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Growing through skills: the integration of transnational dimensions into growth regimes

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Abstract

This article proposes a new conceptualisation of skill formation within growth regimes that integrates a transnational dimension. Drawing on insights from global value chain and managed migration scholarships, skill formation can become a transnational effort coordinated by a dominant growth coalition sourcing skills for economic growth. Focusing on Germany as a least-likely case, this article finds an increase in policies and practices to transfer vocational education and training and manage labour migration, as part of a growth strategy to sustain export-led growth. A coalition of the state and employers supports this strategy, called ‘externalisation’, which unions, political parties, and foreign governments do not oppose. Through the study of externalisation, we advocate for a departure from methodological nationalism when studying growth in 21st-century political economies.

Key words: Germany; political economy; politics; growth theory; skills, migration.

JEL classification: O400 Economic Growth and Aggregate Productivity: General; P110 Capitalist Systems: Planning, Coordination, and Reform

1. Introduction

Political economy has long examined the strategies that advanced capitalist democracies use to achieve economic growth. While scholars typically frame this as either a supply-side (Hall and Soskice 2001) or demand-side issue (Baccaro, Blyth, and Pontusson 2022), a more integrative approach highlights the inextricable link between ‘the main driver of demand and the way the supply side is organised’ (Hassel and Palier 2023: 350). Accordingly, countries can be understood through the lens of distinct ‘growth regimes’, defined as modes of governance of the economy that encompass both supply-side and demand-side elements.

Growth regimes are defined by the sectors functioning as engines of growth, the institutions governing the economy, and the main components of aggregate demand (Hassel and Palier 2021: 12).

Skill formation plays a crucial role in growth regimes by ensuring that the sectors driving economic growth have access to the right quality and quantity of skills. Traditionally, the literature highlights the complementarities between skill formation and specific industries (Chevalier 2021), with the German vocational education and training (VET) system and its alignment with advanced manufacturing as a key example. However, with the rise of the knowledge economy and of intellectual inputs carrying a higher premium, the traditional complementarity between skill formation and economic sectors is disrupted, altering the skill requirements of advanced capitalist economies (Baethge and Wolter 2015; Graf 2017; Durazzi and Benassi 2020). At the same time, demographic change further complicates skill provision, requiring skill formation institutions to adapt to changing workforce demographics.

We argue that a new dimension of change in skill formation lies in its increasingly transnational orientation. By connecting the literatures on global value chains and managed migration to the study of skill formation, we identify two trends that challenge skill formation's traditional national anchoring. First, manufacturing corporations have pursued a strategy of 'producing where they sell' (Alfaro and Chen 2014; Herrigel 2020), shifting production to emerging and developing economies where consumer demand continues to grow, unlike advanced economies with saturated consumer markets. This shift requires a workforce with skill levels comparable to those in previous production locations, typically located in advanced economies. Second, as demographic decline intensifies, advanced capitalist economies are expanding the extent of labour migration. This has led to a growing influx of workers trained in different skill formation systems entering advanced capitalist economies (Menz 2008; Afonso and Devitt 2016). By documenting these trends and studying their politics, we advocate for a broader perspective on skill formation that encompasses all the policies and practices that develop labour-market-relevant skills, whether domestically or abroad, to sustain a growth regime.

We argue that dominant growth coalitions use transnational skill formation as a strategy to sustain economic growth. A dominant growth coalition consists of producer groups and state actors aware of the 'requirements of the growth model with privileged access to government bureaucrats and the policy implementation sphere' (Baccaro, Blyth, and Pontusson 2022: 35). To ensure an adequate supply of skills, dominant growth coalitions actively shape transnational skill formation. We refer to this process as 'externalisation', referring to the strategic use of transnational policies and practices to develop and access the skills required by a national growth regime.

We explore this argument through a least-likely case study: Germany's rigid and nationally anchored VET system (Graf 2017; Trampusch 2020). Using process tracing, we examine transnational skill formation and argue that it is employed by the dominant growth coalition to secure skills for sustaining the export-led growth model relying on foreign demand. We investigate developments since the global financial crisis, which is the period when German policymakers explicitly configured growth as export-led (Baccaro and Pontusson 2021). Our data sources include 14 interviews with relevant stakeholders and over 100 documents (more details in Annexes I and II).

In our case study, externalisation occurs through skill formation transfers and managed labour migration policies. We find that state actors and representatives of German companies have strategically transferred skill formation to support exporting industries while adjusting labour migration policies for non-exporting sectors. Trade unions, political parties, and foreign governments do not resist this strategy, which is a key condition for the survival of a dominant growth coalition. To strengthen the argument, we systematically analyse and reject counter-arguments about policies that could have attained similar objectives but were not pursued, and plausible motivations behind externalisation other than sustaining the growth regime.

The study of externalisation holds societal and scholarly relevance. Sourcing skills is a profoundly social endeavour, historically balancing employers' demands with the inclusion of marginalised groups through employment opportunities (Carstensen and Ibsen 2021). While our argument highlights power implications for the countries where labour is sourced, we caution against portraying them as passive policy-takers. Externalisation can, in some cases, help reduce youth unemployment and increase remittances (Wanklin 2025). This article also contributes to multiple strands of academic literature. It advances scholarship on growth regimes by emphasising how dominant growth coalitions shape skill formation to supply the labour-market-relevant skills necessary for economic growth. In addition, it calls for greater attention to the role of the dominant growth coalition in areas that remain underexplored in growth model scholarship. Finally, by challenging the assumption that skills are confined within national borders, this article contributes to political economy scholarship by advocating for transnational conceptualisations of institutions.

This article is organised as follows. Section 2 provides a literature review on the role of skills in political economy, while Section 3 illustrates the need to move beyond a national perspective on this issue. Section 4 presents our research design and method. Section 5 presents the argument of the article through the German case study. Section 6 discusses the argument by refuting alternative explanations on the politics of externalisation and by reflecting on its limitations. The conclusion summarises and suggests avenues for further research.

2. The role of skills in economic growth

The literature on growth models (Baccaro, Blyth, and Pontusson 2022) focuses on the demand-side mechanisms that drive economic growth. Scholars study how countries have responded to the decline in wage-led growth since the 1990s and explore growth models, namely 'national-level responses to boost aggregate demand in times of secular stagnation' (36). The politics of growth models revolve around a dominant growth coalition, which is composed of state actors, producer groups, and politicians who are aware of the 'requirements of the growth model [...] with privileged access to government bureaucrats and the policy implementation sphere' (35). In contrast, adopting a supply-side perspective, the seminal Varieties of Capitalism scholarship argues that economic growth results from positive feedback effects generated through complementarities between skill formation, collective bargaining, corporate governance, and welfare policies (Hall and Soskice 2001). While these approaches are often contrasted, Hassel and Palier (2023) propose synthesising the two, relying on connections 'between the main driver of demand and the way the supply side is organised' (350). They thus suggest focusing on 'growth regimes',

defined as ‘modes of governance of the economy, including the institutional, policy and organisational frameworks that shape the specialisation of firms and the consumption and saving patterns of the population’ (350); therefore, including both supply-side and demand-side elements.

Growth regimes imply that governments and producer groups choose growth strategies to boost economic growth and job creation (Hassel and Palier 2021). The growth regime approach has the advantage of identifying the nexus between the skill requirements of industries and the system providing them as essential to achieving economic growth. Indeed, any economic growth (demand-led or export-led) requires specific skills, often stylistically portrayed as distributed along a continuum including high, medium, or low skills (Chevalier 2021: 353). According to the growth regimes scholarship, the sectors identified as the engine of growth are complementary to specific skill formation institutions. For example, the German export-led growth model has reached competitiveness in the high-value-added sectors producing for exports by relying on specialised mid-skilled labour (cf. Sorge and Streeck 2018; Baccaro and Benassi 2016). German advanced manufacturing has been shown to have a symbiotic relationship with a skill formation system that supplies mid-level skills through VET (Durazzi 2023). However, with the rise of the knowledge economy, the skills required to grow are increasingly connected to intellectual capabilities, and even advanced manufacturing requires more highly-skilled labour (Durazzi 2023).

3. Skills in the 21st century: beyond a national perspective

Growth regimes adapt to the evolving relationship between skills and economic growth, requiring a shift beyond a purely national perspective to fully grasp their political economy. In line with the tradition in Comparative Political Economy, the growth regimes scholarship retains a substantially national view of institutions. However, scholars emphasise the importance of incorporating system-level international variables, such as oil prices and examining how national growth models shape the global system (Schwartz and Blyth 2022; Schedelik et al. 2023). In contrast, we argue that even institutions traditionally anchored to a national context, that is, skill formation, are subject to transnational processes and interdependencies that erode their links to the national political economy. In the case of skill formation, we observe the extension of its reach beyond national borders in at least two ways.

The first transformation affecting skill demands is the liberalisation and deregulation of international trade and investment (Unterweger 2022). The global value chains literature has studied the cost-cutting strategy for producers in globalised markets to outsource less value-added processes to lower-income countries while maintaining the highest value-added parts at home (Gereffi 1994). This strategy, known as offshoring, was underpinned by high consumption rates in advanced capitalist economies and expanded economic opportunities for value chain participation in emerging and developing economies (Eckhardt and Poletti 2018). However, the pre-conditions for offshoring no longer hold because consumer demand in advanced capitalist economies is stalling on the backdrop of consumer markets in developing Asia or BRICS economies, who are growing in the double digits and are home to over 40 per cent of the world population (Gereffi 2014; Neilson, Pritchard, and Yeung 2014). As a reaction, German companies’ behaviour is shifting, and they interact with local institutions in a novel, if under-explored, manner. Importantly, it has become profitable to

'produce where they sell' (Herrigel 2015), which means conducting production where demand is growing (Vahlne and Ivarsson 2014; Tintelnot et al. 2018). This strategy can suit products to the consumers' preferences without relying on independent contract manufacturers (Alfaro and Chen 2014; Antràs, Fort, and Tintelnot 2017) and rests on efficient communication networks (Fort 2017).

The case of advanced German manufacturing illustrates this shift (Herrigel 2018; Butollo and Staritz 2022). Within manufacturing companies, increasingly, only the core of high engineering and design still takes place in Germany, while all the other production occurs in foreign locations (Herrigel, Voskamp, and Wittke 2017). Emblematically, German automobile producers manufacture more than half of their vehicles outside Germany, with China as the most prominent production location (VDA 2022a). While 'produce where you sell' does not outright replace exporting, it notably impacts skill requirements. On the one hand, headquarters require highly skilled workers with tertiary education backgrounds to fulfil research, development, and design functions (Durazzi 2023). On the other hand, production facilities abroad require skilled labour that is specialised in a way commonly associated with the German VET system. These dynamics impact the German economy, where the companies' profit is channelled. In sum, the types of jobs, either in demand nationally or required by German companies abroad, are changing (Oesch and Rodriguez Menes 2011). Skill formation thus becomes a transnational issue requiring coordination across locations.

A second trend compounding changes in skill demands is the demographic decline in advanced industrialised economies. A shrinking labour force affects advanced economies' ability to secure an adequate supply of mid-skilled workers essential for expanding service sectors and ageing societies (OECD 2016). Managed migration scholars have argued that these skills can be sourced through labour migration. Menz's (2008) seminal work has established that as liberal societies recognise the inevitability of immigration, they organise cooperative efforts to influence the characteristics of migration flows and link the admission of new migrant workers to the needs of the domestic labour market. These cooperative efforts can include, for instance, visa schemes, social protection policies, point systems, quotas, family reunification systems, and international agreements. The politics of managed migration involve foreign governments, recipient states, and frequently, international organisations and private sector actors (Panizzon, Zürcher, and Fornalé 2015). Acknowledging the difficulty of successful managed labour migration, the latter, in contrast to other types of migration, such as asylum, forced migration, and family reunification, may substitute or complement national skill supplies (Afonso and Devitt 2016: 595). The politics of managed migration are not easy or consensual and involve employers' organisations, trade unions, political parties, and national governments (Menz and Caviedes 2010). For example, the influx of foreign workers through migration has always worried trade unions, concerned about the risk of decreasing wages and work conditions. Moreover, labour migration may trigger limited political support from political parties (Schultz et al. 2021).

In conclusion, this section highlights how the nature of skills, key to sustaining economic growth, is becoming increasingly transnational. This shift is driven by changing skill needs of companies producing abroad and the expansion of managed labour migration. To account for these dynamics, we argue that growth regimes scholarship must expand its

theoretical toolkit to examine how skill formation systems sustain growth models in the face of transnational interdependencies that challenge national borders.

4. Research design and method

We conduct an in-depth case study of the German collective skill formation system, also known as the ‘dual VET system’, which represents a least-likely skill formation system to become transnational for two reasons (Seawright and Gerring 2008). On the one hand, its governance is complex to transfer abroad. The German skill formation system includes occupation-specific VET collectively governed by the state, employer organisations, and trade unions. While elements of statist or liberal skill formation systems have been more easily transferred abroad, the German collective governance structure is complex to transfer to contexts lacking associational logic, as illustrated by the literature on policy transfer (Maurer and Gonon 2014). On the other hand, the system is hard to access for migrants. Germany has traditionally encouraged limited high-skilled migration to fulfil its domestic skill needs (Menz 2008). The immigration of mid-skilled workers is hindered by Germany’s occupational labour market, where jobs are segmented into particular skill groups, accessible only to those with the corresponding qualifications acquired through the dual VET system (Trampusch 2020). This way of organising the labour market is typically associated with occupational protectionism, which is known to create barriers to migration. By choosing a case where the relationship between transnational elements and skill formation seems less likely to manifest, we deliberately set up a challenging test of this relationship. If the proposed relationship holds even under the most unfavourable conditions, it is expected to be applicable beyond the specific case.

