (*Länder*) for higher education. It is visible in the recent works that have been done pertaining to quality assurance and strategy, highlighting how national directions are tiered on decentralised institutions (Röbken & Schütz, 2026; Morris-Lange & Schueller, 2025). The Dutch literature, on the other hand, indicates a departure from autonomous institutional discretion towards a stronger national control (Schiltmans, 2024). Policy instruments are often studied in isolation in order to measure their direct impact. However, in order to paint a complete picture of how governments seek specific expected results from the broader policies, a deeper investigation into how these instruments work in tandem is essential and forms the focus of this comparative study.

Research on Europeanisation acknowledges that policy convergence among countries within the shared European framework is subject to and faces pressures from shared structures such as the European Higher Education Area (EHEA), but it also outlines that domestic adaptation of policies are greatly dependent on the existing national institutional arrangements and structures (Radaelli, 2004; Radaelli & Exadaktylos, 2012). It has also been widely argued that policy divergence often results from the way national economies perceive the connection between higher education, skills and labour coordination (Hall & Soskice, 2001; Czaika & Reinprecht, 2022). Despite similar policy ideas and even models often circulating across the borders, they are eventually interpreted, translated and reshaped by local actors, which explains why shared frameworks do not produce uniform outcomes (Hassenteufel & Zeigermann, 2021; Stone et al., 2020). Moreover, demographic trends and institutional capacities further influence the differing national responses (Weber et al., 2024). Therefore, even though European policies consistently encourage and seek alignment, countries still prioritise their own domestic priorities. However, only a few available studies verify this claim by comparing such closely matched systems.

The culmination of this literature reveals a significant amount of evidence regarding why students move, how the existing policies of the host-country influence their choices and the educational, economic and social policies that follow. It contains a useful country-level study of Germany and the Netherlands. However, it still remains unclear as to why countries operating within the same European structure arrive at different priorities and combinations of

instruments with regard to the governance of international student migration. This study combines quantitative text analysis with critical discourse analysis to address how policy gaps and rationales evolve and are redefined over time by comparing how Germany and the Netherlands have responded to transnational educational migration through their internationalisation policies between 2014 and 2025.

2.1 Theoretical Framework

2.1.1 Varieties of Capitalism (VoC)

The Varieties of Capitalism theory, as articulated by Hall and Soskice (2001), serves as the foundational framework for investigating how various institutional configurations across liberal and coordinated market economies influence domestic policy choices. The Varieties of Capitalism (VoC) paradigm posits that policy divergence arises from the ways in which national economies connect higher education, skills development, and labour-market coordination (Czaika and Reinprecht, 2022). This framework enables a comprehensive analysis that extends beyond surface-level regulatory differences and offers an institutional explanation for the prioritisation of different policy instruments by coordinated economies, notwithstanding similar demographic and labour market constraints.

2.1.2 Multiple Streams Framework (MSF)

The Multiple Streams Framework, as proposed by Cairney and Zahariadis (2025), attributes the timing and determinants of policy change to analysing the convergence of three independent streams: problems, policies, and politics. The MSF demonstrates how the opening of a policy window permits certain policy instruments to attain priority within the government agenda. Rather than viewing policy evolution as a linear or solely rational process, the framework alludes to external triggers and political priorities as critical factors that influence policy change. In this study, the MSF is employed to trace the timing and rationale behind significant policy shifts, while also considering the differences between the two countries.

2.1.3 The War for Talent Framework

The War for Talent framework conceptualises the internationalisation of higher education as an economic competition among nations aimed at attracting, recruiting, and retaining highly skilled global labour (Choudaha, 2018). This theory positions international students as essential economic inputs necessary to mitigate domestic demographic decline and workforce shortages. It also indicates that destination countries increasingly perceive international enrolments through this economic perspective. Furthermore, this theory demonstrates how national policies are designed to acquire international talent through specific instruments, even if countries differ in the incentives or retention pathways they offer to attract such talent.

2.1.4 Europeanisation theory

The Europeanisation theory examines the role of European integration, regional domestic norms, and shared governance spaces in influencing domestic policy structures and national agendas (Radaelli, 2004). Broader frameworks such as the European Higher Education Area (EHEA) establish common regional frameworks and generate convergence pressure. However, the Europeanisation theory suggests that domestic adaptations are shaped by preexisting national institutional arrangements (Exadaktylos and Radaelli, 2012). This theory elucidates how, despite countries being subjected to the same regional structural frameworks, they can modify and implement transnational mobility differently.

3. Method

3.1 Research Design

This study employs a comparative longitudinal research design to examine the development of internationalisation policies in Germany and the Netherlands between 2015 and 2025. The study combines descriptive statistical analysis, text-as-data analysis, and critical discourse analysis (CDA) to examine changes in policy priorities, policy instruments, and policy discourse over time. Germany and the Netherlands were selected as comparable cases within a shared European higher-education and migration context, while their national policy

trajectories provide a basis for examining differences in the governance of international student mobility. The analysis integrates quantitative and qualitative approaches to identify temporal patterns and interpret how internationalisation is connected with migration, labour-market, demographic, and institutional considerations.

3.2 Case Selection and Corpus Data

This study compares Germany and the Netherlands ($N = 2$) using the Most Similar Systems Design. Germany and the Netherlands are both EU member states, subject to identical structural frameworks such as the EHEA and EU mobility directives, hence allowing for a structurally comparable analysis. This facilitates the isolation of national political discourse and domestic institutional frameworks as the primary variables driving the policy divergence. The analytical scope of this study spans a decade, from 2015 to 2025, accounting for three major longitudinal shocks: the pre-pandemic expansion, COVID-19 disruptions and post-pandemic reconfiguration. This study relies exclusively on secondary data gathered from official government publications, Eurostat datasets, publications by government ministries, and publicly available policy documents and uses two kinds of data sources.

- **Quantitative data:** Descriptive statistics used customised longitudinal data from 2015-2025, sourced from Eurostat (educ_uoe_mobs02, educ_uoe_enrt0), OECD, DAAD, and Nuffic. These data were visualised through plots showing international student enrolments in EU countries, Germany, and the Netherlands; yearly growth; demographic trends; and origin countries (Refer to Appendix A).
- **Policy Corpus:** To conduct the text-as-data analysis, a customised corpus of 37 primary legislative, parliamentary and policy documents ($N = 37$) produced between 2015 and 2025 was compiled. This corpus comprises national strategies on internationalisation and higher education; laws and policy documents on visas, residence and mobility; post-study retention policies; policy proposals and debates; and official policy communications and government statements spanning 2015 to 2025. Additionally, the corpus illustrates the asymmetry in the structure and frequency of policy publications

in Germany and the Netherlands. The German policy corpus comprised extensively developed, highly detailed strategy documents (*Strategie der Bundesregierung zur Internationalisierung von Bildung, Wissenschaft und Forschung*), specialised ministerial and advisory board publications (*Wissenschaftsrat, Bundesministerium für Bildung und Forschung*), federal-state agreement papers (*Bund-Länder-Strategien*) and legislative acts (*Fachkräfteeinwanderungsgesetzes*). The Dutch corpus, in contrast, was highly iterative and dynamic, consisting of parliamentary papers (*Kamerstukken*), government information letters (*Kamerbrieven*), official gazettes (*Staatsblad*) and legislative acts (*Wet internationalisering in balans*).

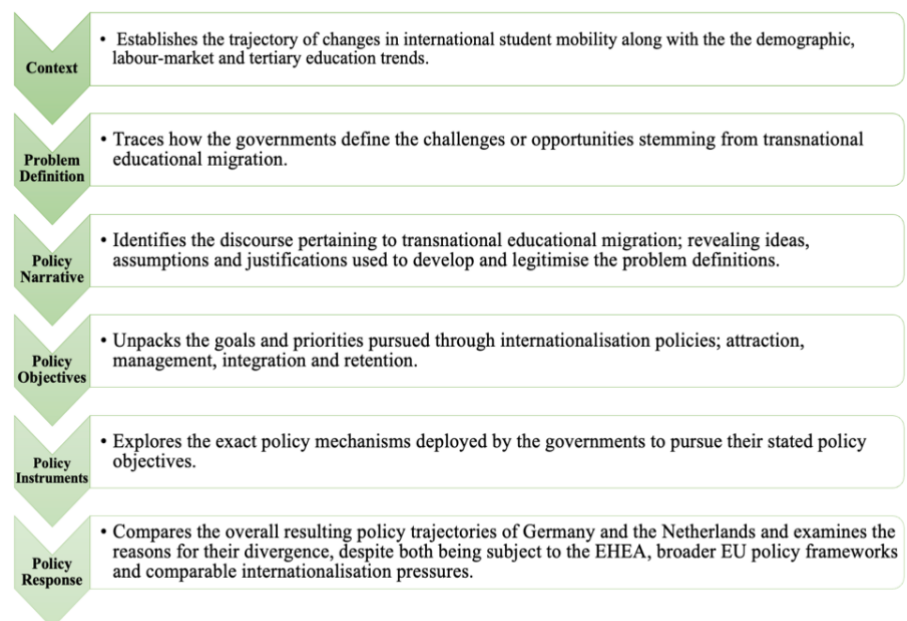
3.3 Analytical Framework and Methods

3.3.1 The Six-Stage Public Policy Process.

The study employs a six-stage analytical framework to trace and compare the development of internationalisation policies in Germany and the Netherlands between 2015 and 2025 (see figure 1). The framework

progresses from context and problem definition to policy narrative, policy objectives, policy instruments, and policy response. These stages provide an organising

Figure 1. Six-Stage Analytical Framework for Comparative Policy Analysis



structure for examining how changing demographic, labour-market and higher-education conditions are articulated as policy problems, translated into policy objectives and instruments, and reflected in national policy responses.

3.3.2 Most Similar Systems Design (MSSD)

Based on case study selection approaches outlined by Seawright and Gerring (2008), this study employs a Most Similar Systems Design to compare two similar European systems. This rationale facilitates the isolation of the domestic policy discourse and institutional structures as the determinants of policy divergence, while holding the regional and structural variables like EHEA and EU Directive constant. The study delineates the central research question into six subordinate enquiries:

1. What factors have shaped the development of internationalisation policies in Germany and the Netherlands?
2. How are internationalisation policies connected to migration and labour-market strategies?
3. What policy instruments are used to attract, manage, integrate, and retain international students?
4. Why do policy priorities differ between the two countries?
5. What political, economic, demographic, and institutional factors help explain this divergence?
6. What strengths, limitations, and broader policy lessons emerge from the comparison?

3.3.3 Methodological Triangulation

The analytical framework of this study relies on mixed-methods triangulation by synthesising the macro-level quantitative results using descriptive statistics and text-as-data analysis with the micro-level qualitative revelations obtained through the critical discourse analysis. This triangulation maps the changes in state rhetoric to observable changes in regulatory instruments applied to internationalisation policies.

3.3.4 Text-as-Data Analysis

In order to map the thematic and lexical evolution of the policy documents in both countries, this study uses an empirical text-as-data method by applying the “quanteda” and “quanteda.textstats” packages in R in four stages:

- *Stage 1 (Processing and Normalisation)*: The core policy corpus, consisting of documents in German and Dutch, was compiled and converted into text files for analysis. Following the steps of Natural Language Processing, the documents were tokenised, and all punctuation, numerals, and stop words (including stopwords (“de”) and stopwords (“nl”)) were removed. Additional iterations eliminated standard policy boilerplate terms such as *artikel*, *absatz*, *lid*, *nummer*, *satz*, and *nr*. To address the asymmetry in the documents, where Germany (represented by $N = 14$) exhibited a higher mean word count, while the Netherlands (represented by $N = 23$) exhibited a greater document frequency, the raw frequency counts were normalised to frequencies per 10,000 words:

$$\text{Normalised Score} = \left(\frac{\text{Raw word count}}{\text{Total Document Tokens}} \right) \times 10,000$$

- *Stage 2 (Dictionary Construction)*: Two dictionaries were developed to analyse two distinct policy dimensions: macro-level policy orientations and micro-level policy instruments. For macro-level policy orientations, the dictionary was devised to categorise policy objectives into four domains: Attraction, Management, Retention, and Labour (entry into the labour market). Additionally, a separate taxonomy was established to encompass the 14 policy instruments utilised by the German and Dutch governments to regulate international educational migration. These include Admission, Enrolment, Housing, Institutional Funding, Labour Integration, Language, Post-study Work, Recognition of Qualifications, Recruitment, Retention Support, Scholarships, Skilled Migration, Tuition Costs, and Visa Policies (Refer to Appendix C).

- *Stage 3 (Discourse Analysis)*: Relevant categories pertaining to the discourse, derived from the previously constructed dictionary at the macro level, were mapped and iteratively refined through collocation analysis utilising association scores to identify salient and emerging lexical trends.
- *Stage 4 (Temporal Discourse Tracing)*: The normalised feature frequencies of the four macro policy orientations and fourteen micro policy instruments within each document were consolidated by country and year of publication. This was conducted to trace the evolution of policy discourse and priorities over the decade from 2015 to 2025.

3.3.5 Norman Fairclough's three-dimensional model of discourse

To elucidate the fundamental rationales underlying policy divergence, this research employs Norman Fairclough's three-dimensional model of Critical Discourse Analysis (CDA). CDA investigates how texts operate across three interconnected levels over a decade. Firstly, textual practice scrutinises the actual language used, such as word choices, legal phrasing variations, and metaphors—since this is where significant ideological influence occurs. Secondly, discursive practice examines the processes involved in the creation and management of these documents behind the scenes, including the authorship of policy papers, responses from various ministries, and the role of university agreements in reconciling legal frameworks with practical realities. Lastly, social practice adopts a broader perspective, considering the external pressures influencing these debates, such as Germany's ageing workforce, the Netherlands' acute housing and university shortages, and the overarching trend of transforming European higher education into a competitive market, with students viewed as part of the labour supply.

3.4 Supplementary Materials

Supplementary materials are provided in Appendices A–D. Appendix A presents supplementary descriptive statistics and demographic and international student enrolment figures. Appendix B provides supplementary text-as-data visualisations, including policy orientation scores, policy instrument trajectories and discourse trajectories. Appendix C contains the dictionaries, frequency tables, corpus statistics and other raw outputs underlying the text-as-data analysis. Appendix D provides a

comparative overview of higher education internationalisation policy in Germany and the Netherlands.

4. Policy Context

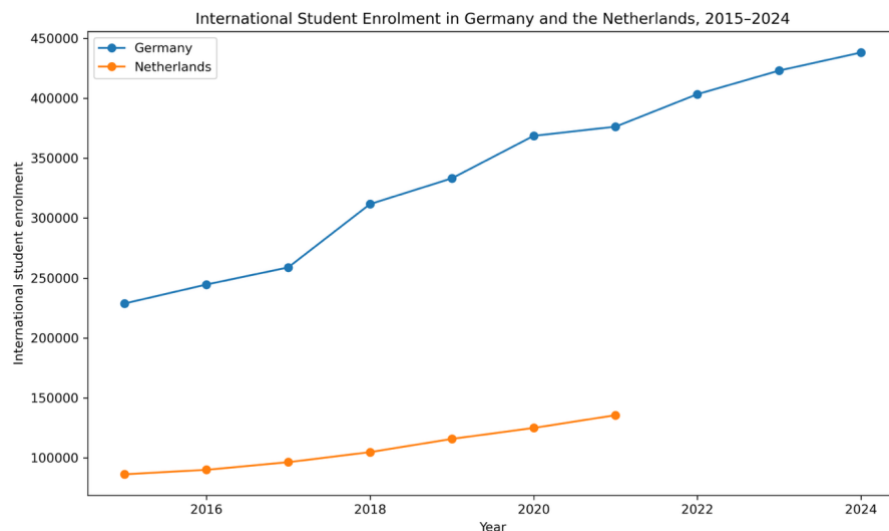
4.1 Internationalisation Policy for Students in Germany

Germany initially framed internationalisation around academic cooperation, mobility and research rather than large-scale tuition-based recruitment. Over time, demographic change, population ageing and skilled-labour shortages increasingly connected international education with migration policy, positioning international students as potential future skilled workers and researchers (Mayer et al., 2012; Hoffmeyer-Zlotnik & Grote, 2019). Since the early 2000s, the

Green Card initiative, the 2005 Immigration Act, and subsequent reforms progressively reduced barriers between study and employment, making study migration an increasingly important pathway into skilled employment

(Mayer et al., 2012; Hoffmeyer-Zlotnik & Grote, 2019).

Figure 2. *International Student Enrolment in Germany and the Netherlands, 2015–2024*



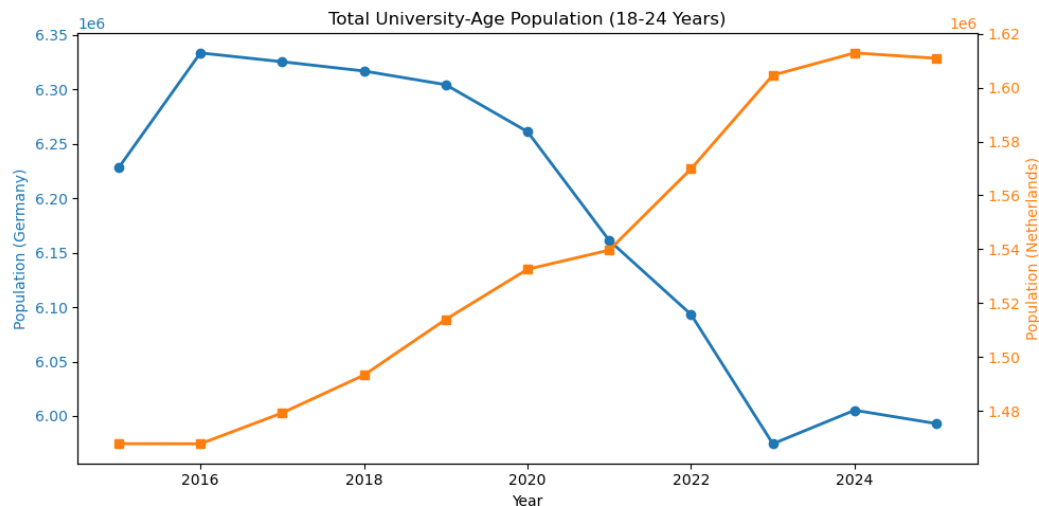
Note. Data retrieved from Eurostat (*educ_uoe_mobs02*). Authors' visualisation.

The 2013, 2017 and 2024 internationalisation strategies progressively broadened the agenda from mobility and research cooperation towards internationalisation at home, institutional internationalisation, talent attraction, integration and retention (Hoffmeyer-Zlotnik & Grote, 2019). The trajectory intensified during the 2020s, as the Skilled Immigration Act and subsequent amendments further increased the permeability between education and skilled employment. In 2024, permitted employment for international students increased from 120 to 140 working days annually. The 2024 Federal and Länder Strategy for the Internationalisation of Higher Education Institutions for 2024–2034 placed recruitment, integration and retention alongside international mobility, research cooperation and institutional resilience (BMBF & KMK, 2024). The scale of internationalisation is substantial. Approximately 368,000 international students were enrolled in the 2022/23 winter semester, placing Germany third globally among host countries at that time (BMBF & KMK, 2024; DAAD & DZHW, 2024). International student enrolment also increased over the study period, as shown in Figure 2.

Demographic change and skilled-labour shortages provide an important structural context for international student recruitment and migration policy (Heß, 2025). Germany's university-age population also changed over the study period, providing demographic context for the development of higher education and internationalisation policy (see Figure 3).

Academic success and integration have gained importance because international recruitment has historically been accompanied by higher dropout among some non-European groups, with academic preparation, language, finances, administrative complexity and limited support identified as relevant challenges (Mayer et al., 2012; Hoffmeyer-Zlotnik & Grote, 2019). German-language acquisition, career support and employer-orientated services have also been incorporated into efforts to facilitate the transition from study to employment.

Figure 3. *University-Age Population (18–24 Years) in Germany and the Netherlands, 2015–2024*



Note. Data retrieved from Eurostat (demo_pjangroup). Authors' visualisation.

Germany's internationalisation policy has increasingly incorporated recruitment, integration and pathways into employment alongside its longer-standing emphasis on academic mobility and international cooperation.

4.2 Internationalisation Policy for Students in the Netherlands

Dutch internationalisation expanded through English-medium programmes, international recruitment and institutional partnerships, initially being associated with educational quality, competitiveness, knowledge exchange and intercultural learning (van Gaalen & Gielesen, 2014, 2016; Popescu & Elshof, 2017). The scale of international degree mobility increased particularly rapidly during the 2010s, with international degree-seeking students rising from just over 4% of Dutch higher education students in 2010 to more than 10% in 2017.

The policy interpretation subsequently changed as growth generated concerns about educational capacity, accessibility, quality, housing and the position of Dutch as a language of

higher education. The 2019 *Taal en Toegankelijkheid* framework marked a shift towards greater regulation of foreign-language education and student numbers, while the 2024 *Wet internationalisering in balans* (WIB) proposed stronger system-level steering through language regulation and numerical controls (Ministerie van OCW, 2019, 2024a; Raad van State, 2024).

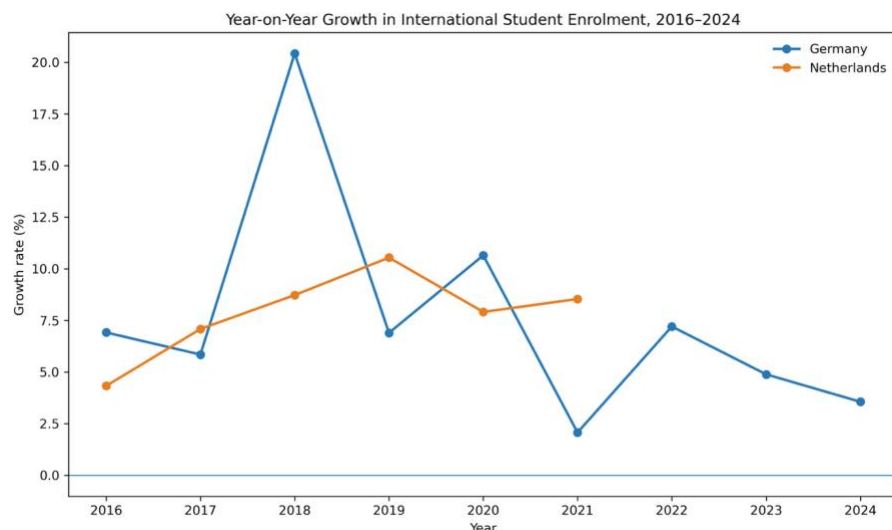
The scale of internationalisation nevertheless remained substantial: 131,004 international degree students were enrolled in publicly funded Dutch higher education in 2024/25, representing 16.6% of total enrolment.

Growth had slowed to 3%, while new international bachelor enrolment declined (Nuffic, 2025a, 2025b). In 2025/26, enrolment fell to 129,764, the first overall year-on-year decline since Nuffic began measuring international student numbers

(Nuffic, 2026). The change in annual enrolment growth is illustrated in Figure 4.

The policy shift has increasingly focused on institutional capacity and accessibility, housing pressure, language, and labour-market considerations. Capacity and housing pressures have become increasingly prominent in policy discussions, with approximately 44% of international students concentrated in North and South Holland in 2023/24 (Fang & van Liempt, 2021; Ministerie van OCW, 2024b). English had become the medium of instruction in approximately three-quarters of master's programmes and one-quarter of bachelor's programmes (Breetvelt,

Figure 4. Year-on-Year Growth in International Student Enrolment



Note. Data retrieved from Eurostat (dataset *educ_uoe_mobs02*). Authors' visualisation.

2018). Policy has consequently sought to strengthen Dutch as the principal language while permitting foreign-language education where educational, regional or labour-market justification exists (Ministerie van OCW, 2019, 2024a). At the same time, the Netherlands has retained mechanisms for the selective retention of international graduates. The orientation-year residence permit (*zoekjaar*) provides eligible graduates with one year to seek employment or establish a business, after which an appropriate work-based residence status may be obtained (IND, 2026). Approximately 25.3% of international graduates from the 2013/14–2022/23 cohorts remained in the Netherlands five years after graduation, with relatively high stay rates among education and engineering graduates. Almost four in ten international graduates working in the Netherlands five years after graduation were located in the Greater Amsterdam labour-market region (Nuffic, 2025c).

Overall, Dutch internationalisation policy has shifted from a strong emphasis on international recruitment and English-medium education towards greater attention to capacity, accessibility, language regulation and the management of international student flows, while retaining pathways for graduate employment and retention.

5. Comparative Policy Analysis

5.1 Policy Objectives

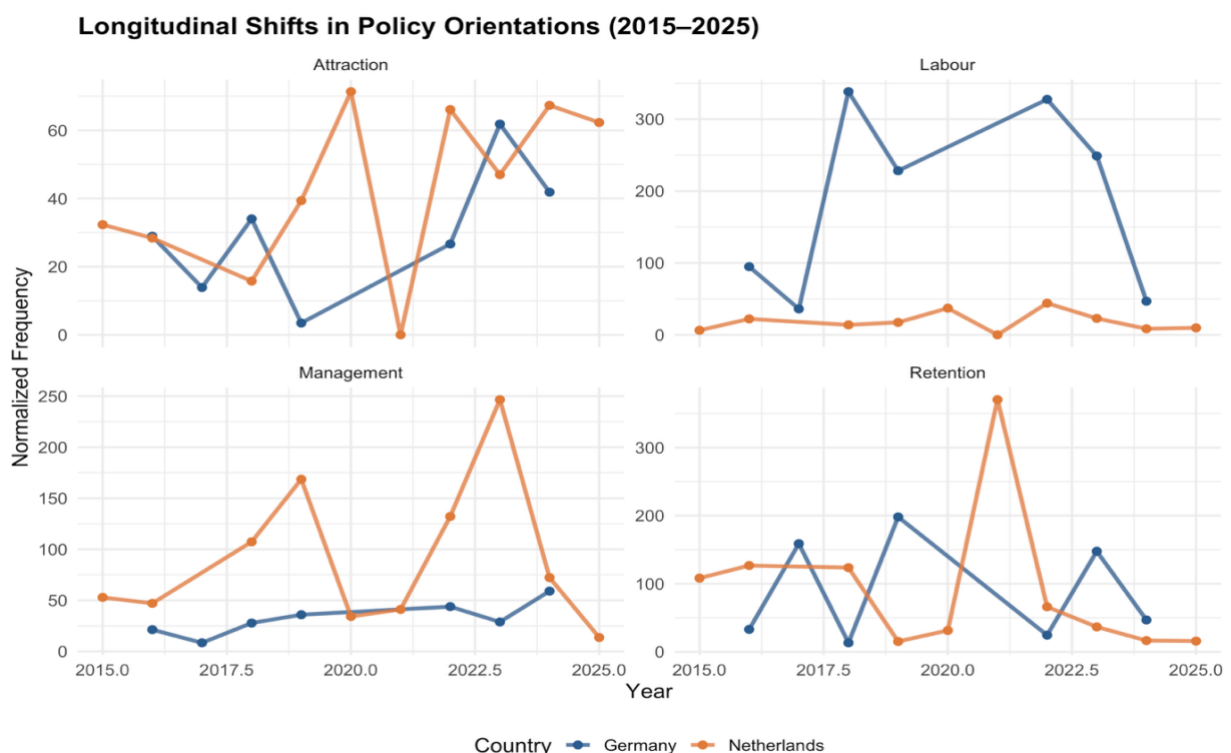
Germany and the Netherlands continue to regard internationalisation as an important component of higher education, research and economic development, but the policy objectives attached to international student mobility have diverged.

Germany has increasingly integrated internationalisation with demographic and skilled-labour objectives, whereas the Netherlands has increasingly sought to balance internationalisation against domestic capacity and accessibility pressures. Germany's policy objective combines international attractiveness with higher education, research and skilled-labour needs. The 2024 Federal and Länder strategy connects recruitment, integration and retention with academic excellence, international cooperation, institutional resilience and labour-market needs (BMBF & KMK, 2024). The Netherlands increasingly seeks a “sustainable balance” (*duurzame balans*)

and greater “grip” over international student flows, particularly through language, capacity and system-level steering (Ministerie van OCW, 2024a). Rather than eliminating international student mobility, the objective is to regulate its scale, composition and distribution according to educational capacity, accessibility, language, housing and labour-market requirements.

The comparative text analysis further indicates variation in the prominence of four macro-level policy orientations: attraction, management, retention and labour-market integration – across the German and Dutch policy corpora (see Figure 5).

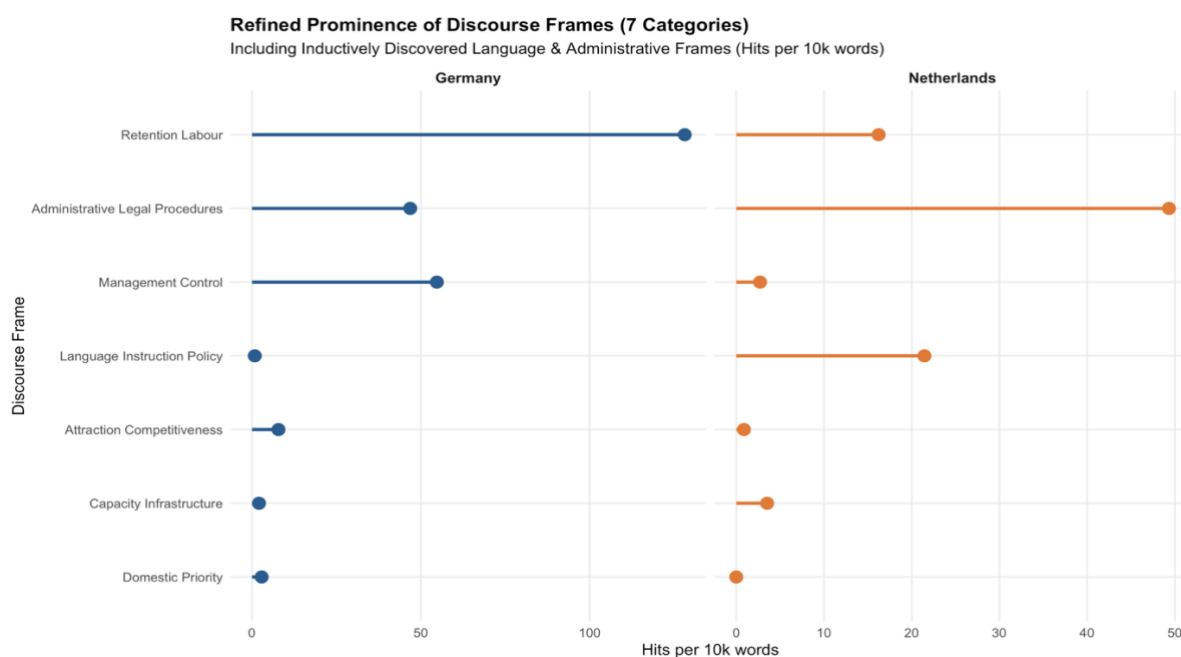
Figure 5. *Evolution of Macro-Level Policy Orientations in Germany and the Netherlands, 2015–2025*



Note. This figure illustrates the evolution over time in the macro-level policy orientations of Germany and the Netherlands. Visualisations and quantitative text analysed in R based on the authors’ policy corpus compilation (Germany and the Netherlands, 2015-2025).

The distribution of these orientations indicates differences in the relative emphasis of internationalisation policy across the two countries. In the German corpus, labour-market integration and retention are more prominent, whereas the Dutch corpus shows greater emphasis on management-related concerns, including capacity, language and administrative regulation. A more detailed inductive analysis identified seven discourse framings within the policy corpus, providing further insight into how internationalisation objectives are articulated in the two countries (see Figure 6).