German growth is prototypically export-led and dependent on price-sensitive exports (Di Carlo, Hassel, and Höpner 2024). This is demonstrated by the disproportionate size of value added in German manufacturing and high current account surpluses against the backdrop of relatively low consumption and investment in international comparison (Baccaro and Benassi 2016; Baccaro and Höpner 2022). With the fourth highest GDP in the world and hosting 6 per cent of global manufacturing, Germany has a low unemployment rate of 5.3 per cent in 2022 (ILO 2023). To maintain export competitiveness in a single currency regime, German wages are compressed and low compared to labour productivity, which keeps domestic demand low (Höpner 2019; Haffert and Mertens 2021). Although wage restraint is a contested policy choice, it remains politically viable to maintain a record-high current account surplus (Jacoby 2020; Di Carlo, Hassel, and Höpner 2024).

We trace the political strategies in German skill formation since 2008. The global financial crisis represents a fitting starting point for studying the relationship between skill formation systems and growth regimes because it is recognised as the explicit start of the pursuit of export-led growth (Baccaro and Pontusson 2021). We conduct process tracing, defined as ‘an analytic tool for drawing descriptive and causal inferences from diagnostic pieces of evidence—often understood as part of a temporal sequence of events or phenomena’ (Collier 2011: 823). We collected two types of data for process tracing. First, we conducted fourteen semi-structured interviews with experts on the nexus of VET, migration, and the labour market, as well as actors involved in its governance, such as representatives of employer and employee organisations in Germany and abroad, project and HR managers involved in VET projects outside of Germany (details on interviews provided in Annex I,

hereafter referenced as ‘INT’). Second, we analysed over 100 documents reported in [Annex II](#) (strategy papers referenced as ‘S’, policy papers as ‘PolP’, position papers as ‘PosP’, regulations as ‘REG’, websites as ‘W’, reports as ‘REP’, studies as ‘SW’, news articles as ‘N’). We analysed the data using deductive yet flexible qualitative content analysis ([Schreier 2012](#)). To capture the transnational elements of German skill formation (i.e. externalisation), we investigate the policies and practices governing collective skill formation systems along the core task areas, for example, steering, financing, monitoring, matching, and certifying skill provision ([Emmenegger, Graf, and Trampusch 2019](#)).

5. Externalisation at the nexus between German skill formation and its growth model

This section analyses the changes in German skill formation. Following an introduction to the case context, we present evidence of changed policies and practices in skill formation, driven by the dominant growth coalition’s efforts to sustain economic growth. Quantitative data supporting this analysis can be found in [Annex III](#).

5.1 What skills does Germany need and where?

Skill needs evolve both domestically and internationally. Domestically, Germany has faced an ever-increasing lack of skilled personnel since the 2000s, particularly in the middle of the skill distribution and in occupations requiring dual VET ([Federal Employment Agency 2023](#); [Tiedemann and Malin 2023](#); see [Annex III, A.2](#)). Skilled workers in the non-exporting service sector, particularly in care, hospitality, retail, craftspeople, and construction workers, have been in short supply. This development particularly pressures small- and medium-sized enterprises, accounting for 59 per cent of total German employment and 48 per cent of value-added ([OECD 2021](#)). The causes of this skills shortage are contested but can broadly be traced to deindustrialisation ([Wren 2021](#)) and academisation ([Durazzi and Benassi 2020](#)), rendering higher education more attractive than VET ([Baethge and Wolter 2015](#)). On the demand side, structural features of the education system, including early education tracking, render occupationally-oriented tracks like VET less attractive for the youth. On the supply side, the education system struggles to integrate early school leavers and those who cannot land an apprenticeship into the labour market, contributing to the shortage ([Busemeyer 2009](#)). Demographic changes further aggravate the shortage of skilled labour. Estimates from the German Federal Statistical Office expect a 19 per cent decline in the working population (20–65 years old) by 2060 ([Fuchs, Söhnlein, and Weber 2022](#)). Finally, the persistence of wage compression renders VET occupations less attractive than highly skilled ones and hinders the provision of better salaries in VET-trained jobs ([DGB 2019](#)).

German skill needs are also evolving abroad. As German companies increasingly ‘produce where they sell’, skill demands of foreign production structures change (see [Annex III, A.1](#)), and the skill requirements at company headquarters are evolving as well, increasingly requiring highly skilled workers with tertiary education backgrounds ([Durazzi 2023](#)). The foreign locations increasingly require a workforce akin to German VET-trained mid-skilled workers, which is particularly challenging. German companies abroad report finding many candidates with school-based and tertiary qualifications but not enough with technical and mid-level skills ([Herrigel, Voskamp, and Wittke 2017](#)). This is not surprising: as

argued above, the specificity of German VET, and its complementarity to advanced manufacturing are hard to replicate in foreign contexts. As a caveat, the shift to producing goods abroad does not replace traditional exporting strategies, which continue to sustain the German economic model. In essence, the skill needs of Germany concern mid-skilled personnel, especially for the construction, crafts, and service sectors at home and VET-trained workers for manufacturing abroad.

5.2 The policies and practices of externalisation

This section explores how skill formation has become more transnational since 2008, analysing evolving policies and practices first in VET transfer, and second in managed labour migration.

5.2.1 Skill formation transfer

Externalisation crucially involves the transfer of German VET to foreign contexts, engaging a range of actors across the public and private sectors. Transfers of skill formation involve processes designed to convey the core ideas, concepts, and institutional arrangements of a domestic skill formation system to foreign contexts (Li and Pilz 2023). Depending on local contexts and strategic considerations, we observe transfers occurring at the firm, sector, or system level, all aimed at training workers through VET (see Annex III, B.1). At the system or sectoral level, transfers include reforming VET systems in foreign countries, introducing incentives for companies in a particular sector to train according to German occupational standards, and supporting German training providers in expanding their activities abroad (INT5; INT7; INT8; L5; L8; REP14; S4; W25). These systematic transfers take place, for instance, through bilateral cooperation aiming at introducing VET reforms (i.e. between Germany and Egypt, Serbia, Costa Rica, Thailand, or Vietnam) or cooperation between German and foreign sectorial chambers (W30; W31). At the firm level, transfers include organising and modernising training processes, delivering training and examinations, and issuing internationally recognised training certificates (L3; L10; REP12). The most popular VET tracks to transfer are those for mechatronics engineers, industrial mechanics, industrial clerks, and tool makers (R12). While exact data on VET transfer activities in firms are lacking, the German Chambers of Commerce Abroad (AHKs) report that they have organised VET training inspired by German skill formation practices for 2000 companies in more than forty-five countries, benefitting nearly 20,000 apprentices (W22).

Various public and private actors govern and implement VET transfers. Regarding the private sector, the AHKs, which are official representations of the German economy abroad, drive VET transfers with private education providers (REP12; REP14; REP16). In addition, German companies with sizeable human resource departments (e.g. car and tool manufacturing companies) producing abroad engage in VET transfers by training in their host countries according to German VET practices (INT3; INT5; INT7; INT11; L3; L4). The German state is formally involved in transfers through official development assistance (ODA) or bilateral cooperation agreements (L5; L6). While the Federal Ministry in charge of education coordinates and consolidates VET transfer (S4; INT4), two other ministries provide strategic capacity to VET transfers. The Federal Ministry in charge of development and economic cooperation (BMZ) funds and provides technical assistance for the transfers, while the Federal Ministry in charge of the economy (BMWK) oversees

exports and is interested in promoting them in tandem with VET transfers (INT3; INT4; INT5; INT8).

While transfers of the German VET systems are not new, their scale and extent have increased substantially in the post-global financial crisis decade. Since 2008, the disbursement of Germany's ODA towards the VET sector has increased by a factor of four, reaching an average of approximately 400 million USD per year between 2018 and 2022 (OECD n.d.). This positions Germany as the number one donor in the field of VET (S3; S4; S8; W21). Although some of the most significant allocations of German ODA are 'needs-based', channelled to low-income and fragile economies (Hoeffler and Sterck 2022; OECD n.d.), some of the largest recipients are countries that receive substantial German Foreign Direct Investment (FDI), for example, China, South Africa, Sri Lanka, and Vietnam. Many are also explicitly recognised as having the potential to host skilled workers, for example, Indonesia, Egypt, India, Albania, Tunisia, Morocco, Colombia, Mexico, Vietnam, and the Philippines (SW2). In sum, the increased scale and strategic focus of German VET transfers reflect the growing importance of skill formation for economic growth.

5.2.2 Migration policy

Externalisation also involves the liberalisation of Germany's migration policy regime since the global financial crisis, particularly focusing on the increasing openness to mid-skilled labour. The German migration policy regime traditionally took a protective stance until the 2000s, granting social partners control over immigration (Maletzky 2017). Few qualifications, such as those in regulated professions (e.g. health), could access the labour market, while guestworkers coming to Germany to fill manual labour shortages were recruited regardless of the qualifications they had obtained abroad. However, this began to change at the turn of the century (see Annex III, B.2), when the entry of high-skilled IT professionals was first facilitated in the 2000s. Allowing entry for highly skilled workers in specific occupations is still considered a typical element of a protective migration policy (Menz 2008).

A change that challenged the logic of a protectionist migration regime occurred after the financial crisis, when immigration was liberalised. This change, which involved relaxing rules for mid-skilled workers, stemmed from the recognition that intra-EU migration was less effective than expected to address skill shortages (OECD 2023). Several policies have liberalised mid-skilled immigration. First, the 2012 Recognition Act created a framework for recognising non-regulated professions, including all formal occupations trained within the German dual VET system (REG2). Second, the 2016 Western Balkan Regulation (REG4) was introduced to manage the influx of asylum-seeking migrants from the Western Balkan region. Although not originally intended for this purpose, it became a popular tool facilitating mid- and low-skilled labour migration, especially in construction, healthcare, and engineering (REP1; REP3). Given the past prominence of the Western Balkans as a location for German subcontracting (L7; INT5; INT9), this regulation was the first to connect German production abroad with mid-skilled migration. Third, the 2020 Skilled Worker Immigration Act (REG4) expanded the right to migrate to Germany to all workers with VET credentials obtained worldwide. Directly connected to the 2012 Recognition Act, skilled workers with fully or partially recognisable foreign VET qualifications can enter and work in Germany in their occupational field. Fourth, the 2023 Skilled Worker Immigration Act further liberalised recognition standards (e.g. recognition can be obtained after signing

the contract and starting a job) and introduced new migration opportunities (e.g. the ‘Opportunity Card’) (N7; REG5).

These policies have been accompanied by increased practices that link foreign-trained mid-skilled workers with the domestic German labour market needs. For example, German chambers abroad and in Germany have agreed on standards for VET abroad, which facilitate the later recognition by German authorities (INT5; INT7; REP12; Pr6; W23). Moreover, government strategies on development cooperation in the sector of VET and on skilled workers explicitly advocate for integrating mid-skill migration with VET transfer activities conducted within ODA (INT5; INT8; INT12 PolP1; PolP2; S2; S8). Recent initiatives like ‘transnational skill partnerships’ (L1; REP7) include schemes to attract mid-level skilled workers to Germany, partially recognising their VET abroad, and then complementing their training according to German standards. Further schemes entail programmes to train apprentices in their country of origin and complementing their training within VET programmes in Germany. Another important practice is the introduction of information platforms to diminish the complexity and bureaucracy of migration, for instance, regarding recognising foreign qualifications (e.g. W3-W17).

These new migration policies and practices led to a fourfold increase in labour migration from non-EU countries over 12 years (from 85,000 in 2010 to 351,000 in 2022; W32), a continuous increase in mid-skilled workers with a VET background migrating to Germany under the 2020 Skilled Worker Immigration Act (41,000 migrants in 2022), an increase of qualified foreign employees from the Western Balkans (103,042 in 2013 to 213,866 in 2020, with 60 per cent being mid-level skilled workers; REP1), and a fourfold increase in qualifications receiving full or partial recognition since 2012 (REP8). In summary, the liberalisation of Germany’s migration policies has significantly expanded the opportunities for mid-skilled workers to migrate, reshaping the country’s labour market to meet its economic needs more effectively.

5.3 The politics of externalisation

This sub-section first defines ‘externalisation’ and, second, traces its political development, focusing on the coalition that sustains it, primarily involving the state and employers and featuring no opposition from other political actors.

5.3.1 Defining externalisation

We refer to the increasingly transnational orientation of skill formation as externalisation, a term the literature commonly uses to denote the broadening of the scope of a policy. Drawing on sociological systems theory, education research views externalisation as the process by which a system opens itself to other function systems (or the ‘world’) and then translates these external influences according to its internal norms and logic (Schriewer 1989). Migration scholarship uses externalisation to indicate the offshoring of migration policies such as border control and rescue operations from advanced capitalist economies to ‘neighbouring countries or sending states in the Global South’ (Stock, Üstübcici, and Schultz 2019: 1). In contrast, comparative politics understands externalisation not as the delegation of responsibilities to external actors, but as the sharing of responsibilities. Here, the term describes the extension of a unit’s sphere of influence beyond the boundaries established by law (Lavenex and Schimmelfennig 2009). Building on these debates, we define

externalisation as the strategic deployment of transnational skill policies to develop and supply the skills required by a growth regime.

5.3.2 The political coalition sustaining externalisation

We find that externalisation is a political strategy enacted by a coalition of state actors and employers. State activism proves essential to providing the skills required by an export-led growth model, which aligns with recent literature on the state's activity in fostering corporatism and growth models (Busemeyer, Carstensen, and Emmenegger 2022; Sancak 2024). We observe a strong involvement of the Ministries in charge of the economy, economic co-operation and development, internal affairs, labour and welfare, and health.