Figure 6. *Discourse Framings in German and Dutch Internationalisation Policy, 2015–2025*



Note. This figure illustrates the prominence of seven discourse framings, discovered inductively. Germany emphasises labour retention, whereas administrative procedures and language instruction policy dominate the Netherlands' discourse. Visualisations and quantitative text analysis were conducted in R based on the authors' policy corpus compilation (Germany and the Netherlands, 2015-2025).

Recruitment is central to both systems, but its policy function differs substantially. Germany maintains a comparatively broad recruitment infrastructure supported by national agencies, scholarships, English-taught programmes and relatively affordable public higher education. This infrastructure has supported geographically diversified recruitment (Hoffmeyer-Zlotnik & Grote,

2019).

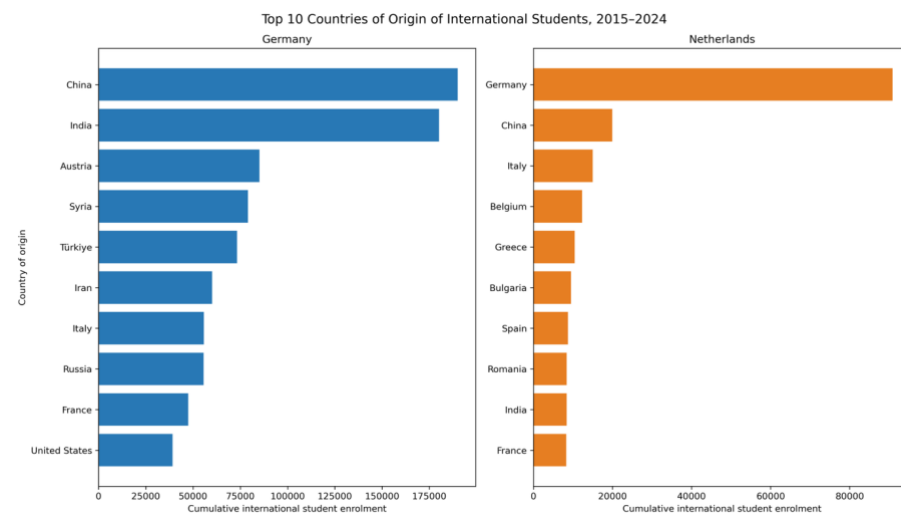
Germany's recruitment therefore remains (see Figure 7 & 8) relatively broad in volume terms, although strategic priorities increasingly emphasise qualified talent and labour-market needs.

Germany

therefore combines broad international recruitment with an increasingly strategic human capital orientation.

The Netherlands historically relied heavily on the international attractiveness of English-medium programmes, institutional recruitment and international partnerships. However, recruitment has increasingly become a regulated rather than open-ended activity. The principal proposed instrument is the *numerus fixus*. Under the WIB, capacity restrictions can be directed

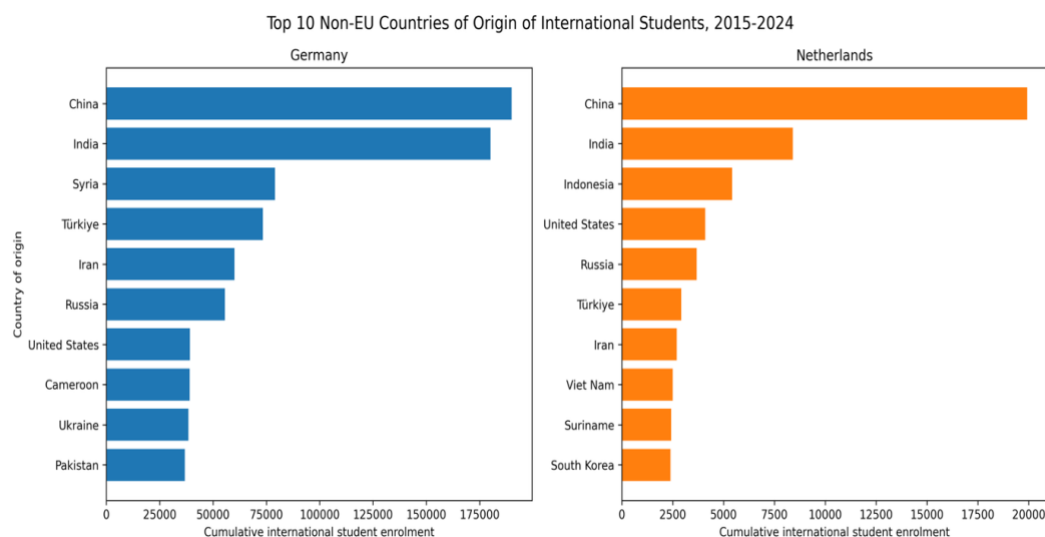
Figure 7. *Top Ten Countries of Origin of International Students in Germany and the Netherlands, 2015–2024*



Note. *This figure demonstrates the top ten countries of origin (sending countries) for international students arriving in Germany and the Netherlands from 2015 to 2024. Data retrieved from Eurostat (educ_uoe_mobs02); visualisations created by the authors using Python.*

at particular programmes or foreign-language tracks rather than necessarily being applied to an entire institution. The WIB also proposes limits on non-EEA enrolment where capacity conditions justify intervention (Raad van State, 2024). Language regulation also operates indirectly as a recruitment instrument because restricting foreign-language provision can influence the accessibility and therefore the volume of international applications. The 2026 agreements further reinforce controlled and targeted recruitment (Ministerie van OCW, 2026).

Figure 8. *Top Ten Non-EU Countries of Origin of International Students in Germany and the Netherlands, 2015–2024*



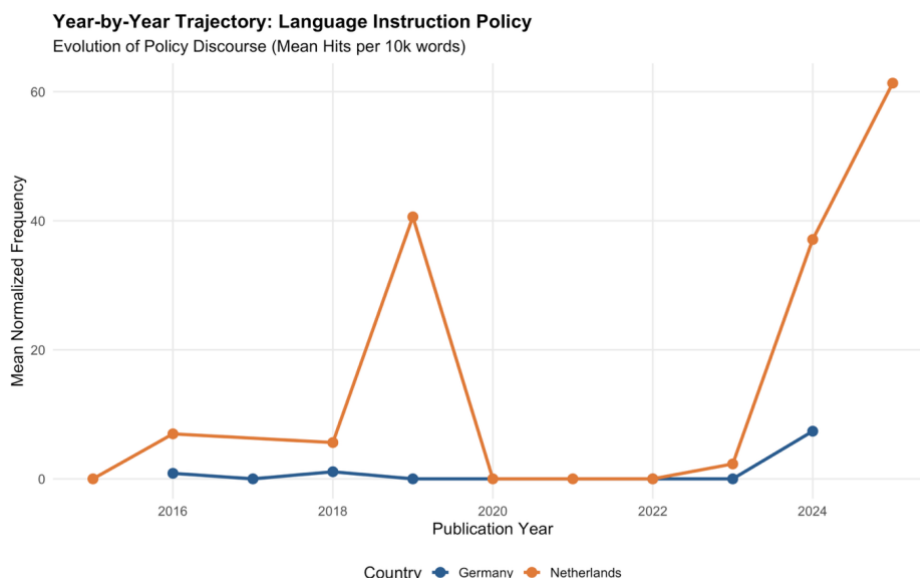
Note. *This figure isolates the top ten non-EU sending countries for international students arriving in Germany and the Netherlands from 2015 to 2024. Data retrieved from Eurostat (educ_uoe_mobs02); visualisations created by the authors using Python.*

Rather, recruitment is increasingly differentiated according to programme capacity, language, nationality, regional needs and labour-market relevance. The central contrast is therefore between Germany's comparatively broad recruitment infrastructure and the Netherlands' increasingly capacity-sensitive recruitment architecture.

5.3 Integration Instruments

German integration is primarily support-orientated, combining academic preparation, language development, counselling and career support. This emphasis reflects evidence that international students, particularly some non-European groups, have historically experienced higher dropout rates and challenges related to academic preparation, administrative complexity, finances, language and insufficient support (Mayer et al., 2012; Hoffmeyer-Zlotnik & Grote, 2019).

Figure 9. *Temporal Change in Language-Related Policy Discourse in Germany and the Netherlands, 2015–2025*



Note. This figure traces the temporal shift in the emphasis of language instruction policy in the internationalisation policy discourse in Germany and the Netherlands. Visualisations and quantitative text were analysed in R based on the authors' policy corpus compilation (Germany and the Netherlands, 2015-2025).

Germany maintains a mixed-language model in which English increases accessibility while German-language acquisition supports employment and social participation. The 2024 strategy therefore combines multilingual

provision, German-language teaching, accessible administrative services, career guidance and employer cooperation (BMBF & KMK, 2024). Integration is consequently understood as a process through which international students are supported in completing education and entering German society and employment.

The Netherlands increasingly combines integration with regulation. Dutch-language proficiency (*Nederlandse taalvaardigheid*) has become a central instrument because the government links language acquisition to social participation, employability and the probability of remaining after graduation. The 2019 *Taal en Toegankelijkheid* framework explicitly connected Dutch-language development with international students' connection to Dutch society and the labour market (Ministerie van OCW, 2019). The 2026 administrative agreements reinforce Dutch-language education and preparation for transition into employment (Ministerie van OCW, 2026).

The temporal distribution of language-related policy discourse further illustrates differences in how language functions as an integration and internationalisation instrument in Germany and the Netherlands (see Figure 9).

The two systems therefore use language differently. Germany combines English-language accessibility with German-language integration, whereas the Netherlands increasingly uses foreign-language regulation alongside Dutch-language acquisition to manage internationalisation. Germany uses integration instruments primarily to support students after recruitment, whereas Dutch language and programme regulation can influence recruitment itself.

5.4 Retention Instruments

Both Germany and the Netherlands have developed institutional pathways linking international education with skilled employment, but the breadth and policy logic of these pathways differ. Germany has one of the more established education-to-employment pathways. International graduates can remain for up to 18 months to search for suitable employment, and the abolition of the labour-market priority test in 2007 and subsequent reforms reduced barriers to skilled employment (Mayer et al., 2012; Hoffmeyer-Zlotnik & Grote, 2019). The 2024 reforms further increased employment opportunities during study from 120 to 140 working days and broadened skilled-migration pathways. Recent residence data illustrate the permeability of this system. Approximately 46,285 changes of residence status from education and job-search categories into labour migration were recorded in 2024 (Heß, 2025). Retention is therefore supported

through language acquisition, career services and employer connections, linking educational mobility with labour-market participation. (see Figure 10)

The Dutch pathway is more selective. Its principal formal mechanism is the orientation-year residence permit (*zoekjaar*), which allows eligible, highly educated graduates to remain for one year to seek employment or establish a business. Graduates securing qualifying employment

can

subsequently

transition to an

appropriate

work-based

residence status,

including the

highly skilled

migrant route

(IND, 2026).

Use of this

mechanism

increased from

14,530 non-EEA

graduates in

2024 to 16,120

in 2025 (Nuffic,

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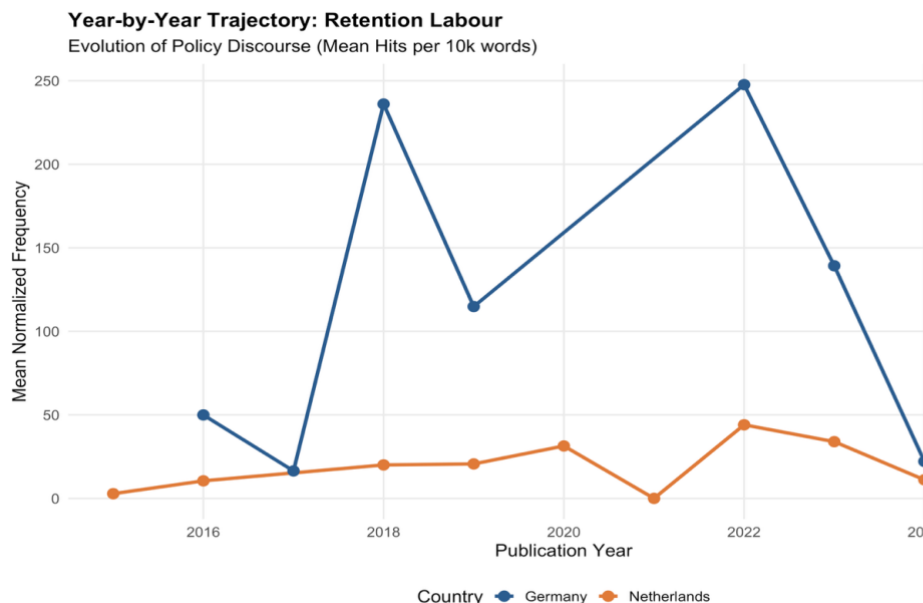
Nevertheless,

longitudinal

evidence

indicates that

Figure 10. *Temporal Change in Labour-Market Retention Discourse in Germany and the Netherlands, 2015–2025*



Note. *This figure demonstrates the change over time in the emphasis of labour retention in the internationalisation policy discourse in Germany and the Netherlands. Visualisations and quantitative text analysed in R based on the authors' policy corpus compilation (Germany and the Netherlands, 2015-2025).*

approximately 25.3% of international graduates from the 2013/14–2022/23 cohorts remained in the Netherlands five years after graduation, compared with 24.1% in the previous study. The Dutch model therefore represents selective talent retention rather than broad retention of the

international student population. The Netherlands therefore seeks to control inflows while retaining strategically valuable graduates.

The comparison therefore reveals a sharper distinction than simply “open” versus “restrictive”. Germany combines relatively broad recruitment with a comparatively established post-study pathway, whereas the Netherlands combines controlled recruitment with selective retention. Both recognise international graduates as potential human capital, but Germany gives greater weight to expanding the supply of skilled workers, while the Netherlands gives greater weight to matching international talent with identified labour-market and regional needs.

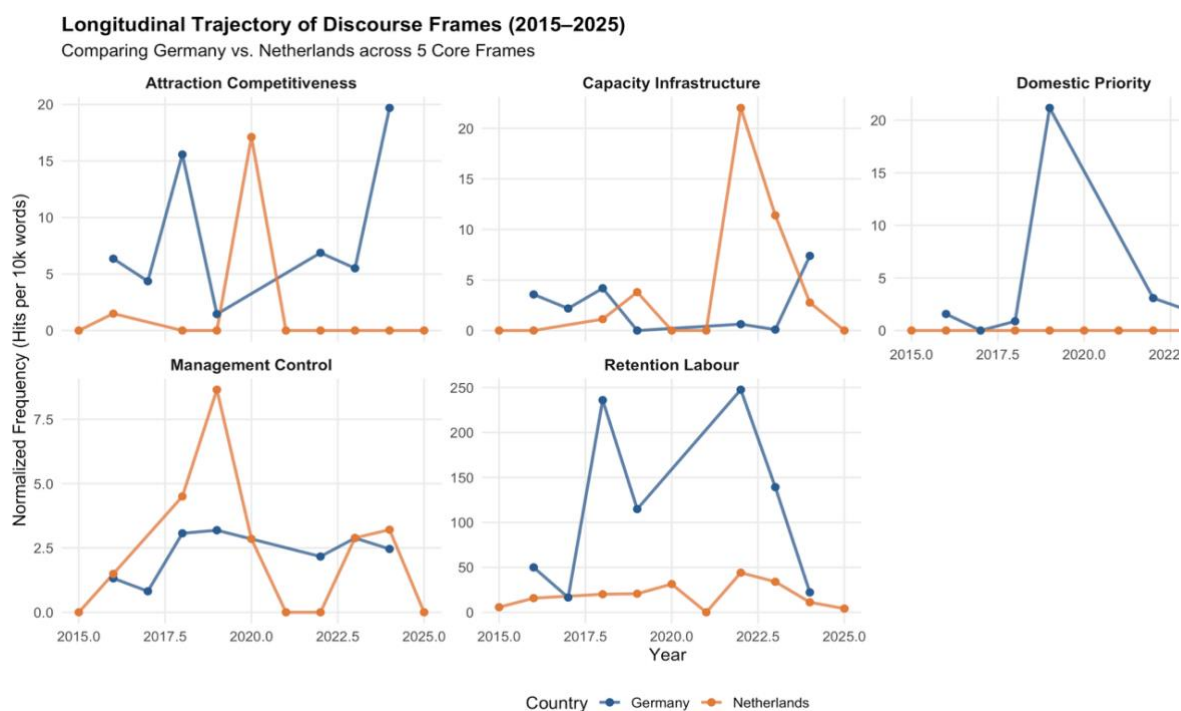
5.5 Governance Changes

Governance has changed in both countries, but the institutional trajectories remain different because their underlying state structures differ. Germany continues to operate through a coordinated but decentralised governance model. Higher education remains primarily a Länder responsibility, while the Federal Government exercises important authority over migration, research funding and international cooperation. The 2013, 2017 and 2024 internationalisation strategies progressively strengthened national coordination while retaining institutional autonomy. The 2024 strategy introduces indicator-based monitoring for 2024–2034, supported by *Wissenschaft weltoffen* (BMBF & KMK, 2024). The DAAD Strategy 2030 complements this framework through funding, networking and advising, linking international academic exchange with geopolitical change and global cooperation (DAAD, 2025). Germany’s governance therefore combines federal strategic direction, Länder responsibility, intermediary organisations and institutional autonomy. Its strength lies in the ability to combine national objectives with decentralised implementation; its limitation is that implementation can remain uneven across Länder and institutions. Internationalisation is consequently coordinated without being fully centralised.

The Netherlands has moved in the opposite direction, from relatively strong institutional discretion towards multi-level coordinated steering. The rapid growth of internationalisation generated increasing recognition that individual institutional decisions could produce system-level consequences for housing, accessibility, capacity and language. The 2019 *Taal en Toegankelijkheid* framework represented an early movement towards greater national

intervention (Ministerie van OCW, 2019). The 2024 WIB proposed a stronger statutory framework encompassing language regulation, numerical controls, foreign-language provision and non-EEA enrolment. Dutch governance has increasingly combined government steering with institutional self-regulation and administrative agreements. The 2026 agreements reinforce controlled recruitment, Dutch-language development, capacity management and graduate retention. (Ministerie van OCW, 2026). The Dutch system therefore combines government steering, proposed legislation, institutional self-regulation and administrative agreements (see Figure 11).

Figure 11. *Evolution of Governance-Related Discourse Frames in Germany and the Netherlands, 2015–2025*



Note. This figure traces the temporal trajectory of particular discourse frames. Germany focuses on labour retention framing, whereas the Netherlands has increasingly moved towards capacity infrastructure and management control framings. Visualisations and quantitative text were analysed in R based on the authors' policy corpus compilation (Germany and the Netherlands, 2015-2025).

The principal governance divergence is consequently institutional rather than simply ideological. Germany adds stronger federal coordination to an established decentralised federal structure, whereas the Netherlands is developing stronger national steering in response to the perceived limits of institutional discretion. Germany's governance framework has largely been used to coordinate and facilitate internationalisation; the Netherlands increasingly uses governance instruments to manage and selectively constrain it.

5.6 Divergent Policy Trajectories

The comparative analysis shows that Germany and the Netherlands respond to international student mobility within a shared European policy environment but construct the underlying policy problem differently. Both countries increasingly connect internationalisation with economic, labour-market and institutional objectives, yet their policy trajectories reflect different combinations of Attraction, Management, Retention and Labour-Market Integration. Germany increasingly frames international students as potential skilled workers, whereas the Netherlands increasingly frames internationalisation in relation to institutional capacity, accessibility, language and the management of student flows.

In Germany, the policy discourse increasingly constructs the international student as a “Fachkraft von morgen”, or future skilled worker. Earlier associations with academic exchange, cultural diplomacy and international cooperation remain present but are increasingly combined with demographic and labour-market objectives. The recurring narrative of *Demografie, Digitalisierung und Dekarbonisierung* connects population ageing and skilled-labour shortages with workforce requirements associated with digital and green transitions. International higher education is consequently positioned increasingly within a broader skilled-migration framework. The *Fachkräfteeinwanderungsgesetz* (FEG) and related reforms, together with implementation of the EU REST Directive (2016/801), have strengthened pathways between study and employment, including the 18-month post-study job-search period. Recruitment, language acquisition, career support and residence provisions therefore form interconnected elements of an education-to-employment pathway.

Language occupies an important position within this configuration. Germany has expanded English-medium provision to facilitate international access while simultaneously promoting

German-language acquisition as a means of supporting social participation and labour-market integration. This produces a layered approach rather than a complete shift towards either German- or English-medium education. The discourse also employs concepts such as “brain circulation” and “Triple Win” to frame international mobility as potentially beneficial to Germany, sending countries and individual migrants. At the same time, the corpus indicates tensions between the discourse of Willkommenskultur and administrative and institutional capacity, including uneven implementation and the availability of support for international students. Recruitment and retention objectives therefore coexist with practical implementation constraints within the German system.

The Dutch trajectory reflects a different construction of the policy problem. Internationalisation initially expanded through English-medium education, international recruitment and institutional partnerships and was associated with educational quality, knowledge exchange and economic benefits. Over time, however, the policy discourse increasingly foregrounded absorptiecapaciteit (absorption capacity), groeiprikkel (growth incentive), housing, teaching capacity, accessibility and the position of Dutch in higher education. Internationalisation was consequently reframed around the objective of achieving a duurzame balans (sustainable balance) and greater grip over international student flows.

This shift became increasingly institutionalised through the Wet internationaliseren in balans (WIB) and associated policy instruments. The proposed numerus fixus, regulation of foreign-language programmes and the Toets anderstalig onderwijs (TAO) provide mechanisms for linking international enrolment to programme-level and system-level capacity. Language, therefore, occupies a different position from that observed in Germany. The formulation “Nederlands, tenzij...” establishes Dutch as the default language while allowing specified exceptions based on considerations such as labour-market needs, regional circumstances and programme characteristics. Dutch-language policy consequently functions not only as an integration instrument but also as a mechanism for managing the scale and composition of internationalisation.

The governance trajectories reinforce this divergence. Germany combines federal strategic coordination with Länder responsibility and institutional autonomy. Its governance

configuration seeks to coordinate internationalisation across different levels while retaining decentralised implementation. The Netherlands has increasingly combined government steering with institutional zelfregie, administrative agreements and statutory mechanisms. The concept of tragedie van de meent captures concerns that individually rational institutional recruitment decisions can generate system-level consequences for housing, capacity and accessibility. At the same time, regional exemptions indicate that these pressures are not uniform across the country, with some border and shrinking regions continuing to associate international recruitment with demographic and labour-market considerations.

The divergence is therefore most visible in the relative emphasis and sequencing of policy instruments. Germany more strongly connects Attraction, Integration, Labour-Market Integration and Retention, reflecting the construction of international students as potential human capital within a context of demographic and skilled-labour pressures. The Netherlands more strongly connects attraction, management, language and capacity regulation, and selective retention, reflecting concerns surrounding educational capacity, accessibility, housing and linguistic balance. In Germany, language acquisition primarily operates as a bridge towards employment and social participation alongside continued English-medium provision. In the Netherlands, language regulation increasingly forms part of system-level management of foreign-language education and international enrolment.

The comparison should not, however, be reduced to a simple distinction between expansion and restriction. Germany also faces administrative and institutional capacity constraints, while the Netherlands retains mechanisms for attracting and retaining international graduates and allows programme- and region-specific exceptions. Both systems therefore combine attraction with management, integration and retention but assign different relative weights to these functions. Their policy trajectories are consequently better understood as different configurations of internationalisation within broader higher-education, migration and labour-market systems.

Overall, the findings indicate that similar transnational pressures can produce different national policy configurations. Germany increasingly incorporates international education into a broader skilled-migration and human-capital strategy, while the Netherlands increasingly

incorporates internationalisation into a framework of capacity management, accessibility and language regulation, alongside graduate retention mechanisms. The divergence therefore lies not in whether internationalisation is pursued, but in how its scale, purpose and relationship with migration, labour markets and domestic institutional conditions are governed.

6. Policy Implications

Internationalisation creates a policy trade-off between the benefits of international student mobility and the institutional and social pressures associated with expansion. Germany increasingly links internationalisation with recruitment, integration and labour-market retention, whereas the Netherlands increasingly emphasises the regulation of scale, language and institutional capacity. The key policy question is therefore how these benefits and costs can be distributed sustainably.

6.1 Aligning International Recruitment with Institutional Capacity

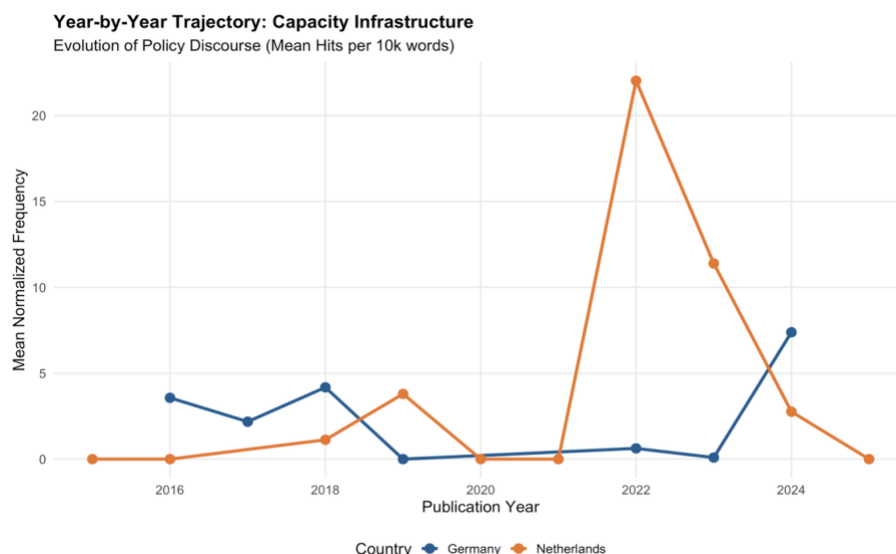
The first policy implication is that international recruitment should be aligned with both labour-market demand and institutional capacity. Germany demonstrates the potential benefits of maintaining broad international recruitment when international graduates can subsequently enter skilled employment, particularly in the context of demographic ageing and labour shortages. The Netherlands demonstrates the importance of programme-level and system-level capacity management when international enrolment generates pressures on accessibility, housing, language and educational infrastructure (see Figure 12). A transferable approach would therefore avoid relying exclusively on either expansion or restriction. Instead, recruitment planning could incorporate programme capacity, regional conditions, labour-market demand and graduate outcomes when determining the appropriate scale and composition of international recruitment. Such an approach would also allow recruitment policy to distinguish between programmes and regions rather than treating internationalisation as uniform across the higher-education system. The Dutch proposal to use programme-level and foreign-language controls illustrates how intervention can be targeted towards areas experiencing particular capacity pressures (Raad van State, 2024). At the same time, Germany's broad recruitment infrastructure demonstrates the potential value of maintaining international

access where institutions and labour markets have sufficient capacity to support international students. The transferable mechanism is therefore not a specific numerical restriction but the use of evidence-based, programme-level capacity assessment before modifying international recruitment.

6.2 Strengthening Education-to-Employment Pathways

A second policy implication concerns the transition from international education to skilled employment. Germany provides a relatively established pathway through post-study job-search

Figure 12. *Evolution of Capacity-Related Policy Discourse in Germany and the Netherlands, 2015–2025*



Note. This figure illustrates the evolution over time in the emphasis on capacity infrastructure in the internationalisation policy discourse in Germany and the Netherlands. Visualisations and quantitative text were analysed in R based on the authors' policy corpus compilation (Germany and the Netherlands, 2015-2025).

residence, expanded employment opportunities during study, language development, career services and employer connections.

The approximately 46,285 changes of residence status from education and job-search categories into labour migration recorded in

2024 demonstrate substantial movement from educational residence towards labour migration, although these figures should be interpreted as evidence of pathway use rather than causal

evidence of policy effectiveness. The Netherlands provides a more selective mechanism through the orientation-year residence permit, with use increasing from 14,530 non-EEA graduates in 2024 to 16,120 in 2025. At the same time, approximately 25.3% of international graduates from the 2013/14–2022/23 cohorts remained in the Netherlands five years after graduation. These mechanisms suggest that post-study residence can form an important link between educational internationalisation and skilled-migration policy, but residence rights alone should not be treated as sufficient for retention. For policy transfer, post-study pathways should therefore be accompanied by language training, qualification recognition, career counselling, professional-network development and employer engagement. These conditions are particularly relevant where the policy objective extends beyond attracting students towards retaining graduates in sectors experiencing persistent labour shortages. Countries considering such mechanisms should consequently assess whether their migration administration, labour market, higher-education institutions and employers have sufficient capacity to support the transition from study to employment.

6.3 Conditions for Policy Transfer

The comparison indicates that policy transfer should involve selective adaptation rather than direct replication of either national model. Education-to-employment pathways are potentially transferable to contexts characterised by persistent skilled-labour shortages, demographic pressures, employer demand and sufficient administrative capacity to facilitate transitions from study for employment. Their implementation would also require complementary language, career and qualification-recognition systems. By contrast, elements of the Dutch capacity-management approach are more applicable where rapid international enrolment has generated demonstrable pressure on programme capacity, housing, accessibility or the language of instruction. Capacity-management mechanisms would require reliable programme-level enrolment data, transparent criteria for intervention and monitoring of effects on both domestic and international students. Recruitment and retention policies would also require coordination among higher-education institutions, migration authorities, employers and, where relevant, regional governments. Policy transfer should therefore be conditional on evidence concerning labour-market demand, institutional capacity, housing and infrastructure, domestic

accessibility, language policy and graduate outcomes rather than based on direct replication of either national model.

6.4 Potential Distributional Effects

Germany's internationalisation model generates benefits across several groups, but these benefits and associated costs are not distributed evenly. International students benefit from access to Germany's publicly funded higher-education system and pathways into skilled employment. Benefits are also distributed beyond international students. German employers gain access to internationally educated graduates amid demographic change and skilled-labour shortages. Universities and research institutions also benefit from international academic participation: in 2022, 63,078 international academic staff represented 14.7% of academic personnel, while 3,947 international professors represented 7.7% of professors (BMBF & KMK, 2024; Heublein et al., 2024). However, the costs required to sustain these benefits are more concentrated. International offices, career services and student-support units face additional demands associated with recruitment, administration, language provision and labour-market transition. The distributional issue is therefore whether institutional resources are sufficient and proportionate to the scale of international enrolment.

The distributional effects also extend to local communities. International students contribute to university cities while also increasing demand for housing and local infrastructure. These pressures are likely to be concentrated in locations with high levels of internationalisation. The sustainability of Germany's expansive model may therefore depend on whether these localised pressures are adequately supported rather than transferred to municipalities, universities and students. A further distributional issue arises from the expansion of private provision. Private *Studienkollegs* may create additional pathways into German higher education, but differences in fees, recognition and quality assurance can produce unequal experiences for international applicants (Morris-Lange & Schueller, 2025). Comparable standards of transparency and educational quality should therefore apply across public and private pathways. Germany's principal distributional challenge is therefore preventing the institutional and local costs of expansion from becoming disproportionately concentrated.

The Dutch case reflects a different distributional logic because internationalisation is increasingly situated within a broader conception of education as a socially protected public and common good. Article 23 protects educational freedom while permitting common regulatory standards. Recent scholarship identifies growing tension between educational freedom and the wider societal responsibilities of educational institutions (Broer et al., 2024), while Locatelli (2018) emphasises education's collective functions beyond its value as a private commodity. This conception helps explain the distributional rationale underlying the Netherlands' more restrictive approach. If higher education is understood as serving wider public functions, unrestricted international expansion cannot necessarily be prioritised over accessibility, institutional capacity and social sustainability. Regulation can therefore be interpreted as an attempt to protect the broader distribution of educational opportunities rather than simply reduce international student numbers (Government of the Netherlands, 2023, 2024). Greater restrictions may improve predictability and accessibility for Dutch and EEA students in capacity-constrained programmes. However, these gains may reduce access for some international applicants and narrow the future pool of internationally trained graduates.