The Ministry in charge of the economy supports Germany's export-led growth strategy through the German Chambers of Commerce Abroad (AHKs) network. Although AHKs are formally independent private entities that support German companies abroad, they are more connected to the mission of the Ministry responsible for the economy than commonly recognised. While the AHKs should be financed through members' contributions (INT4), they are primarily funded by the Ministry in charge of the economy (each at different levels; INT5; INT11). A representative from an intermediary organisation promoting dual VET abroad illustrates their role in externalisation:

The basic funding clearly comes from BMWK [Federal Ministry for Economic Affairs and Climate Action], that is no secret [...] For vocational training, that means that if I am now a managing director and ten entrepreneurs talk to me, then I call [...] the AHK and say: "Hey, they have a need [...]", and then we help to tap into a programme or to advertise it at the BMZ [Federal Ministry for Economic Cooperation and Development] or BMWK. (INT4, authors' translation)

The informal role of the AHKs is to support the Ministry in charge of the economy, whose role is to address the needs of German companies abroad and non-German companies, that can become trading partners through appropriate employee training (W17). Thus, AHKs see their activities in VET as 'seamlessly integrated into the AHK's mission of foreign trade promotion' (REP12: 5). This involves providing services to facilitate VET based on the German model, encouraging the transfer of VET practices. The Ministry in charge of the economy and the AHKs' efforts in the field of VET transfer have expanded from catering to the needs of the industry abroad towards equipping the domestic economy with the skills needed to sustain export-led growth. The AHKs have also used their international expertise to suit the rising skills requirements of companies in Germany by providing advice on the recognition of foreign qualifications and migration. When asked about linking training abroad to migration into Germany, a representative from a business association illustrated the shift in the perspective of AHKs toward purposefully linking skills acquired abroad to the German labour market:

This is perhaps the most exciting point at the moment. For the last 5 to 10 years, we have had a clear strategy and a clear credo: We trained abroad at the AHKs for the German industry [operating abroad] and [...] for the foreign industry. [...] This has changed. [N]ow we are missing 400,000 skilled workers in Germany [...] The DIHK [Association of German Chambers of Industry and Commerce, the domestic umbrella organisation of AHKs] set up a system of certification [for training abroad] that the [German] companies understand is of good quality, including an examination, a training certificate, and trainers on-site. (INT5, authors' translation)

At the same time, the Ministry in charge of development cooperation has substantially changed its approach to financing VET transfers and liberalising migration. Traditionally, development cooperation actors were reluctant to support the skills drain ensuing from training workers abroad for another country's labour market (L12; INT10). This practice contravenes the OECD's Development Assistance Committee principles, which established that ODA funds can be used for migration-related purposes only if they primarily serve the interests of the partner country. In compliance with these principles, after the refugee crisis in 2015, VET transfer activities within development cooperation aimed at creating perspectives in countries of origin (N9; S7; W27). This depoliticised migration and framed migration as a matter of development assistance (Zaun and Nantermoz 2023). Together with VET transfer initiatives, this development laid the groundwork for instrumentalising development cooperation for domestic labour market needs. Development cooperation is increasingly used to train according to German standards for migration purposes (INT5; INT8; INT12 PolP1; PolP2; S2; S8). When asked for the motivations behind training according to German standards, a project manager representing a German development agency responded that the reason is:

... to support the youth, because vocational education is costly, and to increase the quality. [...] Then, to have a qualified workforce for the labour market [in the country of origin]. [...] Then, if the quality is increased and approaches the European standards (...) also to train workers for the European labour market. (INT2, authors' translation)

This quote exemplifies the logic of training abroad for the German labour market. Several factors contribute to the growing acceptance of development cooperation financing VET transfers and migration liberalisation (S8). Key factors include the promotion of the German dual VET model as an effective policy for addressing challenges like youth unemployment (Pr1–Pr8), personnel changes within ministries that placed more supporters of this strategy in decision-making roles (INT12), and the introduction of new project initiatives designed to train young people for labour markets both in their countries of origin and in Germany (PolP1; PolP2; REP7). Furthermore, given the general governmental budgetary constraints and the inter-ministerial battles for funding, promoting training abroad to fulfil domestic economic needs has become a strategic choice to protect the allocation of funds for development cooperation.

Next to the ministries in charge of economy and development cooperation, the ministries in charge of interior affairs, labour and welfare, and health are also involved. The former two see labour migration as a means to 'safeguard Germany's prosperity' (PosP15; PosP25). Unable to structurally improve working conditions in the health sector, the Ministry in charge of health views migration as a strategy to secure care personnel—a trend exemplified by the German health ministers' visits to India, Mexico, the Philippines, and Kosovo to encourage locals to pursue health professions and migrate to Germany (N4; N5).

Domestic employers support this state activism, especially since they can no longer sustain the export-led growth strategy through employer coordination. Since 2008, organisations representing the German domestic private sector, transcending traditional divides based on size or sectors, have increasingly endorsed policies and practices to attract transnational skills to fill skill shortages (INT13; PosP4; PosP14–PosP23; W28). Employer organisations usually advocate for legislation that supports both the quality and quantity of

labour migration required to sustain their production system, ensuring the continued success of a competitive economic strategy (Menz 2008). Employers concerned about the widespread shortage of skilled workers and its adverse impact on German economic competitiveness have raised the urgency and saliency of the need for skilled migration. Their focus on this aspect is, for instance, apparent from their position in the context of the Western Balkan Regulation, drafted in the aftermath of the 2015 refugee crisis. It initially did not have the support of the Confederation of German Employers (BDA), which was sceptical about the unclear migration logic emerging from the regulation (PolP3), citing the presence of 'special immigration rules for people from the Western Balkans that are not based on specific needs of the German labour market' (PolP3, 16). However, after experiencing the labour market relief that ensued from the regulation, the BDA and other employer organisations advocated for extending the Western Balkan Regulation indefinitely and abolishing any quotas (Posp4; PosP14). These demands were largely adopted in the latest revision (REG6).

Calls for a looser integration between vocational training partnerships organised in line with 'German standards' and skilled labour migration (PosP4) also entered the 2022 Skilled Worker Strategy proposed by the state (S2). While sectoral and professional organisations traditionally served as gatekeepers in the process of recognising foreign qualifications (REG2), the latest version of the Skilled Immigration Act grants individual employers the discretion to recognise foreign qualifications in line with their sectorial and occupational labour market shortages (Sommer 2021; INT6; INT7; INT8; PolP4).

We argue that the above actors constitute a dominant growth coalition because these actors are all aware of the 'requirements of the growth model' (Baccaro, Blyth, and Pontusson 2022: 35), because they frame policies as supporting the 'national interest', and because there is no strong countervailing coalition. A contesting coalition could typically include either unions, political or foreign governments. German unions have expressed concerns related to some aspects related to migration and the risk of creating an exploitative system for migrants (PosP11; PosP13). They also contest the dominant narrative about skill shortages, arguing that it is not workers that are lacking but rather attractive working conditions and decent wages (N6; INT13). However, even the German Trade Union Confederation (DGB), which is the umbrella organisation of German labour, acknowledges that, due to the dramatic scale of demographic change, there is a need to recruit abroad to sustain the economy in the coming years (PosP12). In addition, skill shortages seem to have revitalised German collective bargaining (Schulzen 2019), suggesting that they are of significant concern to trade unions. German trade unions discuss the immigration of skilled workers as a policy that must be adopted while safeguarding everyone's work conditions in consultation with social partners. They have come to accept the inevitability of migration and have focused their advocacy on improving workers' rights, equal pay, and work conditions of migrants within German borders (INT13; PosP1; PosP2; PosP3).

In addition, we observe no opposition to labour migration and VET transfer in the electoral or public arena. On the one hand, skill formation is typically a quiet policy with low salience negotiated within the corporatist arena (Culpepper 2011; Busemeyer et al. 2020). As such, VET issues do not feature prominently on electoral politicians' agendas. In addition, managed labour migration is also typically less contentious than asylum-seeking and refugee policy. While the rise of right-wing populism in Germany has been mobilising negative sentiments towards all migrants, this has concerned refugees and asylum seekers and,

less so, labour migrants. The general population has shifted its political sympathies from asylum seekers to labour migrants (Schultz, Lutz, and Simon 2021), and more generally, labour migration has remained the subject of the quiet politics of interest groups and homogeneous consensus across the centre-right and the centre-left (Menz 2008; Afonso and Devitt 2016). On the other hand, the lack of opposition can also be traced to a constantly decreasing unemployment rate in the German labour market since the early 2010s, which has decreased to a stable 5 per cent since 2016 (ILO 2023). Without concerns about domestic unemployment, labour migration is perceived as complementary rather than substitutive to German skills.

Finally, foreign governments have expressed increased interest in adopting elements of the 'successful' German VET system and have shown enthusiasm for skill formation transfers (L5; L9; INT10; INT14). However, they are not mere policy-takers. As the policy transfer literature has argued, governments seeking solutions to socio-economic problems often import 'best practices' like the dual VET model 'to combine resources to support a third, supposedly more neutral, policy option borrowed from elsewhere' (Steiner-Khamisi 2016: 383). Hoping for remittances to finance their demand-led growth models and to ease pressure on their domestic labour market, foreign governments do not generally resist skill drain (Wanklin 2025). They demonstrate an interest in training their labour force according to German standards for potential emigration to Germany at a later stage (INT7; INT10; INT12; N8).

This section has shown that practices and policies to facilitate skill formation transfers and labour migration are organised by a dominant growth coalition, including key Federal Ministries and private sector actors transcending cleavages and non-exporting sectors. The coalition also has indirect backing from trade unions and is not opposed by the public, political parties, or foreign governments. Whether explicitly or implicitly, all these actors share the common agenda: sustaining the export-led growth regime by meeting its skill demands.

6. Addressing counter-arguments

To strengthen our argument, we address counter-arguments to show their limitations.

The reliance of the growth model on skills it cannot source could be reduced by focusing exports on high-end niche products, as is the case in export-oriented economies such as Switzerland. This way, the growth model would require only more tertiary-trained workers with broad expertise (Durazzi 2023) and could exert a more targeted migration policy to attract highly educated foreign talents. Alternatively, further suppressing domestic demand would lower production costs, potentially making exports more competitive. Although theoretically possible, both strategies seem unlikely in the mid-term because they have become consolidated through incremental path-dependent developments that are unlikely to be reversed. The literature documents a series of path-dependent incremental changes that led to the institutionalisation of the German export-led growth since 2008 and the deeply entrenched political developments that tie actors' positions to the growth model (Baccaro and Höpner 2022). This does not imply that no change in the German growth model is conceivable. However, the German growth model 'depends on conditions which are not directly controllable by domestic policymakers' (309), such as a world economy open to free trade, unions' commitment to wage moderation, lack of a backlash against public underinvestment—not least in the context of the green transition. While change may eventually

occur, it is unlikely to manifest in the medium term, when economic demands for growth appear most pressing.

Alternatively, instead of sourcing skills abroad, Germany could focus on its national supply and increase the productivity of its workers and the attractiveness of its VET system by fostering continuing education, modernising training, and improving work conditions for VET occupations (S2). However, academisation, the compressed wage structure, and the inability of the education system to include those left behind hinder the effectiveness of these strategies in a context of pressing demographic decline. For example, the 2020 Skilled Worker Strategy (S2) states that from a quantity perspective, solutions to skill mismatches hinge on increased migration, with an estimated need for an annual net migration of 400,000 people by 2060 (Fuchs, Söhnlein, and Weber 2022). In short, while Germany may pursue strategies to boost the productivity of its domestic labour force, these strategies can, at best, be complementary to externalisation, but not replace it.

Having established the relevance of externalisation against alternative mechanisms to support German growth, one could challenge the evidence supporting its politics. For example, the economic rationale behind VET transfers could be questioned as VET transfers could reflect altruistic motivations to support other countries' development through ODA. In the aftermath of the global financial crisis, national and international actors promoted the German skill formation system as a winning policy to fight youth unemployment, following an altruistic rationale. However, actors are well aware that the success rates of projects inspired by transfers of German VET are mediocre (Stockmann and Silvestrini 2013). During our interviews, stakeholders explained the difficulty of systematically transferring VET policies and practices abroad, among others, due to insecure cost-benefit ratios for training companies, impatience of partner governments, and the lack of strong corporatist structures abroad. Companies primarily train abroad if they are German and know about VET's benefits. In addition, empirical evidence shows that ODA raises net emigration from the ODA-recipient country to the donor country rather than diminishing it (Fuchs et al. 2023). Therefore, while policymakers could have altruistic motivations, the limited evidence about Germany's promotion of VET through ODA suggests that altruism can, at best, be only part of the story.

Finally, one could question the role of the actors and ascribe externalisation to large German MNCs, who benefit from the skills produced abroad. Given their heterogeneous skill needs and structural power, MNCs could be potential candidates for driving externalisation. In some instances, MNCs act as policy entrepreneurs in host countries (Fortwengel and Jackson 2016). However, their first-order preference is not to engage in politics abroad—they only do so under pressure from their headquarters, for example, to ensure global consistency or build a reputation (Svystunova et al. 2024). Similarly, in the case of externalisation, a representative of a German MNC explained the lack of MNCs' desire to coordinate and institutionalise transnational skill formation: 'I have to tell you honestly, I prefer it [training according to dual VET] when I am alone. Because we control it from the headquarters' (INT11, authors' translation). Large MNCs prefer training and recruiting tailored to their specific in-house needs, without outside interference, as explained by a representative of an intermediary organisation promoting German dual VET:

The large companies are not interested at all in what we are doing. [...] They found out they did not need us. The huge companies in Germany, if they need to bring people from abroad, they do that. They do not need the government to support them or a chamber or anyone (INT4).

Therefore, despite MNCs' technical and financial resources, they are not the policy entrepreneurs behind externalisation in this case.

Finally, our argument comes with certain limitations. Most importantly, externalisation does not inherently imply its success. Given its recent adoption, we withhold judgment on the economic success of this strategy. However, barring any unforeseeable disruptions, it is plausible to expect that externalisation could solidify as an independent pathway for sourcing skills, existing alongside the traditional domestic system—a development with potentially significant political costs. Further research is thus needed to investigate the impact and outcome of externalisation.