Distributional effects are also geographically uneven. International students are particularly concentrated in North and South Holland, so pressures on housing, institutional capacity and local infrastructure are unlikely to be experienced equally across the Netherlands. Consequently, measures intended to rebalance internationalisation may produce greater immediate benefits in highly concentrated regions, while the costs of reduced international recruitment may be experienced more broadly through lost educational, labour-market and economic opportunities. The potential economic consequences are illustrated by the SEO Economisch Onderzoek (2025) estimate that substantial reductions in international student numbers could result in approximately €3.9–€4.8 billion in lost GDP over the working lives of one cohort, depending primarily on graduate retention and labour-market participation. The Dutch regulatory approach can therefore be understood as regulated pluralism rather than the elimination of educational freedom. This creates a distributional trade-off: greater protection of domestic accessibility and institutional capacity may be achieved through restrictions that reduce opportunities for some international applicants and potentially limit future labour-market and fiscal benefits. The policy challenge is consequently not to determine whether internationalisation is beneficial or harmful in aggregate, but to determine how its benefits and

costs are distributed and whether restrictions remain proportionate to the pressures they are intended to address.

Across the two cases, the central policy challenge is not simply whether internationalisation should be expanded or restricted, but how international education can be aligned with institutional capacity, labour-market demand and wider societal objectives. Germany illustrates the policy potential of connecting international education with skilled-migration pathways, while the Netherlands illustrates the importance of capacity-sensitive governance and targeted regulation. Both approaches generate trade-offs: expansion can increase institutional and local pressures, while restriction can reduce future educational, labour-market and economic opportunities. Comparative policy design should therefore focus on mechanisms, measurable outcomes and institutional conditions rather than on transferring either national model in its entirety.

7. Conclusion and Limitations

This study has examined how internationalisation of higher education became increasingly connected with transnational educational migration in Germany and the Netherlands between 2015 and 2025. Although both countries operate within the same broader European policy environment, their responses have diverged in accordance with different domestic pressures and policy priorities. Germany has increasingly linked international education with demographic change, skilled-labour shortages and long-term workforce needs, while the Netherlands has placed greater emphasis on managing the scale of internationalisation in response to pressures relating to housing, institutional capacity, language and domestic accessibility. The comparison consequently points towards two different ways of managing the same broad policy challenge. Germany has responded to internationalisation largely through expansion, integration and retention, whereas the Netherlands has moved more strongly towards management, regulation and selective retention. Neither approach should be regarded as inherently superior. The German model provides greater opportunities for educational mobility and labour-market transition, but its sustainability depends on whether housing, institutional capacity, integration and local implementation can keep pace with continued internationalisation. The Dutch model places greater protection on system capacity and

domestic accessibility, but tighter controls may also reduce opportunities for institutions, students and employers to benefit from international mobility.

The broader policy implication is that internationalisation should not be evaluated only through the number of international students recruited. Student numbers provide an important indicator, but they do not reveal whether students are successfully integrated into higher education, whether graduates enter the labour market, whether institutional capacity is sufficient, or whether the costs associated with internationalisation are being distributed fairly. Internationalisation increasingly operates at the intersection of higher education, migration, labour-market policy, housing and demographic planning. The more important policy question is therefore not simply whether international students should be attracted, but under what conditions internationalisation can remain academically valuable, economically beneficial and socially sustainable.

Several limitations should nevertheless be acknowledged. The study relies exclusively on secondary data, including official government publications, Eurostat and other statistical sources, and a corpus of 37 legislative, parliamentary and policy documents. This provides substantial insight into formal policy positions, but the experiences of international students, university staff, employers and local communities are not directly captured. Differences between formal policy intentions and implementation at institutional or regional levels may therefore remain under-represented. The policy corpus is also asymmetrical. Fourteen German documents and twenty-three Dutch documents were included, and the documents differ considerably in length, purpose and institutional form. German material includes extensive national strategies, ministerial publications and federal-state agreements, while the Dutch corpus contains a larger number of parliamentary papers, government letters, official gazettes and legislative documents. Although this reflects genuine differences in national policy-making, textual frequencies should consequently be interpreted with caution.

A further limitation arises from the use of predefined dictionaries in the text-as-data analysis. The four macro-level orientations and fourteen policy instruments provided a systematic framework through which policy priorities could be traced, but some meanings may not be fully captured through lexical frequencies alone. Policy language is often context-dependent,

and important political meanings may be expressed indirectly. For this reason, quantitative text analysis was combined with critical discourse analysis rather than being treated as a standalone measure of policy priorities. In addition, several reforms examined towards the end of the study period are relatively recent. Their longer-term effects on student mobility, graduate retention, institutional capacity and labour-market outcomes may therefore not yet be visible. The findings are consequently more suitable for identifying changing policy directions and underlying rationales than for establishing the full causal effects of recent reforms.

The use of only two national cases also places limits on generalisation. The Most Similar Systems Design provides a useful basis for comparing two broadly comparable European systems, but the findings cannot automatically be extended to other countries with different higher education structures, migration regimes or demographic conditions. The divergence identified in this study should therefore be understood as a comparative explanation of Germany and the Netherlands rather than as a universal model of internationalisation policy.

Future research could address these limitations by examining the outcomes associated with different internationalisation strategies over a longer period. Greater attention could be given to whether international graduates successfully enter skilled employment, how long they remain in the host country and which institutional, economic and policy factors influence their decision to stay or leave. Primary research involving international students, graduates, university administrators, employers and policymakers could also provide a clearer understanding of how formal policy measures are experienced and implemented in practice. Particular attention could be given to academic integration, language barriers, housing, administrative difficulties, social participation and access to employment, as these dimensions are less visible in aggregate enrolment statistics.

A broader comparative design could also be developed by including additional European countries with different combinations of tuition structures, labour-market conditions, demographic pressures and migration policies. Such research would help determine whether the German and Dutch approaches represent wider European policy trajectories or more country-specific responses. Further research should also examine the distributional consequences of internationalisation, particularly how benefits and costs are distributed among

international students, universities, employers, governments, domestic students and local communities. This would allow greater attention to be given to the question of who benefits from internationalisation and where its institutional and social costs are concentrated.

Finally, the reforms introduced during and after the study period should be followed longitudinally. Germany's continued emphasis on international recruitment and skilled-migration pathways and the Netherlands' increasing use of regulatory and capacity-management instruments provide an important basis for evaluating whether different models can remain sustainable over time. The future challenge is unlikely to be resolved through either unrestricted expansion or strict restriction. Rather, sustainable internationalisation will require greater coordination between recruitment, integration, labour-market access, housing, language policy and institutional capacity.

Overall, the German and Dutch cases demonstrate that internationalisation is no longer solely an issue of higher education policy. It has increasingly become part of a wider policy relationship between education, migration, labour markets, demographic change and domestic social priorities. Germany and the Netherlands have responded to these pressures differently, but both illustrate the same underlying policy challenge: the benefits of international educational mobility need to be balanced against the capacity of institutions and societies to absorb and sustain that mobility. Internationalisation can therefore be considered sustainable only when openness is accompanied by adequate institutional capacity, meaningful integration and attention to the distribution of both its benefits and its costs.

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APPENDIX

Appendix A: Supplementary Descriptive Statistics

This appendix contains supplementary descriptive statistics for both countries, visualised to establish the background information for this study.

Figure A1: International student enrolment across EU (27) member states (2015-2024)

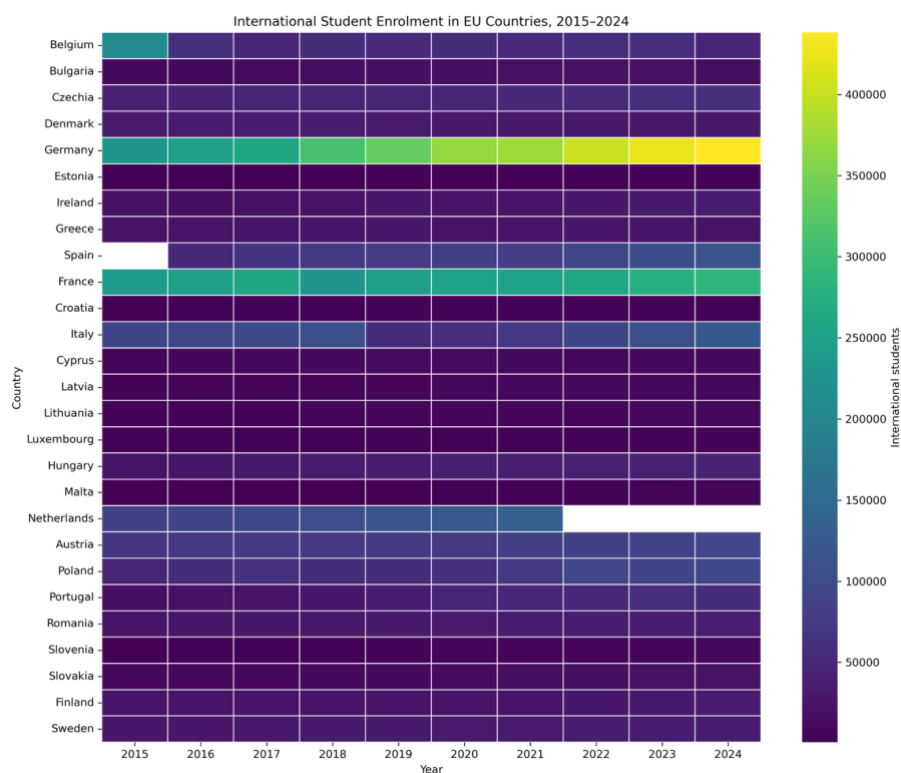


Figure A2: Age demographic trends in Germany (2015-2025). Depicts the decline in younger cohorts in order to contextualise the domestic levels of the university-age population and the decline in the working-age population contributing to the shortage of skilled labour.

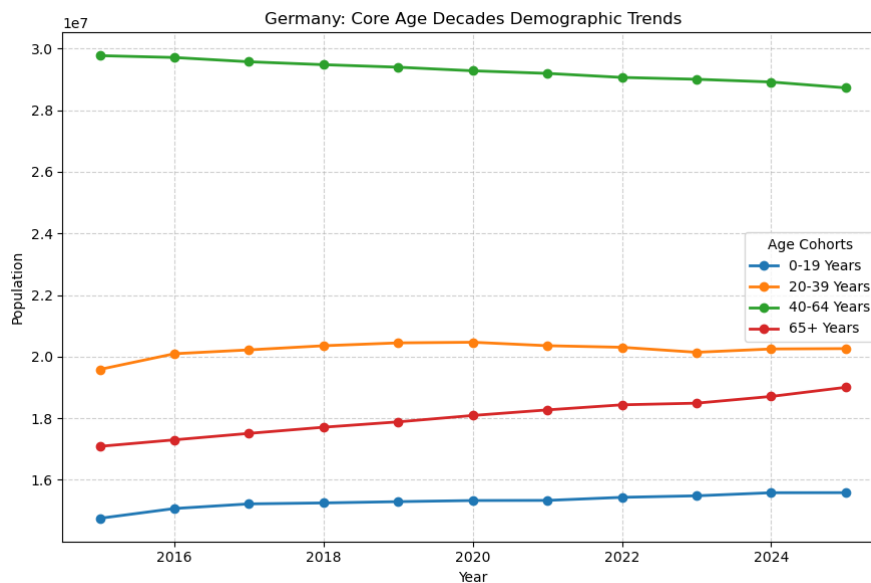
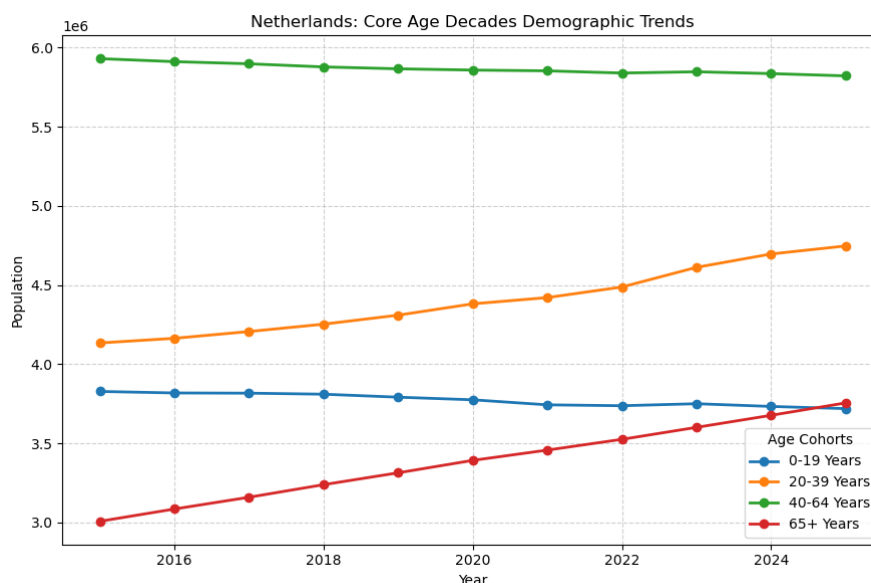


Figure A3: Age demographic trends in the Netherlands (2015-2025). Depicts the steady increase of the university-age population as well as the mature population, indicating pressure on domestic infrastructure.



Appendix B: Supplementary Text-as-Data Diagrams

This appendix contains the supplementary diagrams that were obtained during the empirical text analysis.

Figure B1: Distribution of document length based on the compiled country corpus. Illustrates the variance of token counts per document in the German and Dutch legislative and policy corpus.

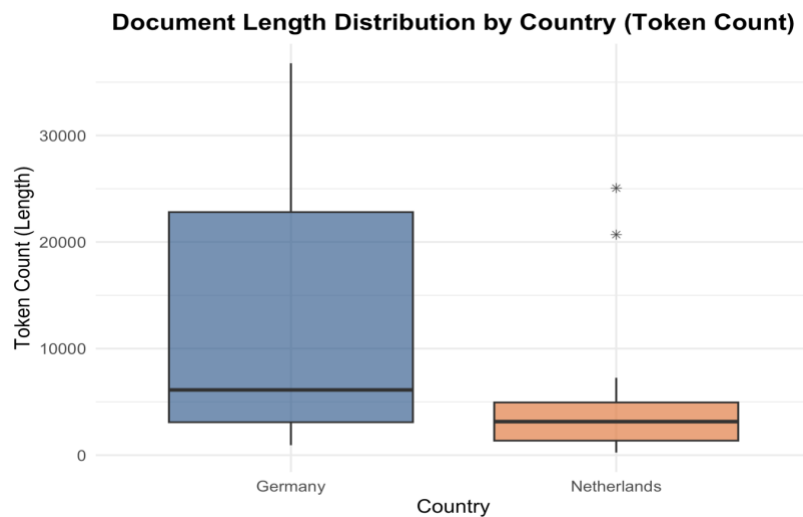


Figure B2: Average policy orientation scores by country. Demonstrates the normalised frequency (hits per 10,000 tokens) of the four macro-level policy orientations: Attraction, Labour, Management, and Retention.