7. Conclusion

Our study investigated the relationship between skill formation and growth regimes in light of the increasingly transnational nature of skill formation, which must accommodate skill needs in different locations. Due to companies 'producing where they sell', the onset of the knowledge economy, and demographic decline, transnational skill formation becomes an instrument for the dominant growth coalition to source the skills necessary for economic growth. We call this strategy externalisation, understood as the extension of skill formation beyond national borders to source skills to grow. We provide evidence through an analysis of the least-likely case of Germany, which is marked by a rigid and occupational labour market. Within the externalisation strategy, we find a range of policies and practices to transfer skill formation and manage labour migration to fulfil the skills required by German export-led growth. We identify a dominant growth coalition consisting of the state and employers, and the lack of resistance from unions, political parties, electorates, or foreign governments. In the German context, externalisation represents a way of adding new rules to deal with transnational processes and interdependencies, innovating at the periphery of the skill formation system while leaving its core intact.

Our study made several contributions. It underscores the importance of considering skill formation in studies of economic growth. In contrast to the national focus of the Varieties of Capitalism or growth regimes literature, we advocate for incorporating a transnational dimension in skill formation. Given the difficulty of reforming national education systems, it is likely that other countries have also been developing strategies to adapt skill formation institutions in a transnational way. Future research should thus explore strategies and political dynamics within skill formation in other growth regimes. It should furthermore investigate the transnational dimension of other institutions key to growth, such as social protection, production systems, and financing systems. This article further demonstrates that managed migration is no longer limited to high-skilled workers but is increasingly extending to mid-skilled labour. Comparative studies across countries should assess how other economies manage different kinds of labour migration and their connections to distinct growth regimes. Finally, this article brings insights into the political economy of Germany, showing that its occupational labour market is less rigidly regulated than commonly thought and that the borders between distinct policy fields have become flexible,

which should be considered when studying the German economy and its potential for economic success. This echoes recent contributions showing that, rather than rebalancing the export-led growth model, Germany's economic elites have resorted to interventionism to strengthen and maintain the growth model, even at high fiscal costs (Di Carlo, Hassel, and Höpner 2024). Further studies should examine the interactions between policy fields, such as education, migration, and labour, and how these changes influence Germany's competitiveness on the global stage.

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Annex

Annex I: List of interviews

ID	Function	Organisation	Date	Length
INT1	Managing director	Intermediary organisation promoting German dual VET abroad	29.10.2021	1h00
INT2	Local consultant	German development cooperation agency located in a partner country	04.11.2021	0h45
INT3	Expert on dual VET	Peak German employer association	07.12.2022	1h00
INT4	Deputy head	Intermediary organisation promoting German dual VET abroad	09.12.2022	1h00
INT5	Head of the section on dual VET	German business association	14.12.2022	1h00
INT6	Expert on recognition of foreign qualifications	Peak German employer association	22.12.2022	0h45
INT7	Head of dual VET practices	German business association located abroad	06.01.2023	1h10
INT8	Head	Intermediary organisation providing dual VET transfer practices abroad	11.01.2023	1h15
INT9	Expert on dual VET abroad	Intermediary organisation providing dual VET transfer practices abroad, located in a foreign country	12.01.2023	1h00
INT10	Project manager VET project	German development cooperation agency located in a partner country	03.04.2023	1h15
INT11	Head of international VET	German multinational company	04.04.2023	1h50
INT12	Senior Project Manager	Foundation providing a platform for actors involved in the externalisation of VET	05.05.2024	1h05
INT13	Head of division in charge of skilled migration	Peak employee interest organisation	13.04.2023	1h05
INT14	Head of dual VET practices	German business association located abroad	04.05.2023	1h00

Annex II: List of documents

ID	Title	Publisher	Author	Year	Type	Link to article
News articles						
N1	Tackling 'skills mismatch', BPSDMI and KADIN collaborate with Germany and Switzerland	The Jakarta Post	n.a.	2021	News article	https://www.thejakartapost.com/adv/2021/09/28/tackling-skills-mismatch-bpsdmi-and-kadin-collaborate-with-germany-and-switzerland.html
N2	Over 1,000 Vietnamese nurses received training and work in Germany	Vietnam Net	n.a.	n.d.	News article	https://vietnamnet.vn/en/over-1000-vietnamese-nurses-received-training-and-work-in-germany-609224.html
N3	Regierung Will Fachkräftezuwanderung Erleichtern [Government Wants to Facilitate Skilled Labour Immigration]	Frankfurter Allgemeine	Beeger, B.	2022	News article	https://www.faz.net/aktuell/karriere-hochschule/buero-co/regierung-will-zuwanderung-fuer-fachkraefte-erleichtern-18186977.html
N4	Skilled migration, climate change top agenda of German Chancellor Olaf Scholz's India visit	The Economic Times	Chaudhury, D. R.	2023	News article	https://economictimes.indiatimes.com/news/india/skilled-migration-climate-change-top-agenda-of-german-chancellor-olaf-scholz-india-visit/articleshow/98031655.cms?from=mdr
N5	Suche nach Pflegekräften: Spahns heikle Mission in Mexiko. [Search for health workers: Spahn's delicate mission in Mexico]	Der Spiegel	Schmergal, C.	2019	News article	https://www.spiegel.de/wirtschaft/jens-spahn-will-pflegekraefte-aus-mexiko-anwerben-a-1287956.html
N6	SPD und FDP für Ausweitung der Westbalkan-Regelung	Fundscene	n.a.	2023	News article	https://fundscene.com/spd-und-fdp-fuer-ausweitung-der-westbalkan-regelung/

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
N7	German parliament reforms skilled work immigration law	Deutsche Welle	Knight, B.	2023	News article	https://www.dw.com/en/german-parliament-reforms-skilled-work-immigration-law/a-66010566
N8	Serbien will keine Pflegekräfte mehr nach Deutschland schicken [Serbia no longer wants to send nursing staff to Germany]	Zeit Online	n.a.	2020	News article	https://www.zeit.de/wirtschaft/2020-02/migration-serbien-pflegekraefte-deutschland-fachkraefte-kooperation?utm_referrer=https%3A%2F%2Fwww.google.com%2F
N9	Gerd Müllers Mission auf dem Balkan [Gerd Müller's mission in the Balkans]	Welt	Ehrenstein, Claudia	2015	News article	https://www.welt.de/print/die_welt/politik/article141628315/Gerd-Muellers-Mission-auf-dem-Balkan.html
Policy Papers						
PolP1	Maximizing the Shared Benefits of Legal Migration Pathways: Lessons from Germany's Skills Partnerships	Center for Global Development	Michael Clemens, Helen Dempster and Kate Gough	2019	Policy Paper	https://www.cgdev.org/sites/default/files/maximizing-shared-benefits-legal-migration-pathways.pdf
PolP2	Fostering Transnational Skills Partnerships in Germany	Bertelsmann Stiftung	Najim Azahaf	2020	Policy paper	https://www.bertelsmann-stiftung.de/de/publikationen/publikation/did/fostering-transnational-skills-partnerships-in-germany-all
PolP3	Creating legal pathways to reduce irregular migration? What we can learn from Germany's 'Western Balkan Regulation'	Bertelsmann Stiftung	Jessica Bither and Astrid Ziebarth	2018	Policy paper	https://ism-bst-stage.bertelsmann-stiftung.de/fileadmin/files/Projekte/Migration_fair_gestalten/IB_Creating_Legal_Pathways_to_Reduce_Irregular_Migration_MSG_2018.PDF

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
PolP4	Workers without borders? The rights of workers from the Balkans in the EU	Friedrich Ebert Stiftung	Georg Blokus, Aleksandra Lakić, Niccolò Milanese, Madlen Nikolova, Tanja Pavlov and Aleksandra Savanović	2022	Policy paper	https://library.fes.de/pdf-files/bueros/sarajevo/19205.pdf
Position Statements						
PosP1	Position des Deutschen Gewerkschaftsbundes zu den Eckpunkten zur Fachkräfteeinwanderung aus Drittstaaten [Position des Deutschen Gewerkschaftsbundes zu den Eckpunkten zur Fachkräfteeinwanderung aus Drittstaaten]	German Federation of Trade Unions	n.a.	2022	Position paper	https://www.dgb.de/downloadcenter/+++co+9683666c-918d-11ed-11ed-ba15-001a4a160123
PosP2	Stellungnahme: Bewertung des Deutschen Gewerkschaftsbundes zu Eckpunkte der Bundesregierung zur Fachkräfteeinwanderung vom 02.10.2018 [Statement: Assessment of the Confederation of German Trade Unions on the Federal Government's Key Issues Paper on Skilled Labour Migration of 02.10.2018]	German Federation of Trade Unions	Volker Rossocha	2018	Position paper	https://www.dgb.de/downloadcenter/+++co+11b6dfde-ec11-11e8-a803-52540088cada

continued

Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
PosP3	Westbalkanregelung und Einwanderung in befristete Beschäftigung [Western Balkans regulation and immigration in temporary employment]	German Federation of Trade Unions	n.a.	2023	Position paper	https://www.dgb.de/downloadcenter/++co++106b86b6-9be4-11ed-9f90-001a4a160123
PosP4	Fachkräfte- Und Arbeitskrätfesicherung Braucht Mehr Zuwanderung: Zehn-Punkte-Plan Der BDA Zur Stärkung Der Erwerbsmigration [Securing Skilled Workers and the Labour Force Needs More Immigration: BDA's Ten-Point Plan to Strengthen Labour Migration]	Confederation of German Employers' Associations	n.a.	2022	Position paper	https://arbeitsgeber.de/themen/beschaeftigung-und-arbeitsmarkt/zuwanderung-und-integration/
PosP5	Statement of the Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ) GmbH on the draft bill of the Federal Ministry of the Interior, for Construction and Home Affairs of 26 November 2018 for a skilled labour immigration law'	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2018	Position paper	https://www.bmi.bund.de/SharedDocs/gesetzgebungsverfahren/DE/Downloads/stellungnahmen/fachraefteeinwanderungsgesetz/giz.pdf?__blob=publicationFile&v=4

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
PosP6	IAB-Stellungnahme: Zum Gesetzentwurf der Bundesregierung eines Fachkräfteeinwanderungsgesetzes sowie zu den Anträgen der Fraktionen der FDP, Bündnis 90/DIE GRÜNEN und DIE LINKE [IAB Statement: On the Federal Government's Draft Law on the Immigration of Skilled Workers and on the Motions of the Parliamentary Groups of the FDP, Bündnis 90/DIE GRÜNEN and DIE LINKE]	Institut für Arbeitsmarkt- und Berufsforschung (IAB) [Institute for Employment Research]	Herbert Brücker, Philipp Jaschke, Sekou Keita, Regina Konle Seidl	2019	Position paper	https://iab.de/en/publications/publication/?id=9470777
PosP7	Position des Deutschen Gewerkschaftsbundes: Inländisches Fachkräftepotenzial ausschöpfen, faire Fachkräfteeinwanderung sichern—DGB-Anforderungen in der Fachkräftedebatte [Position of the Confederation of German Trade Unions: Exploiting domestic skilled labour potential, ensuring fair skilled labour immigration—DGB demands in the skilled labour debate]	German Federation of Trade Unions	n.a.	2022	Position paper	https://www.dgb.de/downloadcenter/++co++45706802-4961-11ed-b04d-001a4a160123

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Annex II: *Continued*

ID	Title	Publisher	Author	Year	Type	Link to article
PosP8	Stellungnahme: DGB-Stellungnahme zur Fachkräfteeinwanderung aus Drittstaaten [Statement: DGB statement on skilled labour immigration from third countries]	German Federation of Trade Unions	n.a.	2023	Position paper	https://www.dgb.de/downloadcenter/++co++78124d8e-be64-11ed-aa35-001a4a160123
PosP10	Shaping the Future, strengthening Investments Economic Policy Positions 2017 of the German CCI-Organization	Association of German Chambers of Commerce and Industry	n.a.	2017	Position paper	https://www.dihk.de/resource/blob/13656/481a120f43809c95cde824a1ebf58484/economic-policy-positions-2017-data.pdf
PosP11	Jetzt ist das Parlament am Zug [Now it's the parliament's turn]	German Federation of Trade Unions	n.a.	2019	Press release	https://www.dgb.de/presse/++co++d215d4ec-723f-11e9-b5b0-5254008cada
PosP12	Fachkräfte gewinnen und binden: Durch Integration und Weltoffenheit [Attracting and retaining skilled workers: Through Integration and Openness]	German Federation of Trade Unions	n.a.	2019	Press release	https://www.dgb.de/presse/++co++69c1cb96-1ff3-11ea-ba49-5254008cada
PosP13	The EU must adopt a radically different approach toward labor migration	Friedrich Ebert Stiftung	Aleksandra Lakić	2023	Press release	https://www.fes.de/en/displacement-migration-integration/article-page-flight-migration-integration/the-eu-must-adopt-a-radically-different-approach-towards-labour-migration

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
PosP14	Fachkräfteeinwanderungsgesetz jetzt unbürokratisch umsetzen [Implement skilled labor immigration law now without red tape]	German Confederation of Skilled Crafts	n.a.	2023	Press release	https://www.zdh.de/presse/veroeffentlichungen/pressemitteilungen/fachkraefteeinwanderungsgesetz-jetzt-unbuerokratisch-umsetzen/
PosP15	Befassung des Deutschen Bundestages mit dem Gesetzentwurf zur Reform des Fachkräfteeinwanderungs-gesetzes	Federal Ministry of the Interior and Home Affairs	Nancy Fraser	2023	Speech	https://www.bmi.bund.de/SharedDocs/reden/DE/2023/faeser-20230623-bundestag-feg.html;jsessionid=61A88212C859D3938693F3F3E9D03901.1_cid364
PosP16	Stellungnahme für die öffentliche Anhörung des Bundestagsausschuss für Inneres und Heimat am 22. Mai: Entwurf eines Gesetzes sowie einer Verordnung zur Weiterentwicklung der Fachkräfteeinwanderung [Statement for the public hearing of the Bundestag Committee on Interior and Homeland on May 22: Draft of a law and regulation for the further development of skilled immigration]	German Confederation of Skilled Crafts	Labour Market and Collective Bargaining Policy Department; Vocational Training Department	2023	Position paper	https://www.bundestag.de/resource/blob/948950/e83e0f8ccda42c6e06cfc0c8c61563bc/20-4-218-data.pdf

continued

Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
PosP17	Stellungnahme: Referentenentwurf des Bundesministeriums des Innern und für Heimat und des Bundesministeriums für Arbeit und Soziales zu einem Gesetz zur Weiterentwicklung der Fachkräfteeinwanderung [Position statement: Draft by the Federal Ministry of the Interior, Building and Community and the Federal Ministry of Labour and Social Affairs for a law on the further development of skilled immigration]	Association of German Chambers of Commerce and Industry	n.a.	2023	Position Paper	https://www.dihk.de/resource/blob/92776/11fe3083679774ed129a5e241aef1000/dihk-stellungnahme-feg-data.pdf
PosP18	Mehr Mut bei der Zuwanderung in Beschäftigung—Tempo machen bei den Verwaltungsverfahren: Stellungnahme zum Referentenentwurf eines Gesetzes zur Weiterentwicklung der Fachkräfteeinwanderung und zum Referentenentwurf einer Verordnung zur Weiterentwicklung der Fachkräfteeinwanderung [More courage in immigration for	Confederation of German Employers' Associations	n.a.	2023	Position Paper	https://arbeitsgeber.de/wp-content/uploads/2023/03/bda-arbeitgeber-stellungnahme-referentenentwurf_eines_gesetzes_zur_weiterentwicklung_der_fachkraefteeinwanderung-2023_03_07.pdf

continued

Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
	employment—Accelerating administrative procedures: Statement on the draft legislation for the further development of skilled immigration and the draft regulation for the further development of skilled immigration.]					
PosP19	Stellungnahme zum Entwurf eines Fachkräfteeinwanderungsgesetzes [Statement on the draft Skilled Labour Immigration Act]	Central Association of the German Construction Industry	n.a.	2018	Position Paper	https://www.bmi.bund.de/SharedDocs/gesetzgebungsverfahren/DE/Downloads/stellungnahmen/fachraefeeinwanderungsgesetz/zdb.pdf;jsessionid=B64C1C4DDDF134B00C4E4EC1EFD432C5.1_cid387?__blob=publicationFile&v=4
PosP20	Stellungnahme zum Referentenentwurf des Bundesministeriums des Innern, für Bau und Heimat zu einem Fachkräfteeinwanderungsgesetz [Statement on the draft legislation by the Federal Ministry of the Interior, Building and Home Affairs for a skilled immigration law.]	Interest Group Construction-Agriculture-Environment	n.a.	2018	Position Paper	https://www.bmi.bund.de/SharedDocs/gesetzgebungsverfahren/DE/Downloads/stellungnahmen/fachraefeeinwanderungsgesetz/ig-bauen-agrar-umwelt.pdf;jsessionid=B64C1C4DDDF134B00C4E4EC1EFD432C5.1_cid387?__blob=publicationFile&v=4

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
PosP21	Stellungnahme des Arbeitgeberverbandes Pflege e. V. zum Referentenentwurf eines Fachkräfteeinwanderungsgesetzes des Bundesministeriums des Innern, für Bau und Heimat [Statement on the draft legislation for a skilled immigration law by the Federal Ministry of the Interior, Building and Home Affairs]	Employers' Union for the Care Sector	Isabell Halletz	2018	Position Paper	https://www.bmi.bund.de/SharedDocs/gesetzgebungsverfahren/DE/Downloads/stellungnahmen/fachkraefteeinwanderungsgesetz/arbeitgeberverband-pflege.pdf;jsessionid=B64C1C4DDDF134B00C4E4EC1EFD432C5.1_cid387?__blob=publicationFile&v=5
PosP22	Stellungnahme zum Referentenentwurf des Bundesministeriums des Innern, für Bau und Heimat eines Fachkräfteeinwanderungsgesetzes vom 26.11.2018 [Statement on the draft legislation of the Federal Ministry of the Interior, Building and Home Affairs for a skilled immigration law dated November 26, 2018]	German Professional Association for Nursing Professions	Peter Tackenberg	2018	Position Paper	https://www.bmi.bund.de/SharedDocs/gesetzgebungsverfahren/DE/Downloads/stellungnahmen/fachkraefteeinwanderungsgesetz/dbfk.pdf;jsessionid=B64C1C4DDDF134B00C4E4EC1EFD432C5.1_cid387?__blob=publicationFile&v=4

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
PosP23	Stellungnahme zum Referentenentwurf des Bundesministeriums des Innern, für Bau und Heimat vom 26. November 2018 Fachkräfteeinwanderungsgesetz [Statement on the draft legislation of the Federal Ministry of the Interior, Building and Home Affairs dated November 26, 2018: Skilled Immigration Law]	German Hotel and Restaurant Association	n.a.	2018	Position Paper	https://www.bmi.bund.de/SharedDocs/gesetzgebungsverfahren/DE/Downloads/stellungnahmen/fachkraefteeinwanderungsgesetz/dehoga-bundesverband.pdf;jsessionid=B64C1C4DDDF134B00C4E4EC1EFD432C5.1_cid387?__blob=publicationFile&cv=3
PosP24	Fachkräfteeinwanderungsgesetz: Lesungen und Anhörungen [Skilled Immigration Law: Readings and Hearings]	German Bundestag	n.a.	2019	Position statements	https://www.bundestag.de/dokumente/textarchiv/2019/kw19-de-fachkraefteeinwanderung-640406
PosP25	‘Fachkräftesicherung ist Wohlstandssicherung für unser Land’ [‘Securing skilled labour is securing prosperity for our country’, Interview with Hubertus Heil, Federal Minister for Labour and Social Affairs]	Federal Ministry for Labor and Welfare	n.a.	2023	Position statement	https://www.bmas.de/DE/Service/Presse/Interviews/2023/2023-03-04-rnd.html

continued

Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
Project Overviews						
Pr1	Youth, Employment, and Skills (YES) project	Center for Global Development	Global Skill Partnerships	n.d.	Project overview	https://gsp.cgdev.org/legalpathway/youth-employment-and-skills-yes/
Pr2	Creating employment perspectives for youth in Kosovo (YES project)	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	GIZ (Klaus Bader-Labarre)	2021	Project overview	https://www.giz.de/en/worldwide/66634.html
Pr3	German-Tunisian Mobility Pact. Gain capacities, create perspectives	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2016	Project overview	https://www.giz.de/en/worldwide/19727.html
Pr4	Attracting personnel from Viet Nam to train as nurses	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2019	Project overview	https://www.giz.de/en/worldwide/69851.html
Pr5	Die duale berufliche Aus- und Weiterbildung in Marokko unterstützen [Supporting dual vocational education and training in Morocco]	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2022	Project overview	https://www.giz.de/de/weltweit/76843.html
Pr6	Sustainable recruitment of nurses (Triple Win)	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2022	Project overview	https://www.giz.de/en/worldwide/41533.html

continued

Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
Pr7	Promoting Cooperative Skill Development: A Cluster Approach	Indo-German Chamber of Commerce, Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2020	Project overview	https://www.giz.de/de/downloads/Promoting%20Cooperative%20Skill%20Development_%20A%20Cluster%20Approach.pdf
Pr8	Global project training and job creation	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2018	Project overview	https://www.giz.de/projektdaten/projects.action?request_locale=de_DE&pn=201821339#~:text=Durch%20den%20Marshallplan%20und%20den,besch%C3%A4ftigungswirksamen%20Wachstum%20von%20Unternehmen%20ab
Pr9	Improving the employability of young people in Kosovo	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2021	Project overview	https://www.giz.de/en/worldwide/103577.html
Pr10	Shaping migration: Migration advice	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	n.a.	2017	Project overview	https://www.giz.de/en/worldwide/55903.html
Pr11	Auslandsprojekte [projects abroad]	Chamber of Crafts Koblenz	n.a.	n.a.	Project overview	https://www.hwk-koblenz.de/artikel/auslandsprojekte-52,0,231.html

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
Regulations						
REG1	Fachkräfteinwanderungsgesetz [Skilled Immigration Act]	German Bundestag	Federal Law Gazette	2019	Regulation	https://www.bgb1.de/xaver/bgb1/start.xav#__bgb1__%2F%2F*%5B%40attr_id%3D%27bgb1119s1307.pdf%27%5D_1681652776903
REG2	Gesetz Über Die Feststellung Der Gleichwertigkeit von Berufsqualifikationen (Berufsqualifikationsfeststellungsgesetz—BQFG) [Act on the Determination of Equivalence of Professional Qualifications]	Federal Ministry of Education and Research	n.a.	2012	Regulation	http://www.gesetze-im-internet.de/bqfg/BjNR251510011.html#BJNR251510011BJNG000100000
REG3	Kabinet beschliesst neues Fachkräfteinwanderungsgesetz: Bundesregierung schafft neue Wege der Erbersmigration [Cabinet approves new skilled labour immigration law: Federal government creates new channels for hereditary migration]	Federal Ministry for Labour and Social Affairs	n.a.	2023	Regulation	https://www.bmas.de/DE/Service/Presse/Pressemitteilungen/2023/kabinet-beschliesst-neues-fachkraefteinwanderungsgesetz.html
REG4	Sechste Verordnung zur Änderung der Beschäftigungsverordnung: Westbalkanregelung [Sixth Ordinance Amending the Employment Ordinance: Western Balkans Regulation]	Federal Ministry for Labour and Social Affairs	n.a.	2020	Regulation	https://www.bmas.de/DE/Service/Gesetze-und-Gesetzesvorhaben/sechste-verordnung-zur-aenderung-der-beschaeftigungsverordnung.html

continued

Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
REG5	Gesetzentwurf der Bundesregierung Entwurf eines Gesetzes zur Weiterentwicklung der Fachkräfteeinwanderung [Draft bill of the Federal Government on the further development of skilled labor immigration]	Federal Ministry of the Interior	n.a.	2023	Regulation	https://www.bmi.bund.de/SharedDocs/gesetzgebungsverfahren/DE/weiterentwicklung_fachkraefteeinwanderung.html;jsessionid=1A549C55077129BFCBDF552B66D9F06A.2_cid373
REG6	Gesetzesentwurf zur Fachkräfteeinwanderung angenommen [Bill on skilled labor immigration adopted]	German Bundestag	n.a.	2023	Regulation	https://www.bundestag.de/dokumente/textarchiv/2023/kw25-de-fachkraefte-954400
Reports						
REP1	Evaluation of the Western Balkans regulation	Institute for Employment Research (IAB), Nuremberg	Brücker, H., M. Falkenhain, T. Fendel, and M. Promberger.	2019	Report	https://doku.iab.de/kurzber/2020/kb1620_englisch.pdf
REP2	A Global Skill Partnership in Construction between Nigeria and Germany	Center for Global Development, World Bank	Samik Adhikari, Michael Clemens, Helen Dempster, Nkechi Linda Ekeator	2021	Report	https://www.cgdev.org/publication/global-skill-partnership-construction-between-nigeria-and-germany

continued

Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
REP3	Creating legal pathways to reduce irregular migration? What can we learn from Germany's 'Western Balkan regulation'?	German Marshall Fund of the United States	Bither, J., and A. Ziebarth	2018	Report	http://aei.pitt.edu/102716/
REP4	Western Balkan Regulation Prolongation	Arbeitsagentur	Arbeitsagentur	2021	Report	https://www.arbeitsagentur.de/datei/dok_ba146772.pdf
REP5	Recognizing skills	Berufsbildung in Wissenschaft und Praxis	Several authors	2017	Report	https://www.bwp-zeitschrift.de/dienst/publikationen/de/8510
REP6	Auszubildende aus Drittstaaten für die Pflege: Ein Leitfaden für Pflegeeinrichtungen [Auszubildende aus Drittstaaten für die Pflege: Ein Leitfaden für Pflegeeinrichtungen]	Federal Ministry for Economic Affairs and Energy (BMWi)	Grit Braeseke, Freja Engelman, Nina Lingott, Sandra Rieckhoff, Ulrike Pörschmann-Schreiber	2020	Report	https://www.bmwk.de/Redaktion/DE/Publikationen/Wirtschaft/leitfaden-auszubildende-aus-drittstaaten-fuer-die-pflege.pdf?__blob=publicationFile&v=10v
REP7	Transnationale Qualifizierungs- und Mobilitätspartnerschaften (rQMP): Kontext—Konzeption—Praxis [Transnational qualification and mobility partnerships: Context, Conception, Practices]	Bertelsmann Stiftung	Michael Saurer, Jurica Volarevic	2020	Report	https://www.bertelsmann-stiftung.de/de/publikationen/publikation/did/transnationale-qualifizierungs-und-mobilitaetspartnerschaften-tqmp-all

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
REP8	Auswertung der amtlichen Statistik zum Anerkennungsgesetz des Bundes für 2020: Ergebnisse des BIBB-Anerkennungsmonitorings [Evaluation of the official statistics on the Federal Recognition Act for 2020: Results of the BIBB Recognition Monitoring]	Bundesinstitut für Berufsbildung	Carolin Böse, Nadja Schmitz	2021	Report	https://www.anerkennung-in-deutschland.de/html/de/pro/aktuelles-auswertung-bundesstatistik-2021.php
REP9	Internationale Fachkräfte aus Drittstaaten—zwei Jahre Fachkräfteeinwanderungsgesetz [International skilled workers from third countries—2 years of the Skilled Workers Immigration Act]	Institute der deutschen Wirtschaft Köln [Institute of the German economy Cologne], Kompetenzzentrum Fachkräftesicherung/Federal Ministry for Economic Affairs and Climate Action of Germany	Sarah Pierenkemper, Helen Hickmann, Anika Jansen	2022	Report	https://www.iw.koeln.de/studien/sarah-pierenkemper-helen-hickmann-anika-jansen-internationale-fachkraefte-aus-drittstaaten-zwei-jahre-fachkraefteeinwanderungsgesetz.html