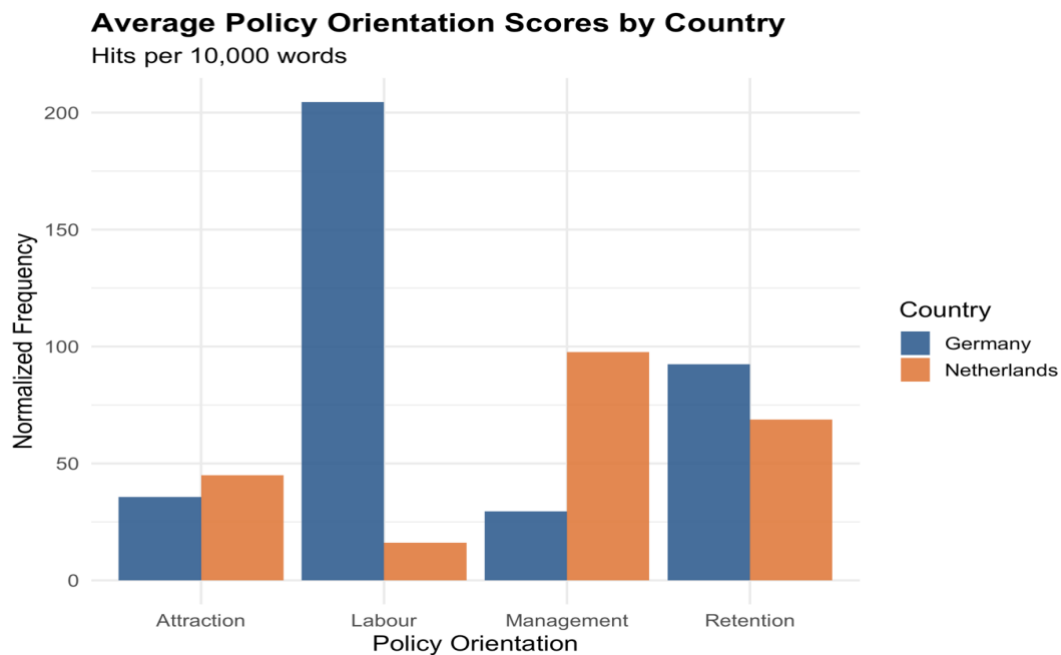


Figure B3: Longitudinal trajectory of the 14 micro-level policy instrument groups (2015-2025). Visualises the normalised frequency (hits per 10,000 tokens) of the policy instruments used by Germany and the Netherlands (based on the compiled policy corpus).

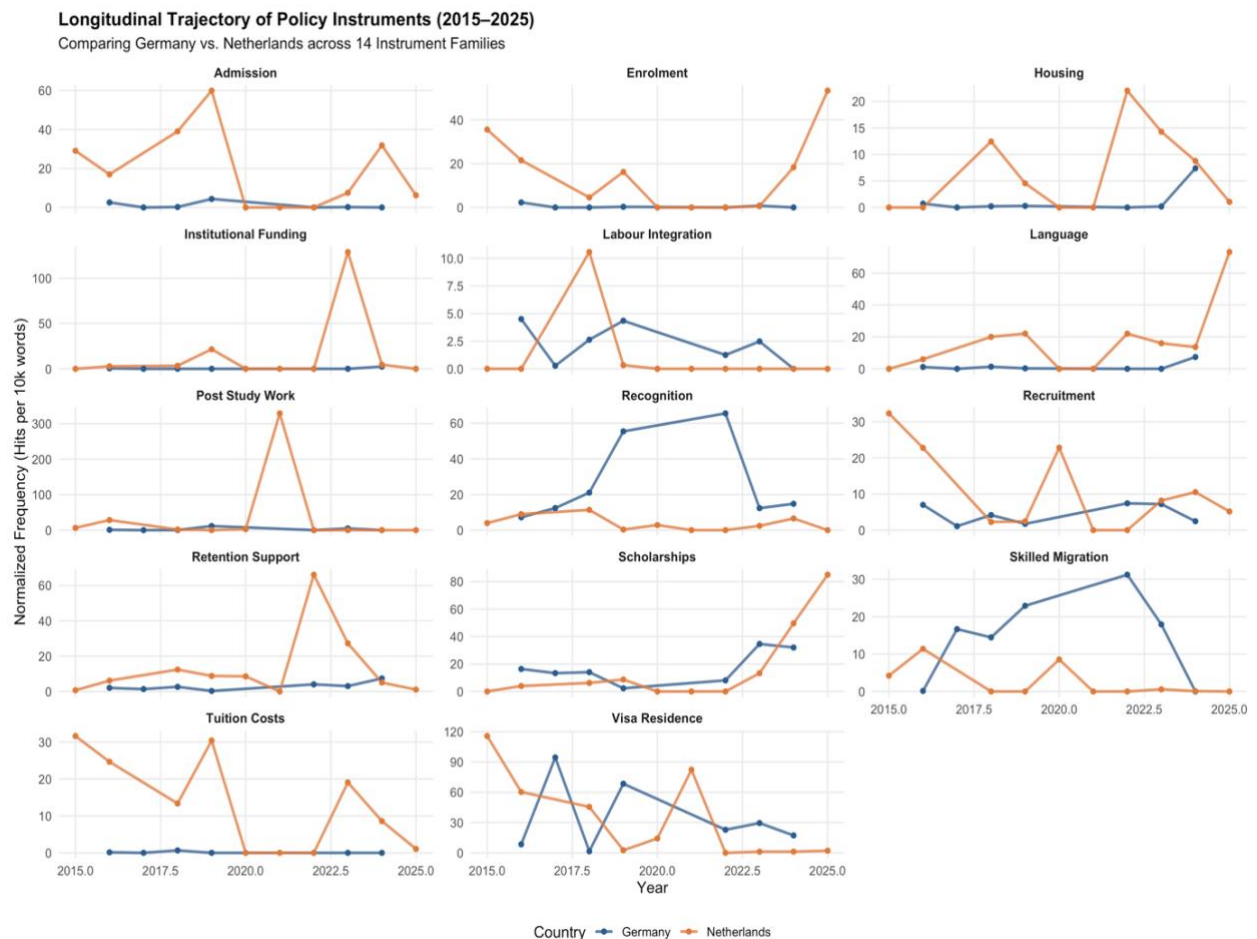


Figure B4: Prominence of Policy Instruments in Germany and the Netherlands. Displays the mean normalised frequency (hits per 10,000 tokens) of core policy instrument traces in the German and Dutch legislative and policy corpora.

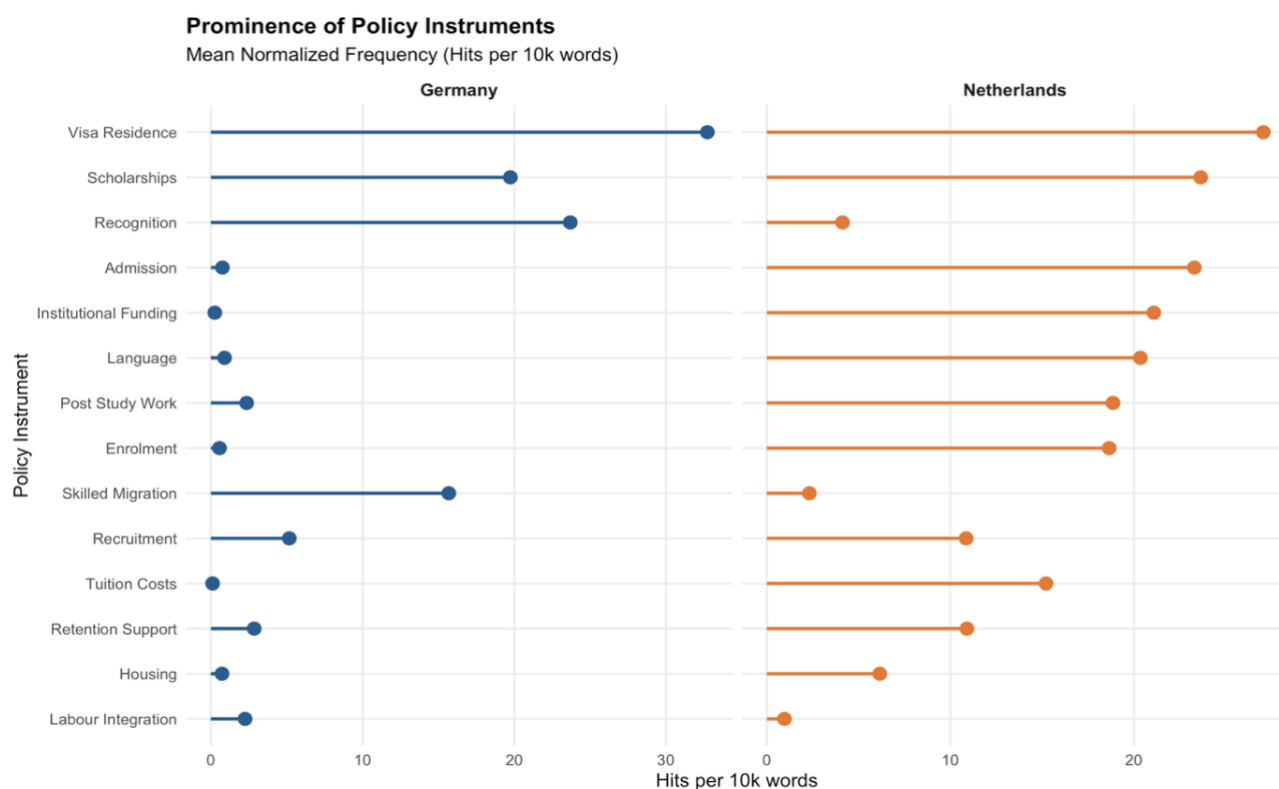


Figure B5: Year-by-year trajectory of the “Administrative and Legal Procedures” discourse with regard to international educational migration (2015-2025). Depicting normalised frequency (hits per 10,000 tokens) across the German and Dutch policy corpus.

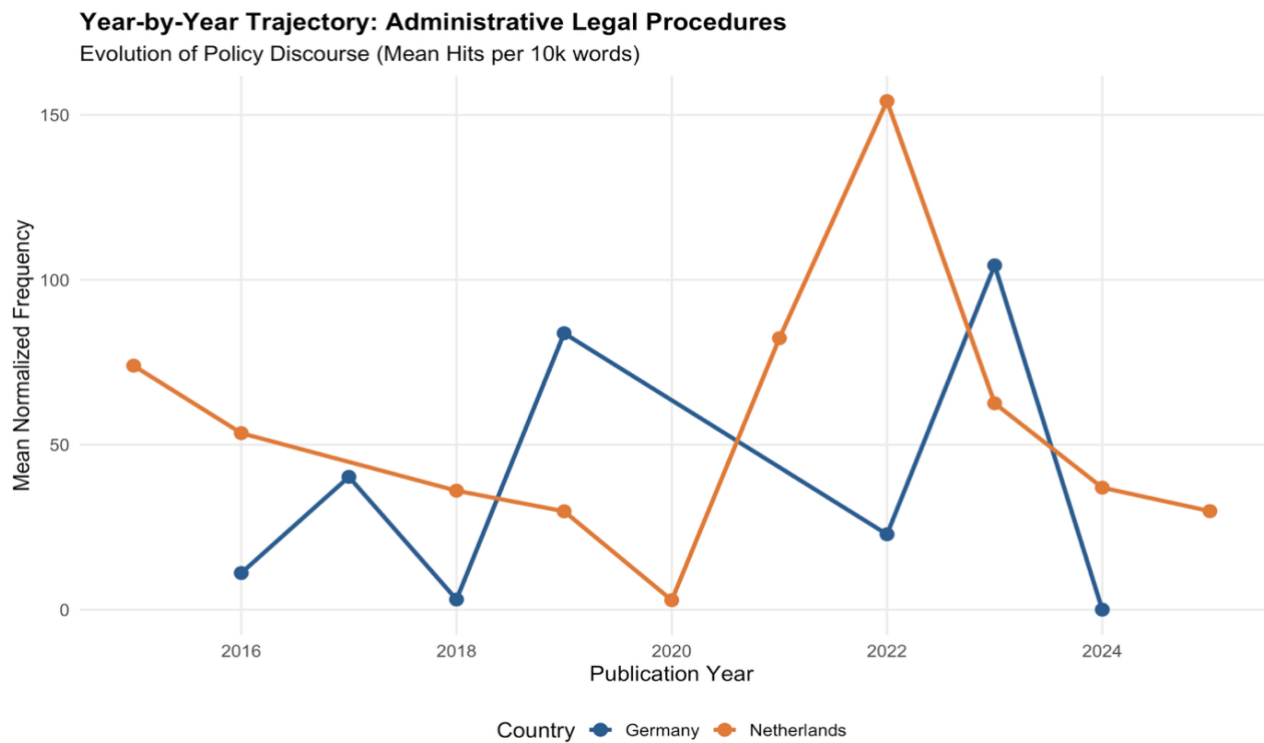


Figure B6: Year-by-year trajectory of the “Management and Control” discourse with regard to international educational migration (2015-2025). Depicting normalised frequency (hits per 10,000 tokens) across the German and Dutch policy corpus.

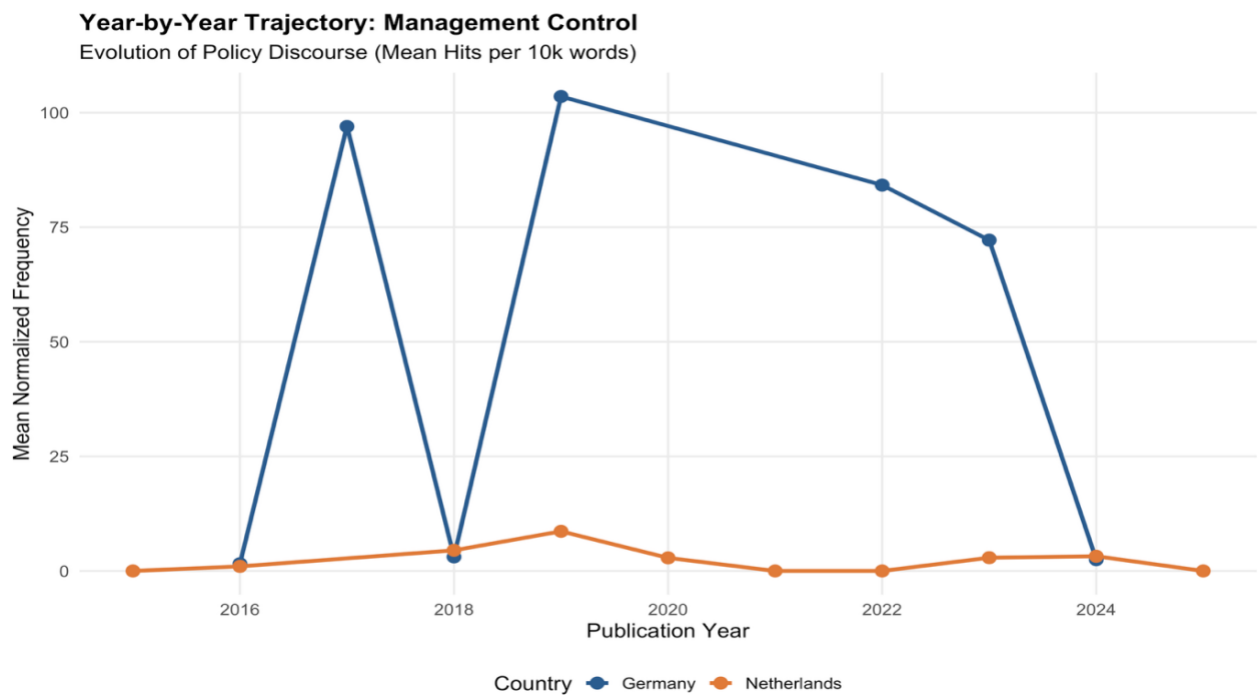


Figure B7: Year-by-year trajectory of the “Attraction and Competitiveness” discourse with regard to international educational migration (2015-2025). Depicting normalised frequency (hits per 10,000 tokens) across the German and Dutch policy corpus.