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
REP10	Evaluierung der Westbalkanregelung: Registerdatenanalyse und Betriebsfallstudien [Evaluation of the Western Balkans Scheme: Register Data Analysis and Operational Case Studies.]	Institute for Employment Research (IAB), Nürnberg	Brücker, H., M. Falkenhain, T. Fendel, M. Promberger, M. Raab, and P. Trübswetter, P	2022	Report	https://www.bmas.de/SharedDocs/Downloads/DE/Publikationen/Forschungsberichte/fb544-evaluierung-der-westbalkanregelung.pdf?__blob=publicationFile&cv=2
REP11	III Evaluators' Final Report: Evaluation of SDC's Vocational Skills Development Activities	Swiss Agency for Development and Cooperation and heb	Maurer, Markus, Rolf Arnold, Philipp Gonon, Katharina Michaelowa, and Uwe Wieckenberg	2011	Report	https://www.zora.uzh.ch/id/eprint/50104/
REP12	Duale Berufsbildung im Ausland: Angebote, Konzeption, Qualitätsmanagement des DIHK-AHK-IHK-Netzwerkes [Dual vocational training abroad: offers, conception, quality management of the DIHK-AHK-IHK network]	Association of German Chambers	n.a.	2019	Report	https://www.dihk.de/resource/blob/2924/91300b7c7694a9444fb248e97399bbc6/duale-berufsbildung-im-ausland-data.pdf

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
REP13	Pilot Project Swiss VET Initiative India: Cooperation between Switzerland and India in the field of Vocational Education and Training 2009-2013; Evaluation	State Secretariat for Education, Research and Innovation SERI and concept	Haering, B., Rageth, L., Rageth, G., Pohl, N.	2014	Report	https://lit.bibb.de/vufind/Record/DS-167240/Preview
REP14	Organizations active in international vocational training: A guide	Federal Foreign Office	n.a.	n.d.	Report	https://www.govet.international/dokumente/pdf/VETBrochure.pdf
REP15	Möglichkeiten der Fachkräfteeinwanderung: Was Arbeitgeber wissen müssen [Opportunities for skilled labour immigration: what employers need to know]	The Federal Government, Make it in Germany	n.a.	2020	Report	https://www.make-it-in-germany.com/en/the-skilled-immigration-act-opportunities-for-employers
REP16	Zehn Jahre Trends im Bildungsexport [Ten years trends in exporting education]	iMOVE Training Made in Germany, Bundesinstitute für Berufsbildung, Federal Ministry of Education and Research	n.a.	2017	Report	https://www.bibb.de/dienst/publikationen/de/8282
REP17	Fachkräftesicherung deutscher Unternehmen im Ausland—Erfahrungen bei der Übertragung dualer Ausbildungselemente [Securing skilled labour for German companies abroad—Experiences with the transfer of dual training elements]	Institute der deutschen Wirtschaft Köln [Institute of the German economy Cologne]	Körpel, M., Pierenkemper, S., Zibrowus, M.		Report	https://www.iwkoeln.de/studien/markus-koerbel-sarah-pierenkemper-erfahrungen-bei-der-uebertragung-dualer-ausbildungselemente.html

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
REP18	Richtlinie zur Förderung der Entwicklung und Implementierung von Ausbildungsklustern International – ClusterVET [Guideline for the promotion of the development and implementation] of Training Clusters	Federal Ministry for Education and Research	n.a.	2019	Report	https://www.bmbf.de/bmbf/shareddocs/bekanntmachungen/de/2019/10/2686_bekanntmachung.html
REP19	Elf Länder, ein Ziel: Erfolg durch berufliche Bildung [Eleven countries, one goal: Success through VET] International—ClusterVET	Association of German Chambers, VETnet	n.a.	n.d.	Report	https://mediafra.admiralcloud.com/customer_609/e0f32dbc-580c-44f0-b630-e114197ccb5?response-content-disposition=inline%3B%20filename%3Dvernet-deutsch.pdf&Expires=1681675679&Key-Pair-Id=K3XAA2Y8CUDC&Signature=F5AuK4h8G4ywtjkc1fIDpIlWnLlek4FEFnDSO5BAJafQwyZTEvUc4~2PX2dETGHSTfpQ63waeIiyu~CESdhfv~WAPwijM9SBSPQUsVzoaDNYo-32CSRBOJ5krNeuXBLwMxqQleggLgAC6p6vf5cphe1DcU~4cmWfdEtJ7p6oAFnyjojoO5R~WvFzefNjmlryPYtqxgm7CuayG7GFRqmnpYbg~L7jzrG7BFInTFpyiQb-9xpILLFLF0zpd~ae5Wp4KT4mGVh0r0ZL486iGnRFXkfcRJvleJl0mrmpEjbr2tFikH25mQB-URmTF808s2mp8eFrNOM8MVYoWHqesMa0w__

Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
REP20	Markstudie Indien für den Export beruflicher Aus- und Weiterbildung [Market Study India for the Export of Vocational Education and Training]	iMOVE Training Made in Germany, Bundesinstitut für Berufsbildung, Federal Ministry of Education and Research	Männike, Jürgen	2018	Report	https://www.imove-germany.de/static/de/downloads/iMOVE-Markstudie_Indien_2018.pdf
REP21	International Migration Outlook 2023	OECD	n.a.	2023	Report	https://doi.org/10.1787/b0f40584-en
Secondary literature						
L1	Global Skill Partnerships: a proposal for technical training in a mobile world	IZA Journal of Labor Policy, 4(2)	Michael Clemens, Helen Dempster and Kate Gough	2015	Secondary literature	https://izajolp.springeropen.com/articles/10.1186/s40173-014-0028-z
L2	Metaevaluierung Berufsbildung: Ziele, Wirkungen Und Erfolgsfaktoren Der Deutschen Berufsbildungszusammenarbeit [Meta-Evaluation of Vocational Training: Objectives, Effects and Success Factors of the German Vocational Training Cooperation]	Waxmann	Strockmann, R., Silvestrini, S.	2013	Secondary literature	https://www.waxmann.com/waxmann-buecher/?tx_p2waxmann_pi2%5bbuchnr%5d=2795&tx_p2waxmann_pi2%5baction%5d=show

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
L3	Does Dual Training Make the World Go Round? Training Models in German Companies in China, India and Mexico	Vocations and Learning, 14(1)	Pilz, M. and Wiemann, K.	2021	Secondary literature	https://link.springer.com/article/10.1007/s12186-020-09255-z
L4	Can multinational enterprises introduce new institutions to host countries? An explorative study about MINEs' training programmes with educational institutes and their potential influence on Vietnam's vocational education sector	Geographische Zeitschrift, 104(3)	Wrana, J. and J. R: Diez, J. R.	2016	Secondary literature	https://www.jstor.org/stable/45174003
L5	An Organized Anarchy? Understanding the Role of German Cooperation in the Construction and Export of the Dual Training Model	International Journal of Training and Development, 26	Fontdevila, Clara, Oscar Valiente, and Sebastian Schneider	2022	Secondary literature	https://onlinelibrary.wiley.com/doi/full/10.1111/ijtd.12274
L6	Dual Vocational Education and Training and Policy Transfer in the European Union Policy: The Case of Work-Based Learning and Apprenticeships	Cogent Education 9 (1)	Martínez-Izquierdo, Luis, and Mónica Torres Sánchez.	2022	Secondary literature	https://doi.org/10.1080/2331186X.2022.2154496

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
L7	Agenda-setting for VET policy in the Western Balkans: employability versus social inclusion	European Journal of Education 51(3)	Bartlett, Will and Marina Cino Pagliarello	2016	Secondary literature	https://onlinelibrary.wiley.com/doi/abs/10.1111/ejed.12182
L8	International transfer of vocational education and training: a literature review	Journal of Vocational Education & Training	Junmin Li, Matthias Pilz	2021	Secondary literature	https://www.tandfonline.com/doi/full/10.1080/13636820.2020.1847566
L9	Cross-national policy borrowing: understanding reception and translation	Asia Pacific Journal of Education 34 (2)	Gita Steiner-Khamisi	2014	Secondary literature	https://www.tandfonline.com/doi/abs/10.1080/02188791.2013.875649
L10	Merkmale dualer Berufsausbildung in den internationalen Angeboten deutscher Bildungsanbieter [Characteristics of dual vocational training in the international offerings of German training providers]	Journal of Technical Education 8 (2)	Uwe Fassbender, Matthias Pilz	2020	Secondary literature	https://www.journal-of-technical-education.de/index.php/joted/article/view/196
L11	Dual training in Europe: a policy fad or a policy turn?	Transfer: European Review of Labour and Research	Vera Šćepanović, Antonio Martín Ariles	2020	Secondary literature	https://journals.sagepub.com/doi/full/10.1177/1024258919898317
L12	60 Jahre Internationale Förderung Der Berufsbildung Im Überblick: Veränderungsprozesse in Der Wertschöpfungskette Für Berufsbildung in Der Staatlichen Deutschen Berufsbildungszusammenarbeit	Konzepte Und Wirkungen Des Transfers Dualer Berufsausbildung [Concepts And Effects Of The Transfer Of Dual	Werner Heitmann	2018	Secondary Literature	https://link.springer.com/chapter/10.1007/978-3-658-23185-9_3

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
	Im Ausland' [60 Years of International Promotion of Vocational Education at a Glance: Processes of Change in the Value Chain for Vocational Education and Training in the German National Cooperation in Vocational Education and Training Abroad]	Vocational Training], edited by Michael Gessler, Martina Fuchs, and Matthias Pilz, 59–118.				
Strategies						
S1	Strategie zur gezielten Gewinnung von Fachkräften aus Drittstaaten: Fachkräftegewinnungs-Strategie [Strategy for the targeted recruitment of skilled workers from third countries: Skilled labour recruitment strategy]	Federal Ministry for Economic Affairs and Energy	n.a.	2019	Strategy paper	https://www.bmwk.de/Redaktion/DE/Publikationen/Ausbildung-und-Beruf/strategien-gewinnung-fachkraefte.pdf?__blob=publicationFile&v=1
S2	Fachkräftestrategie der Bundesregierung [Skilled Workers Strategy of the Federal Government]	Federal Ministry of Labour and Social Affairs	n.a.	2022	Strategy paper	https://www.bmas.de/DE/Arbeit/Fachkraeftestraeherung-und-Integration/Fachkraeftestraege/fachkraeftestraegie.html
S3	Strategiepapier Der Bundesregierung Zur Internationalen Berufsbildungszusammenarbeit Aus Einer Hand [Strategy Paper	German Bundestag	n.a.	2013	Strategy paper	https://www.bmbf.de/bmbf/shreddocs/downloads/files/strategiepapier_der_bundesregi-n_berufsbildungszusammenarbeit.html

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
	of the Federal Government on International Vocational Training Cooperation from a Single Source]					
S4	Strategie Der Bundesregierung Zur Internationalen Berufsbildungszusammenarbeit [Strategy of the Federal Government for International Cooperation in Vocational Education and Training Eckpunkten zur Fachkräffeeinwanderung aus Drittstaaten [Key points on the immigration of skilled workers from third countries]	German Federal Government	n.a.	2019	Strategy paper	https://www.govet.international/dokumente/pdf/Strategie_der_Bundesregierung_iBBZ_2019.pdf
S5		German Federal Government	n.a.	2022	Strategy paper	https://www.bundesregierung.de/breg-de/suche/fachkraeffeeinwanderungsgesetz-2146480#:~:text=Mir%20den%20den%20Fachkr%C3%A4ffeeinwanderung,den%20deutschen%20Arbeitsmarkt%20zu%20rekrutieren
S6	Berufliche Bildung in der Entwicklungszusammenarbeit: Positionspapier [Vocational Training in Development Cooperation: Position Paper]	German Ministry for Economic Cooperation and Development	n.a.	2012	Strategy paper	https://www.dcdualvet.org/wp-content/uploads/2012_BMZ_Positionspapier-BB-in-der-EZA.pdf
S7	Berufliche Bildung in der Entwicklungszusammenarbeit. Strategiepapier (BMZ-Papier 7)	German Ministry for Economic	n.a.	2015	Strategy paper	https://silo.tips/download/bmz-bildungsstrategie

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
S8	[Vocational Education and Training in Development Cooperation. Strategy Paper (BMZ Paper 7)]	Cooperation and Development				
	Strategiepapier: Nachhaltige Wirtschaftsentwicklung, Ausbildung und Beschäftigung	German Ministry for Economic Cooperation and Development	n.a.	2023	Strategy paper	https://www.bmz.de/resource/blob/182690/bmz-papier-nachhaltige-wirtschaftsentwicklung.pdf
	[Strategy Paper: Sustainable Economic Development, Education, and Employment]					
Study/Working paper						
SW1	Developments in Germany in the context of visa liberalization	German National Contact Point for the European Migration Network (EMN)/ Federal Office for Migration and Refugees	Hoffmeyer-Zlotnik	2019	Study/ Working paper	https://www.iw.koeln.de/studien/kristina-stoewe-dirk-werner-daniel-woerndl-developments_in_Germany_in_the.pdf
SW2	Potenziale beruflicher Anerkennung bei der Fachkräftenwanderung: Eine Analyse der beruflichen Bildung in dreizehn Fokusländern [Potential of recognizing foreign VET qualifications within skilled	Institute der deutschen Wirtschaft Köln [Institute of the German economy Cologne]	Annette Bazzak, Nora Rohr, Olesia Schmetzer, Kristina Stoewe, Dirk Werner,	2020	Study/ Working paper	https://www.iw.koeln.de/studien/kristina-stoewe-dirk-werner-daniel-woerndl-eine-analyse-der-beruflichen-bildung-in-dreizehn-fokuslaendern.html

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
SW3	migrationAn analysis of VET in thirteen focus countries]	Migration Policy Centre	Daniel Wörndl, Luena Zifle	2012	Study/ Working paper	https://cadmus.eui.eu/bitstream/handle/1814/62697/Explanatory%20Notes_2012-89.pdf?sequence=1&isAllowed=y https://migration.commission.ge/files/pcms_en_final.pdf
	The demographic and economic framework of circular migration in Georgia		Mirian Tukhashvili			
SW4	Manual on Circular Migration Scheme	Public service development agency, centre for international migration and development (CIM)	Anna Goos	2016	Study/ Working paper	
SW5	Gesteuerte Erwerbsmigration nach Deutschland [Managed labour migration to Germany]	Institute der deutschen Wirtschaft Köln [Institute of the German economy Cologne]	Adunts, David, Herbert Brücker, Tanja Fendel, Andreas Hauptmann, Sekou Keita, and Regina Konle-Seidl.	2022	Study/ Working paper	https://iab.de/gesteuerte-erwerbsmigration-nach-deutschland/#:~:text=Prognosen%20zufolge%20w%C3%BCrde%20das%20Erwerbspersonenpotenzial,auf%20Erwerbsmigration%20aus%20Drittstaaten%20angewiesen
SW6	10 Jahre Anerkennungsgesetz [10 Years Recognition Act]	Federal Ministry of Education and Research	n.a.	2022	Study/ Working paper	https://www.bmbf.de/SharedDocs/Publikationen/de/bmbf/31709_10_Jahre_Anerkennungsgesetz.pdf?__blob=publicationFile&cv=6
SW7	Germany's Immigration Policy and Labor Shortages	Institute of Labor Economics	Constant, A. F., and N.T. Bienvenue	2012		

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
SW8	Germany's Dual Vocational Training System: A Model for Other Countries?	Bertelsmann Stiftung	Dieter Euler	2013	Study/ Working paper	https://legacy.iza.org/en/webcontent/publications/reports/report_pdfs/iza_report_41.pdf https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Bibliothek/Doi_Publikationen/GP_Germanys_dual_vocational_training_system.pdf
Websites						
W1	Western Balkan Regulation	Center for Global Development, World Bank	n.a.	n.d.	Website	https://gsp.cgdev.org/legalpathway/western-balkan-regulation/ or https://www.arbeitsagentur.de/vor-ort/zav/westbalkanregelung
W2	Hand in Hand for International Talents	German Industry and Commerce Vietnam	n.a.	n.d.	Website	https://vietnam.ahk.de/en/training-job/hand-in-hand-for-international-talents
W3	Anerkennung in Deutschland [Recognition in Germany]: Information portal of the German government for the recognition of foreign professional qualifications	Federal Ministry of Education and Research	n.a.		Website	https://www.anerkennung-in-deutschland.de/html/en/index.php
W4	BQ-Portal: The information portal for foreign professional qualifications	Federal Ministry for Economic Affairs and Climate Action	n.a.	2023	Website	https://www.bq-portal.de/en

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
W5	Kompetenzzentrum Fachkräftesicherung (KOFA) [Competence Centre to support small- and medium-sized enterprises in finding and binding skilled workers]	Federal Ministry for Economic Affairs and Climate Action	n.a.	2023	Website	https://www.kofa.de/
W6	Initiative Securing skilled labor and integration	Federal Ministry for Economic Affairs and Climate Action	n.a.	n.d.	Website	https://www.bq-portal.de/en/securing-skilled-labor-and-integration
W7	Unternehmen Berufsanerkennung: Mit ausländischen Fachkräften gewinnen [Company Professional recognition: Winning with foreign skilled workers]	DIHK (German Chamber of Industry and Commerce) and German Confederation of Skilled Crafts (ZDH)	n.a.	2023	Website	https://www.unternehmen-berufsanerkennung.de/
W8	Make it in Germany	German Federal Government	n.a.	n.d.	Website	https://www.make-it-in-germany.com/en/
W9	Central Service Agency for Professional Recognition	Federal Employment Agency and Federal Ministry of Education and Research	n.a.	n.d.	Website	https://www.anerkennung-in-deutschland.de/html/en/pro/service-center.php

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
W10	anabin: Das Infoportal zu ausländischen Bildungsabschlüssen [The information portal on foreign educational qualifications]	Kultusminister-konferenz— Zentralstelle für ausländisches Bildungswesen [Central Office for Foreign Education]	n.a.	2023	Website	https://anabin.kmk.org/anabin.html
W11	ProRecognition	Federal Ministry of Education and Research	n.a.	n.d.	Website	https://www.anerkennung-in-deutschland.de/html/en/pro/prorecognition.php
W12	Skills Analysis Network (NetQA)	Chamber of crafts and trades (HWK) and from the chambers of industry and commerce (IHK)	n.a.	n.d.	Website	https://www.anerkennung-in-deutschland.de/html/en/pro/skills-analysis-network.php
W13	Integration through Qualification (IQ) Network	Federal Ministry of Labour and Social Affairs	n.a.	n.d.	Website	https://www.netzwerk-iq.de/en/
W14	Mein Weg nach Deutschland (My way to Germany)	Goethe Institute	n.a.	2023	Website	https://www.goethe.de/prj/mwd/en/startseite.html
W15	IHK Foreign Skills Approval (IHK FOSA)	IHK Foreign Skills Approval (IHK FOSA)	n.a.	n.d.	Website	https://www.ihk-fosa.de/en/

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
W16	Introducing the Global Skill Partnership Portal	Center for Global Development	Helen Dempster	2021	Website	https://www.cgdev.org/blog/introducing-global-skill-partnership-portal
W17	Skilled workers for Germany	Federal Ministry for Economic Affairs and Climate Action	n.a.	2023	Website	https://www.bmwk.de/Redaktion/DE/Dossier/fachkraeftesicherung.html
W18	Promoting legal mobility among highly qualified Tunisian experts	Center for Global Development	n.a.	n.d.	Website	https://gsp.cgdev.org/legalpathway/promoting-legal-mobility-among-highly-qualified-tunisian-experts/
W19	Strengthening the development potential of the EU Mobility Partnership in Georgia through targeted circular migration and diaspora mobilization	Center for Global Development	n.a.	n.d.	Website	https://gsp.cgdev.org/legalpathway/strengthening-the-development-potential-of-the-eu-mobility-partnership-in-georgia-through-targeted-circular-migration-and-diaspora-mobilization/
W20	Pilot Programme Aimed at Attracting Personnel from Vietnam to Train as Nurses in Germany	Center for Global Development	n.a.	n.d.	Website	https://gsp.cgdev.org/legalpathway/pilot-program-aimed-at-attracting-personnel-from-vietnam-to-train-as-nurses-in-germany/
W21	Qualifizierte Fachkräfte Für Nachhaltige Entwicklung [Qualified Professionals for Sustainable Development]	German Federal Ministry for Economic Cooperation and Development	n.a.	n.d.	Website	https://www.bmz.de/de/themen/berufsbildung

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
W22	Kompetenzstelle Internationale Berufsbildung [Center of Competence International VET]	Association of German Chambers	n.a.	2022	Website	https://dihk.twentymedia.de/cms/map_public
W23	The Sri Lanka German Training Institute: SLGTI	German Training Institute, SLGTI	n.a.	2023	Website	https://www.slgri.ac.lk/about-slgri/
W24	Aussenwirtschaftspolitik—Bedeutung Für Den Maschinenbau (Foreign Trade Policy—Significance for Mechanical Engineering)	Verband Deutscher Maschinen- und Anlagenbau (VDMA) [German Engineering Federation]	n.a.	n.d.	Website	https://www.vdma.org/viewer/-/v2article/render/2736753
W25	Round Table for international cooperation in vocational education and training	Federal Institute for Vocational Education and Training, GOVET	n.a.	n.d.	Website	https://www.govet.international/en/2353.php
W26	European Alliance for Apprenticeships	Federal Institute for Vocational Education and Training	n.a.	n.d.	Website	https://www.bibb.de/en/25377.php
W27	Fluchursachen wirkungsvoll bekämpfen [Effectively combating the causes of flight (Interview with the Commissioner for Refugees and Migration at the Federal Foreign Office)]	deutschland.de	Janet Schayan	2015	Website	https://www.deutschland.de/de/topic/politik/deutschland-europa/fluchursachen-wirkungsvoll-bekaempfen

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Annex II: Continued

ID	Title	Publisher	Author	Year	Type	Link to article
W28	Fachkräfteeinwanderungsgesetz (Skilled Worker Immigration Act)	Zentralverband des Deutschen Handwerks [German Confederation of Skilled Crafts]	n.a.	n.d.	Website	https://www.zdh.de/schlagwort/fachkraefteeinwanderungsgesetz/
W29	Fachkräfte sichern—durch Ausbildung im Ausland [Securing skilled workers—through training abroad]	IHK Position [Position of the Chamber of Commerce and Industry]	Mascha Dinter	2023	Website	https://www.ihk-position.de/fachkraefte-im-ausland/
W30	44 aktualisierte Ländersachstände im GOVET-Länderportal [44 updated country reports in the GOVET country portal]	German office for International Cooperation in Vocational Education and Training	n.a.	2023	Website	https://www.govet.international/de/164428.php
W31	Datenbank Berufsbildungszusammenarbeit [Vocational training cooperation database]	German office for International Cooperation in Vocational Education and Training	n.a.	2023	Website	https://www.govet.international/de/2358.php
W32	Sharp rise in labour migration in 2022	German Federal Statistical Office	n.a.	2023	Website	https://www.destatis.de/EN/Press/2023/04/PE23_165_125.html

Annex III: Quantitative dimensions driving and constituting externalisation

A. Quantitative dimensions illustrating what skills Germany needs and where

A.1. Evidence supporting the ‘produce where you sell’ thesis

Figure A.1 illustrates the most important groups of goods exported in Germany in 2018. Notably, ‘cars and car parts’ are the main exported goods of the German market, characterising 17.5 per cent of the total goods exported. The picture is largely unchanged in 2023 when 17 per cent of exports are characterised as ‘motor vehicles and parts thereof’, with machinery (14.2 per cent) and chemical products (8.9 per cent) ranked second and third (Destatis 2024). Therefore, some of the evidence that follows uses the automobile sector as a critical sector that is representative of the logic of German companies producing where they sell. Figure A.2 illustrates the production of automobiles with German corporate brands abroad and shows an increase over time in the proportion of automobiles produced in China and in the ‘rest of the world’ category. The same trend also applies to the ‘original equipment manufacturers’ (OEMs) of the automotive sector, namely the companies that manufacture products used as inputs in the production of automobiles. As shown in Fig. A.3, between 2008 and 2017, while the production of German OEMs at home remained almost constant, their foreign production almost doubled. Figure A.4 complements this narrative by showing that the increased production of German OEMs does not service foreign markets through exports, whose share has remained fairly constant from 2012 until 2017, but through localised production that happens outside of Europe, which rose from about 5.5 million cars in 2012 to around 7 million in 2017. The same picture emerges from a survey of employee representatives at German and Central Eastern European locations of automotive suppliers in 2016, which asked respondents to evaluate if

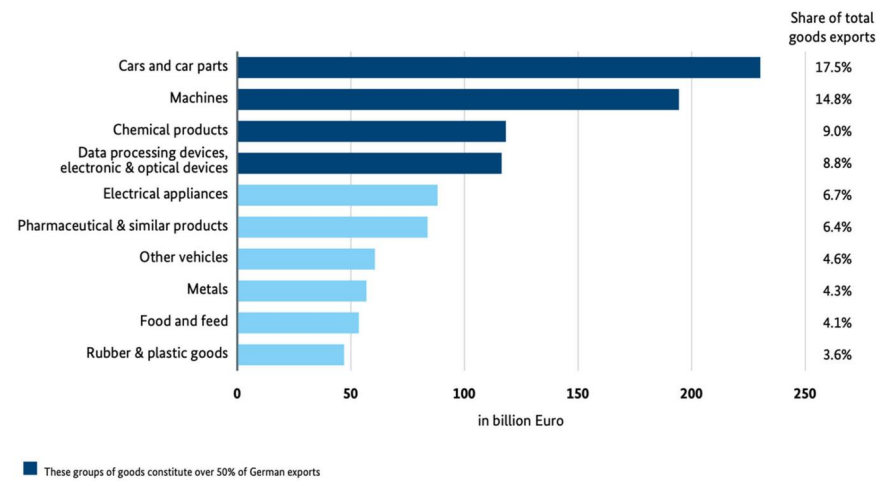


Figure A.1. Exports of the most important groups of goods in Germany in 2018 (Source: Federal Ministry for Economic Affairs and Climate Action 2019: 9).

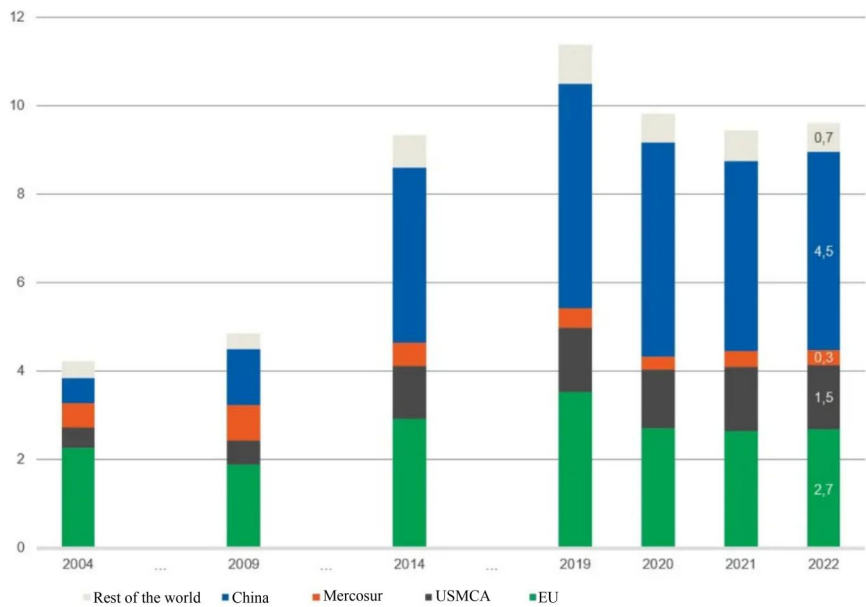


Figure A.2. Automobile production of German corporate brands abroad (Source: VDA 2022b).