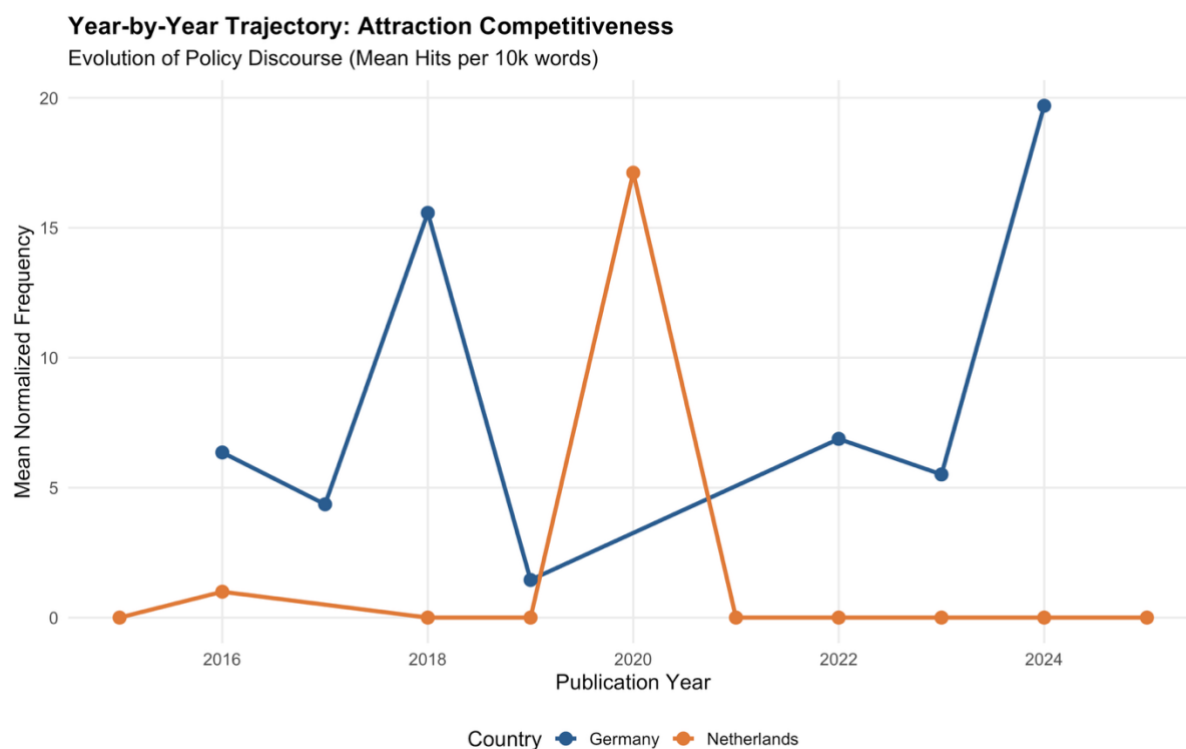
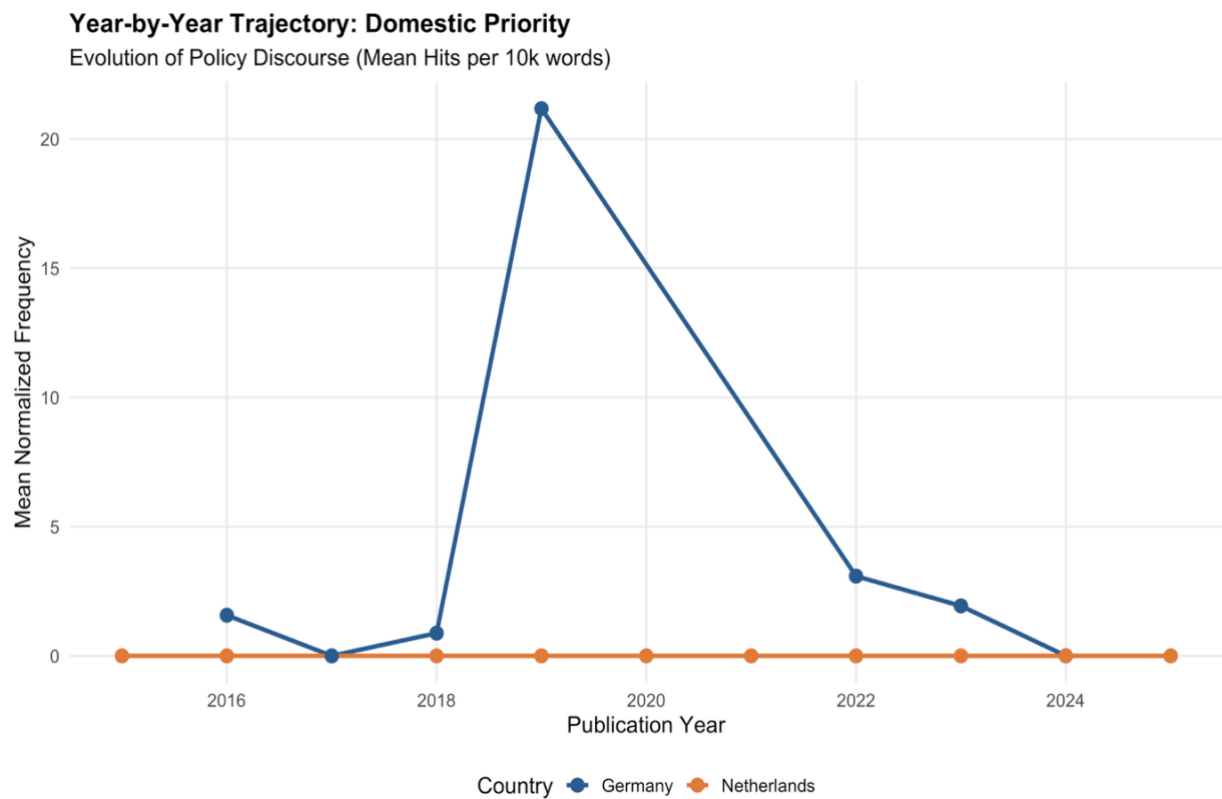


Figure B8: Year-by-year trajectory of the “Domestic Priority” discourse with regard to international educational migration (2015-2025). Depicting normalised frequency (hits per 10,000 tokens) across the German and Dutch policy corpus.



Appendix C: Raw Data from the Text Analysis

This appendix contains tables with important metrics, detailed keywords, translations, frequency tables and scores used in the text-as-data analysis.

Table C1: Descriptive Summary of the Policy Corpus

Country	Total Documents	Mean Word Count	Median Word Count	Minimum Word Count	Maximum Word Count
Germany	14	30177.1428571429	12998.5	2200	88564
Netherlands	23	10516.2608695652	7122	546	56269

Table C2: Dictionary used for Macro-level Policy Orientation Analysis

Orientation	Term	Language	Meaning (in English)
Attraction	<i>gewinnung</i>	German	Attracting
	<i>anwerbung</i>	German	Recruitment
	<i>attraktivit</i>	German	Attractiveness
	<i>stipendi</i>	German	Scholarship
	<i>rekrutierung</i>	German	Recruitment
	<i>marketing</i>	German	marketing
	<i>willkommenskultu r</i>	German	Welcoming Culture
	<i>standort</i>	German	Location
	<i>aantrekken</i>	Dutch	Attract
	<i>werving</i>	Dutch	Recruitment

	<i>instroom</i>	Dutch	Enrolment/ Inflow
	<i>beurz</i>	Dutch	Scholarship
	<i>promotie</i>	Dutch	Promotion
	<i>aantrekkelijk</i>	Dutch	Attractive
	<i>kennisland</i>	Dutch	Knowledge land
Labour	<i>fachkräfte</i>	German	Skilled workers
	<i>arbeitsmarkt</i>	German	Labour market
	<i>beschäftigung</i>	German	Employment
	<i>berufseinstieg</i>	German	Career Start
	<i>wirtschaft</i>	German	Economy
	<i>mangel</i>	German	Shortage
	<i>qualifikation</i>	German	Qualification
	<i>tekort</i>	Dutch	Shortage

	<i>werkgelegenheid</i>	Dutch	Employment
	<i>kennismigrant</i>	Dutch	Skilled immigrant
	<i>vaardigheden</i>	Dutch	Skills
	<i>werkgever</i>	Dutch	Employer
	<i>krapte</i>	Dutch	Shortage
	<i>baankans</i>	Dutch	Job opportunity
	<i>inzetbaarheid</i>	Dutch	Employability
Management	<i>Steuerung</i>	German	Control
	<i>Kapazit</i>	German	Capacity
	<i>Qualität</i>	German	Quality
	<i>zulassung</i>	German	Admission/ Permit
	<i>wohnraum</i>	German	Living space/ Housing

	<i>sprachnachweis</i>	German	Proof of language proficiency
	<i>bedingungen</i>	German	Conditions
	<i>begrenzung</i>	German	Limitation/ Restriction
	<i>numerus clausus</i>	German	Enrolment Restriction (cap)
	<i>gebühren</i>	German	Fees
	<i>visum</i>	German	Visa
	<i>visa</i>	German	Visa
	<i>beheersing</i>	Dutch	Control/management
	<i>sturing</i>	Dutch	Steering/guidance/control
	<i>huisvesting</i>	Dutch	Housing
	<i>taaleis</i>	Dutch	Language requirement
	<i>kwaliteit</i>	Dutch	Quality

	<i>capaciteit</i>	Dutch	Capacity
	<i>toelating</i>	Dutch	Admission
	<i>bekostiging</i>	Dutch	Funding
	<i>beperking</i>	Dutch	Limitation/restriction
	<i>numerus fixus</i>	Dutch	Enrolment Restriction (cap)
	<i>collegegeld</i>	Dutch	Tuition Fees
Retention	<i>bindung</i>	German	Retention
	<i>verbleib</i>	German	Remain/Stay
	<i>haltequote</i>	German	Retention Rate
	<i>bleibeperspektive</i>	German	Prospect of staying
	<i>alumni</i>	German	Alumni
	<i>aufenthalt</i>	German	Residence/Stay

	<i>behoud</i>	Dutch	Preservation/Retention
	<i>blijfkans</i>	Dutch	Chance of staying/ Retention rate
	<i>binding</i>	Dutch	Bonding/binding/connectio n
	<i>verblijf</i>	Dutch	Stay/ Residence
	<i>vestiging</i>	Dutch	Branch/settlement/establis hment
	<i>zoekjaar</i>	Dutch	Job search year
	<i>verblijfsvergunning</i>	Dutch	Residence Permit

Table C3: Frequency Table for Macro- level Policy Orientation Analysis

Country	Attraction	Management	Retention	Labour	Unmatched	Total Hits (Frequency)
Germany	434	503	1575	2846	178338	183696
Netherlands	300	1207	610	157	100888	103162

Table C4: Dictionary used for Micro- level policy instrument analysis

Policy Instrument	Term	Language	Meaning (in English)
Admission	<i>zulassung</i>	German	Admission
	<i>numerus clausus</i>	German	Enrolment restriction (admission cap)
	<i>toelating</i>	Dutch	Admission
	<i>numerus fixus</i>	Dutch	Enrolment restriction (admission cap)

	<i>kapazitätsgrenze</i>	German	Capacity Limit
	<i>capaciteitsbeperking</i>	Dutch	Capacity Limitation
	<i>selectie</i>	Dutch	Selection
Enrolment	<i>einschreibung</i>	German	Enrolment
	<i>immatrikulation</i>	German	Matriculation/ Enrolment
	<i>inschrijving</i>	Dutch	Registration/ Enrolment
	<i>instroombeperking</i>	Dutch	Inflow restriction/limitation
	<i>studierendenzahlen</i>	German	Student Numbers
	<i>studenteninstroom</i>	Dutch	Student Enrolment
Housing	<i>wohnraum</i>	German	Housing/ Living space
	<i>studentenwohnheim</i>	German	Student Dormitory
	<i>huisvesting</i>	Dutch	Housing

	<i>studentenhuisvesting</i>	Dutch	Student housing
	<i>woonruimte</i>	Dutch	Living space
Institutional Funding	<i>hochschulfinanzierung</i>	German	University Funding
	<i>bekostiging</i>	Dutch	Funding
	<i>lumpsum</i>	Dutch	Lump Sum funding
	<i>prestatiebekostiging</i>	Dutch	Performance (based) Funding
	<i>mittelvergabe</i>	German	Allocation of funds
Labour Integration	<i>arbeitsmarktintegration</i>	German	Labour market integration
	<i>arbeidsmarktintegratie</i>	Dutch	Labour market integration
	<i>berufseinstieg</i>	German	Career Entry
	<i>inzetbaarheid</i>	Dutch	Employability
	<i>praktikum</i>	German	Internship

	<i>stages</i>	Dutch	Internships
Language	<i>unterrichtssprache</i>	German	Language of instruction
	<i>onderwijstaal</i>	Dutch	Language of instruction
	<i>taaleis</i>	Dutch	Language Requirement
	<i>sprachnachweis</i>	German	Language certificate/ Proof of language proficiency
	<i>deutschsprachig</i>	German	German- speaking/ German- taught
	<i>engelstalig</i>	Dutch	In English/ English- speaking/ English-Taught
	<i>voertaal</i>	Dutch	Working language/ Language of instruction
Post Study Work	<i>arbeitsplatzsuche</i>	German	Job search
	<i>zoekjaar</i>	Dutch	(Job) Search year/ post- study job search

	<i>verblijf na afstuderen</i>	Dutch	Residence after graduation
	<i>aufenthalt nach dem studium</i>	German	Stay after studies
Recognition	<i>anerkenning</i>	German	Recognition
	<i>erkenning</i>	Dutch	Recognition
	<i>diploma-erkenning</i>	Dutch	Diploma recognition
	<i>waardering</i>	Dutch	Valuation/ Evaluation
	<i>gleichwertigkeit</i>	German	Equivalence
Recruitment	<i>anwerbung</i>	German	Recruitment
	<i>werving</i>	Dutch	Recruitment
	<i>rekrutierung</i>	German	Recruitment
	<i>marketing</i>	German/Dutch	Marketing
	<i>promotie</i>	Dutch	Promotion

	<i>standortattraktivität</i>	German	Location attractiveness
Retention Support	<i>bindung</i>	German	Retention/Binding/Bonding
	<i>behoud</i>	Dutch	Retention/Preservation
	<i>bleibeperspektive</i>	German	Retention Prospects
	<i>integratie</i>	Dutch	Integration
	<i>willkommenskultur</i>	German	Welcoming culture
	<i>regionale binding</i>	Dutch	Regional bonding/connection
Scholarships	<i>stipendi</i>	German	Scholarships
	<i>beurs</i>	Dutch	Scholarship /Funding / Grant
	<i>beurzen</i>	Dutch	Scholarships /Fundings / Grants
	<i>studiefinanciering</i>	Dutch	Student funding/ finance

	<i>förderung</i>	German	Funding/Support
	<i>subsidieregeling</i>	Dutch	Subsidy scheme
Skilled Migration	<i>fachkräfteeinwanderung</i>	German	Skilled worker immigration
	<i>kennismigratie</i>	Dutch	Knowledge migration
	<i>kennismigrant</i>	Dutch	Knowledge migrant
	<i>arbeidsmigration</i>	German	Labour migration
	<i>erwerbsmigration</i>	German	Employment migration
Tuition Costs	<i>studiengebühren</i>	German	Tuition Fees
	<i>collegegeld</i>	Dutch	Tuition Fees
	<i>studiekosten</i>	Dutch	Study Costs
	<i>semesterbeitrag</i>	German	Semester Fee
	<i>financiële</i>	Dutch	Financial

Visa Residence	<i>visum</i>	German/Dutch	Visa
	<i>visa</i>	German/Dutch	Visas
	<i>studentenvisum</i>	German	Student Visa
	<i>aufenthaltstitel</i>	German	Residence Permit
	<i>verblijfsvergunning</i>	Dutch	Residence Permit
	<i>inreis</i>	Dutch	Entry (into the country)
	<i>toegang</i>	Dutch	Access
	<i>verblijfsrecht</i>	Dutch	Right of residence

Table C5: Frequency Table (Raw) for Micro-level policy instruments

Policy Instruments	Germany	Netherlands
Visa / Residence Permits	485	238
Admission	22	79
Enrolment	0	0
Tuition Costs	0	89
Scholarships	69	11
Institutional Funding	0	154
Recruitment	85	55
Language	0	7
Recognition	0	0
Post Study Work	0	65
Skilled Migration	119	26
Labour Integration	36	0

Retention Support	33	73
Housing	12	21
Total Hits	861	818

Table C6: Dictionary used for empirical discourse analysis

Discourse Frame	Term	Language	Meaning in English
Attraction (Competitiveness)	<i>wettbewerbsfähigkeit</i>	German	Competitiveness
	<i>innovationskraft</i>	German	Innovative strength/ capacity
	<i>wirtschaftsstandort</i>	German	Business/ Economic location
	<i>concurrentiekracht</i>	Dutch	Competitiveness
	<i>economische concurrentie</i>	Dutch	Economic competition
	<i>kennisinfrastructuur</i>	Dutch	Knowledge infrastructure
	<i>excellentie</i>	Dutch	Excellence
	<i>attraktivität</i>	German	Attractiveness

	<i>aantrekkelijkheid</i>	Dutch	Attraction/ Attractiveness
Capacity (Infrastructure)	<i>kapazitätsengpass</i>	German	Capacity bottleneck
	<i>überlastung</i>	German	Overload/ Overcrowding
	<i>infrastruktur</i>	German	Infrastructure
	<i>capaciteitsprobleem</i>	Dutch	Capacity Problem
	<i>overbelasting</i>	Dutch	Overload/ Overburdening
	<i>woningtekort</i>	Dutch	Housing shortage
	<i>studentenhuisvesting</i>	Dutch	Student housing
Domestic (Priority)	<i>inländer</i>	German	Domestic citizen/ National
	<i>vorrangprüfung</i>	German	Priority check/ review (labour/ domestic priority)

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	<i>eigenes land</i>	German	Own country
	<i>voorrang van de eigen</i>	Dutch	Priority of one's own (students)
	<i>eigen student</i>	Dutch	Own student/ domestic student
	<i>toegankelijkheid voor eigen</i>	Dutch	Accessibility for own students (domestic students)
Management (Control)	<i>steuerung</i>	German	Control/ Steering
	<i>begrenzung</i>	German	Restriction/ Limitation
	<i>zuzug</i>	German	Immigration
	<i>migration</i>	German	Migration
	<i>steuer</i>	German	Steering/ Control
	<i>migratiebeheersing</i>	Dutch	Migration control
	<i>instroombeperking</i>	Dutch	Inflow restriction

	<i>regulering</i>	Dutch	Regulation
	<i>beheersing</i>	Dutch	Control/Management
Retention (Labour)	<i>fachkräftemangel</i>	German	Skills shortage (skilled labour shortage)
	<i>fachkräfte</i>	German	Skilled workers
	<i>arbeitsmarkt</i>	German	Labour market
	<i>kennismigratie</i>	Dutch	Knowledge Migration
	<i>arbeidsmarkt</i>	Dutch	Labour Market
	<i>talentbehoud</i>	Dutch	Talent Retention
	<i>Erwerbsmigration</i>	German	Employment migration

Table C7: Refined dictionary used for discourse analysis (Data-driven discovery; TF-IDF)

Refined Discourse Frames	Term	Language	Meaning (in English)
Administrative (Legal Procedures)	<i>aufenthaltserlaubnis</i>	German	Residence Permit
	<i>visum</i>	German/ Dutch	Visa
	<i>verblijfsvergunning</i>	Dutch	Residence Permit
	<i>wetsvoorstel</i>	Dutch	Bill/ Legislative Proposal
	<i>richtlinie</i>	German/ Dutch	Directive/ Guideline/ Policy
Attraction (Competitiveness)	<i>wettbewerbsfähigkeit</i>	German	Competitiveness
	<i>innovationskraft</i>	German	Innovative Strength/ Capacity
	<i>wirtschaftsstandort</i>	German	Economic/ Business Location (Hub)

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	<i>concurrentiekracht</i>	Dutch	Competitiveness
	<i>economische concurrentie</i>	Dutch	Economic Competition
	<i>kennisinfrastructuur</i>	Dutch	Knowledge Infrastructure
	<i>excellentie</i>	Dutch	Excellence
	<i>attractiviteit</i>	German	Attractiveness
	<i>aantrekkelijkheid</i>	Dutch	Attraction/ Attractiveness
Capacity (Infrastructure)	<i>kapaciteitsengpass</i>	German	Capacity bottleneck
	<i>überlastung</i>	German	Overload/ Overcrowding
	<i>infrastructuur</i>	German/ Dutch	Infrastructure
	<i>capaciteitsprobleem</i>	Dutch	Capacity Problem
	<i>overbelasting</i>	Dutch	Overload/ Overburdening

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	<i>woningtekort</i>	Dutch	Housing shortage
	<i>studentenhuisvesting</i>	Dutch	Student housing
Domestic (Priority)	<i>inländer</i>	German	National/ Domestic citizen
	<i>vorrangprüfung</i>	German	Priority Check/ Review
	<i>eigenes land</i>	German	Own country
	<i>voorrang van de eigen</i>	Dutch	Priority of one's own (students)
	<i>eigen student</i>	Dutch	Own student/ Domestic student
	<i>toegankelijkheid voor eigen</i>	Dutch	Accessibility for own (domestic students)
Language (Instruction Policy)	<i>anderstalig onderwijs</i>	Dutch	Foreign- language education
	<i>taalbeleid</i>	Dutch	Language Policy

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	<i>language policy</i>	English	Language Policy
	<i>english-taught</i>	English	English- taught
	<i>deutschsprachig</i>	German	German-speaking/ German-taught
Management (Control)	<i>steuerung</i>	German	Control/ Steering
	<i>begrenzung</i>	German	Limitation/ Restriction
	<i>zuzug</i>	German	Immigration/ Inflow
	<i>migration</i>	English	Migration
	<i>steuer</i>	German	Steering/ Control
	<i>migratiebeheersing</i>	Dutch	Migration control/ management
	<i>instroombeperking</i>	Dutch	Inflow restriction/ limitation
	<i>regulering</i>	Dutch	Regulation

		<i>beheersing</i>	Dutch	Control/ Management
		<i>drucksache</i>	German	Printed matter (Parliamentary document)
		<i>wahlperiode</i>	German	Legislative period
Retention Labour)	(of	<i>fachkräftemangel</i>	German	Skilled labour shortage
		<i>fachkräfte</i>	German	Skilled workers
		<i>arbeitsmarkt</i>	German	Labour market
		<i>kennismigratie</i>	Dutch	Knowledge migration
		<i>arbeidsmarkt</i>	Dutch	Labour market
		<i>talentbehoud</i>	Dutch	Talent retention
		<i>Erwerbsmigration</i>	German	Labour/ Employment migration

Table C8: Frequency Table (Raw) for Discourse Analysis (Refined; TF-IDF)

Discourse Frames	Germany	Netherlands
Attraction (Competitiveness)	68	0
Management (Control)	20	43
Retention of Labour	1384	0
Capacity Infrastructure	0	0
Domestic Priority	0	0
Language of Instruction Policy	0	0
Administrative/ Legal Procedures	564	222
Total Hits (Frequency)	2036	265

Table C9: Dictionary used and co-occurrence results (Inductive Collocations; Text-as-data analysis)

Collocation	Meaning in English (and Language)	Frequen cy	Len ^g th	Lambda (λ)	z- scores (z)
<i>internationale studenten</i>	Internation al Students (Dutch)	312	2	4.66234579136 777	63.4592115402 006
<i>hoger onderwijs</i>	Higher Education (Dutch)	466	2	7.46566254580 217	60.7758808924 877
<i>wahlperiode drucksache</i>	Parliamenta ry Document; Legislative (German)	210	2	7.07990791441 75	60.6189796478 677
<i>drucksache deutscher</i>	Printed Matter of the Bundestag (German)	210	2	6.31970011188 578	59.7905363785 401

<i>pro fall</i>	Per case (German)	179	2	7.74717789502 273	55.4407500923 505
<i>anderstalig onderwijs</i>	Education in foreign Language (Dutch)	215	2	5.47036354740 666	54.7992224975 325
<i>internationaler studierender</i>	Internation al Student (German)	181	2	7.98101114580 605	54.2387628016 433
<i>folgt geändert</i>	Amended as follows (German)	150	2	8.22920289435 651	51.0966264319 437
<i>migration flüchtlinge</i>	Migration, refugees (German)	116	2	7.86282900991 663	47.1520942610 285
<i>bepaalde tijd</i>	Fixed- term (Dutch)	115	2	8.68633425470 943	45.8864829626 132
<i>internationale studierende</i>	Internation al Students (German)	134	2	4.96396144078 754	45.0092704608 088
<i>richtlinie EU</i>	EU Directive (German)	178	2	7.52455673456 809	44.6649579479 213

<i>deutschen hochschulen</i>	German Universities (German)	150	2	4.30178959533 187	44.5891534985 328
<i>bundesamt migration</i>	Federal Office for Migration (German)	100	2	8.61955808655 835	43.9894975574 833
<i>erteilung aufenthaltserlau bnis</i>	Issuance of Residence Permit (German)	96	2	5.72280080004 288	43.8422424684 884
<i>toets anderstalig</i>	Foreign- language exam (Dutch)	104	2	7.15786305904 631	43.6082446928 099
<i>nederlandse taal</i>	Dutch Language (Dutch)	109	2	4.87826359131 917	42.3820637715 087
<i>euro pro</i>	Euros per (German)	100	2	5.18984471707 082	41.9628849140 928
<i>tsd euro</i>	Thousand Euros (German)	105	2	6.64316736217 21	41.3414515668 45

<i>darüber hinaus</i>	In addition (German)	179	2	10.7685313241 645	41.1987243606 797
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Appendix D: Comparative Overview of Tertiary Education Internationalisation Policy

Table D1: Comparative Overview of Higher Education Internationalisation Policy: Germany and the Netherlands

Dimension	Germany	Netherlands
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Policy Context & Trajectory

Historical starting point	Internationalisation embedded in a publicly funded HE system, pursued through academic exchange and cooperation rather than tuition-based recruitment.	Internationalisation built through expansion of English-medium instruction, international recruitment and institutional partnerships, framed around quality and competitiveness.
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Trigger for reorientation	Demographic ageing and persistent skilled-labour shortages; 2000 Green Card, 2005 Immigration Act, 2007/2012 reforms linking study to employment.	Rapid enrolment growth (~4% of students in 2010 to >10% in 2017) straining capacity, accessibility and the position of Dutch; 2019 Interdepartmental Policy Review.
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Current strategic framework	2024 Strategy Internationalisation of Higher Education Institutions (2024–2034).	Federal–Länder for the plus July 2026 administrative agreements.	2024 Wet internationalisering in balans (WIB, still in the legislative process)
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Scale (most recent)	≈379,939–402,000 international students/doctoral candidates (2023/24–2024/25); third-largest global host country.	131,004 international degree students (2024/25), falling to 129,764 in 2025/26 – the first recorded year-on-year decline since 2006.
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Overall trajectory	Expansion-orientated: from academic exchange toward a comprehensive recruit–educate–retain model.	Managed/selective trajectory: from open-ended expansion toward controlled internationalisation.
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Policy Objectives & Framing

<i>Core policy objective</i>	Strengthen higher education/research, maintain international attractiveness, and secure the future skilled-labour supply (BMBF & KMK, 2024).	Achieve a "sustainable balance" (duurzame balans) between benefits and societal/institutional costs; "grip" over student flows, not withdrawal from internationalisation.
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<i>Central structural driver</i>	Demographic change and skilled-labour shortage - a labour-market "pull" logic.	Institutional capacity and housing pressure - a domestic-capacity "push-back" logic.
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<i>Legitimizing discourse</i>	Fachkräfte (skilled-worker) shortage, demographic necessity, global competitiveness for talent.	Accessibility, educational quality, housing, the position of Dutch and domestic students, and interests.
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<i>Ideological framing</i>	Expansive model framing: internationalisation increasingly framed through global competitiveness, individual mobility and human-capital/labour-market returns.	Restrictive/managed model framing: internationalisation increasingly framed through accessibility, educational quality, linguistic sustainability and social/institutional capacity.
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Recruitment

<i>Recruitment infrastructure</i>	DAAD-led national infrastructure (scholarships, "Study in Germany" campaign, overseas offices, uni-assist); low/no tuition at public universities.	NL Scholarship (€5,000, non-EEA, first year); historic expansion of English-taught programmes.
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<i>Recruitment direction of travel</i>	Broadly open, volume-orientated and geographically diversified.	Increasingly gated: numerus fixus (incl. foreign-language tracks), non-EEA caps, emergency fixus, and recruitment steered to regional shortage sectors.
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Language & Integration

<i>Language model</i>	Mixed model; English/German English-taught provision expands alongside retained German-medium teaching.	Dutch-language protection is an explicit regulatory objective; WIB seeks to reassert Dutch as the principal medium of instruction.
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<i>Integration instruments</i>	Studienkollegs, aptitude assessment, qualification recognition, career advice, employer cooperation, and DAAD's FIT initiative.	Dutch-language proficiency is tied to "blijfkans" (stay probability); 2026 agreements commit institutions to Dutch-language training.
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<i>Integration logic</i>	Support-orientated – helping students succeed within a system that keeps English provision intact.	Regulatory/integrative - regulating foreign-language provision while strengthening Dutch-language acquisition, accessibility and labour-market integration.
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Retention & Labour-Market Transition

<i>Post-study residence pathway</i>	Up to 18-month post-study job-search permit (extended from 12 months in 2012); labour-market priority test abolished for HE graduates (2007).	Orientation-year residence permit (zoekjaar) - one year to find work or start a business.
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<i>Recent reinforcements</i>	2024 Further Development of the Skilled Immigration Act raised permitted student working days from 120 to 140; opportunity card.	16,120 orientation-year permit holders in 2025, up from 14,530 in 2024.
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<i>Retention outcomes</i>	46,285 status changes from education/job-search into labour migration recorded in 2024.	≈25.3% of international graduates are still residents five years after graduation (Nuffic longitudinal data).
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<i>Retention logic</i>	A broad and comparatively established pathway linking higher education with skilled employment.	Narrow and selective - explicitly conditioned on shortage-sector relevance and regional concentration (Greater Amsterdam).
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Governance

<i>Governance structure</i>	Constitutionally decentralised (Länder responsible for education) with growing Federal coordination since the 2015 amendment to Article 91b.	Movement from institutional autonomy toward multi-level governance: legislation (WIB) + institutional self-regulation (VH/UNL) + administrative agreements (2026).
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<i>Governance trend</i>	Adds coordination on top of established institutional autonomy, without new restrictive levers.	Introduces new restrictive statutory/administrative levers (numerus fixus, enrolment caps) after
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voluntary discretion was judged to have produced unsustainable growth.

Divergence Drivers

<i>Housing</i>	Not identified as a central national driver of internationalisation policy in the German policy corpus.	An explicit, formally acknowledged driver - directly linked to policy in government communications (Oct. 2024) and the 2026 agreements.
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<i>Geographic concentration</i>	Not a dominant theme; the sector is large and federally distributed.	44% of international students concentrated in North and South Holland (2023/24), straining specific institutions and cities.
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<i>National discourse pattern (text-as-data)</i>	Institutional consensus (BMBF, Bundestag, Wissenschaftsrat), shifting toward retention/labour framing from ~2018 to 2019.	Reactive parliamentary framing (Tweede Kamer) driven by legislative proposals; shift toward management/control and capacity/infrastructure framing, surging in 2019 and 2024.
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Potential Distributional Effects

<i>Potential beneficiaries</i>	International students (broad access, low tuition, 18-month job search); HE institutions (recruitment autonomy); employers in shortage	Domestic/EEA students (intended accessibility gains); municipalities/housing markets (intended relief); employers in targeted shortage sectors.
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sectors; national economy
(expanded skilled
workforce).

<i>Potential risks</i>	Not centrally framed in the domestic debate; risk concentrated in capacity strain on specific institutions and dropout among under-supported groups.	Non-EEA/international applicants generally (new caps, language requirements); institutions losing recruitment autonomy; SEO (2025) estimated potential GDP losses of approximately €3.9–€4.8 billion per cohort under substantial reductions in international enrolment.
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<i>Primary policy risk</i>	Overheating: recruitment success outpacing academic support and integration capacity (historically higher dropout among some Bildungsausländer groups).	Overcorrection: capacity/accessibility gains offset by foregone human-capital and fiscal contributions from reduced international enrolment.
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Note. HE = higher education. BMBF = Bundesministerium für Bildung und Forschung; KMK = Kultusministerkonferenz. WIB = Wet internationalisering in balans. VH/UNL = Vereniging Hogescholen / Universiteiten van Nederland.