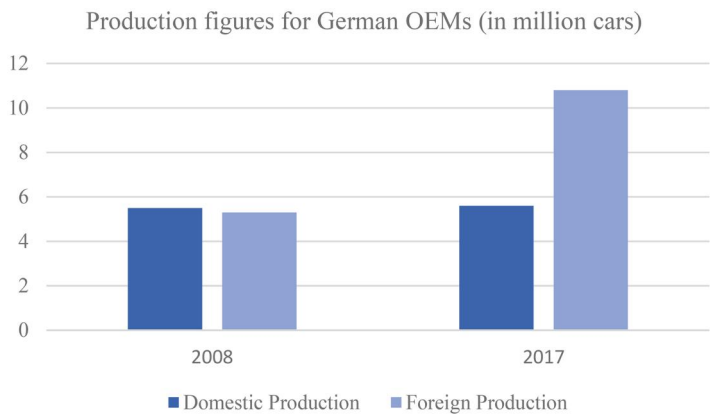


Figure A.3. Development of domestic and foreign production of German ‘Original Equipment Manufacturers’ for the automotive industry (Source: E-mobil BW 2019: 130).

part of the production (or other functions) had been relocated in the last 5 years from their plant to other plants. As illustrated in Fig. A.5, almost 50 per cent of the respondents confirmed relocation to Central and Eastern Europe and 31.7 per cent to outside Europe. Exhibit 1 in BCG and Fraunhofer Institute for Manufacturing Engineering and Automation (2015: 7) illustrates that auto suppliers as a whole are shifting more plants from Europe and the USA to emerging markets, particularly Mexico and China. Along these lines,

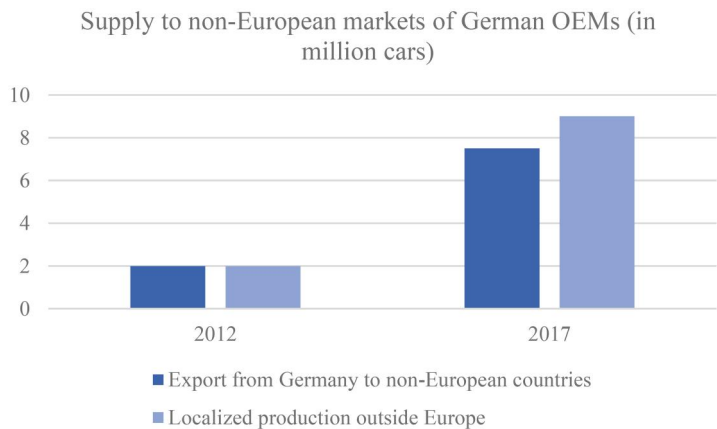


Figure A.4. Supply to non-European markets of German OEMs in the automotive sector (Source: E-mobil BW 2019: 130).

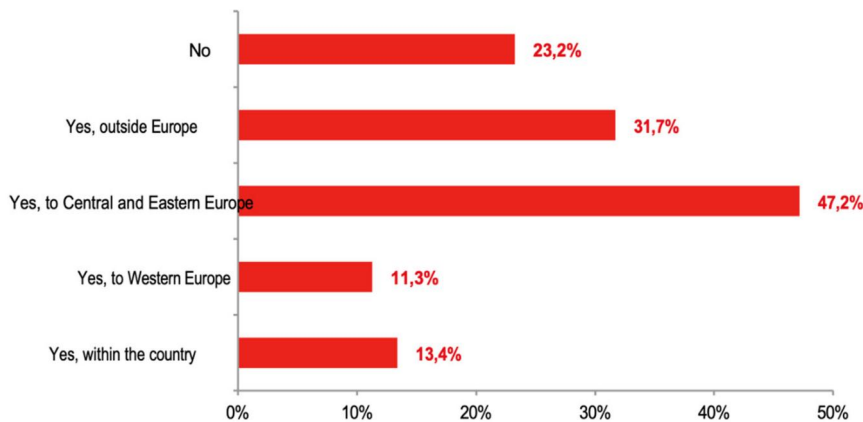


Figure A.5. Relocation experience in German automotive supplier plants, 2011–16. Answers to the question ‘In the last five years, has part of the production (of other functions) been relocated from your plant to other plants?’ (Source: Schwarz-Kocher, Krzywdzinski, and Korflur 2019).

Exhibit 2 in the same report (p. 8) shows that auto suppliers are locating some of their most strategic production facilities in emerging markets. Another sector that ranks second as exported goods in Fig. A.1 is that of machine tools. Figure A.6 illustrates the major customer markets of the exports of German machine tools in 2022 and 2023, providing an updated view of Herrigel’s (2015) argument about shifting consumer markets (p. 136). Although machine tools are still subject to more exports than offshore production, the trends in the changing consumer demands in machine tools markets are the same as in the automotive sector, supporting the thesis about changing consumer markets and, more broadly, ‘produce where you sell’.

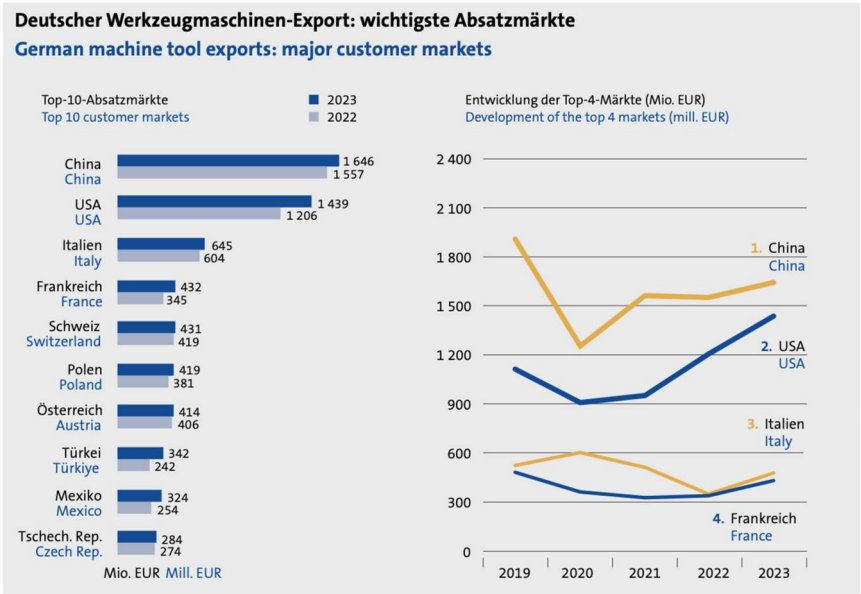


Figure A.6. German machine tool exports, major customer markets exhibiting the same trends as the automotive market, updating [Herrigel \(2015: 137, Fig. 4\)](#) and showing the consistent validity of the thesis of ‘produce where you sell’ (Source: [VDW, 2023: 30](#)).

A.2. Evidence illustrating the increased domestic mid-level skill shortage arising due to the onset of the knowledge economy and demographic decline
As shown in [Durazzi and Benassi \(2020, p. 323\)](#), [Fig. A.7](#), the onset of the knowledge economy has prompted a shift towards general education tracks, putting a lot of pressure on the

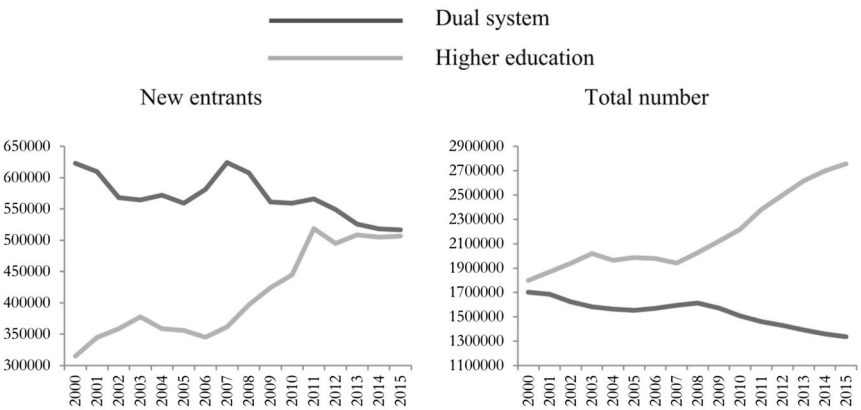


Figure A.7. New entrants and total number of students in the dual VET system and higher education in Germany (Source: [Durazzi and Benassi 2020](#), German Politics, 29:3, p. 323, reprinted by permission of the publisher Taylor & Francis Ltd, <http://www.tandfonline.com>).

dual VET system and the apprenticeship market, which is key for developing mid-level skills. Simultaneously, Fig. A.8 demonstrates how demographic decline is shrinking the labour force potential. Currently, every second person in Germany is older than forty-five and every fifth person is older than 66, which is most likely projected to result in a 19 per cent reduction in the potential labour force by 2060. Those combined trends have contributed to a growing number of struggles to fill mid-level skilled labour positions (see Fig. A.9), especially in sectors such as construction, gastronomy, hospitality, services, IT, health-care, and social services.

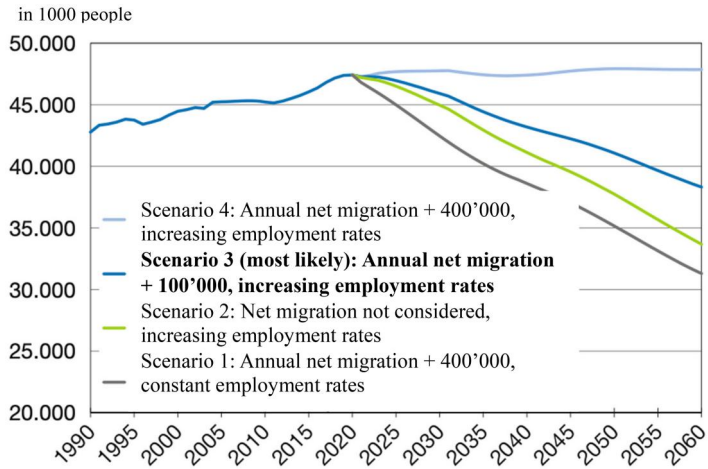


Figure A.8. Development of the labour force potential (Source: Fuchs, Söhnlein, and Weber 2022: 149).

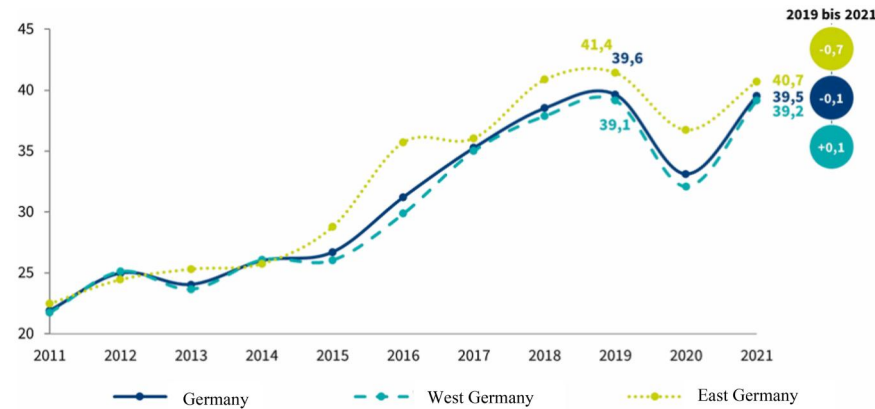


Figure A.9. Non-filling rate of companies for skilled labour positions in Germany and in Western and Eastern Germany from 2011 to 2021 (Source: Bennewitz et al. 2022: 63).

B. Evidence supporting claims about international skill formation transfers and migration as key elements of externalisation

B.1. Evidence showcasing the dimensions of international skill formation transfers

Figures B.1–B.4 highlight the significant increase in Germany’s ODA disbursements and co-operation within the VET sector and the expanding presence of the German Chambers of Commerce Abroad (AHKs). Together, they provide the technical and financial

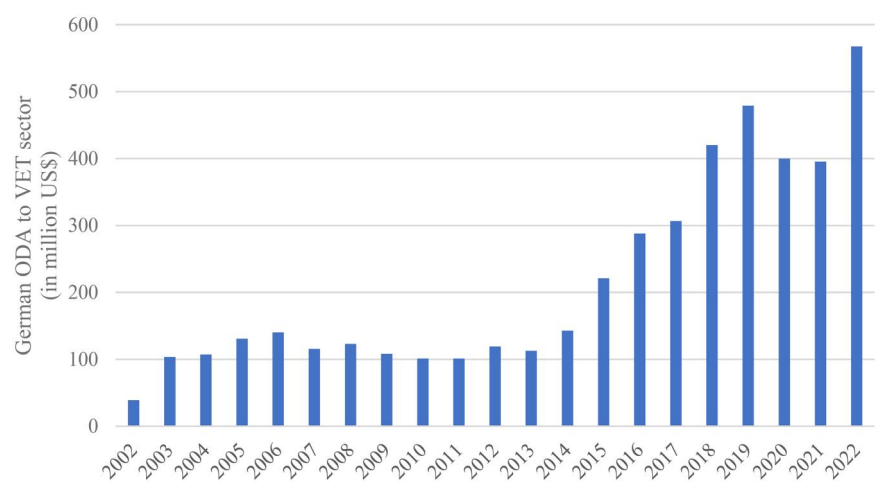


Figure B.1. Germany’s official disbursements to all developing countries to the sector of VET (in million US\$, constant prices, *Source: OECD n.d.*).

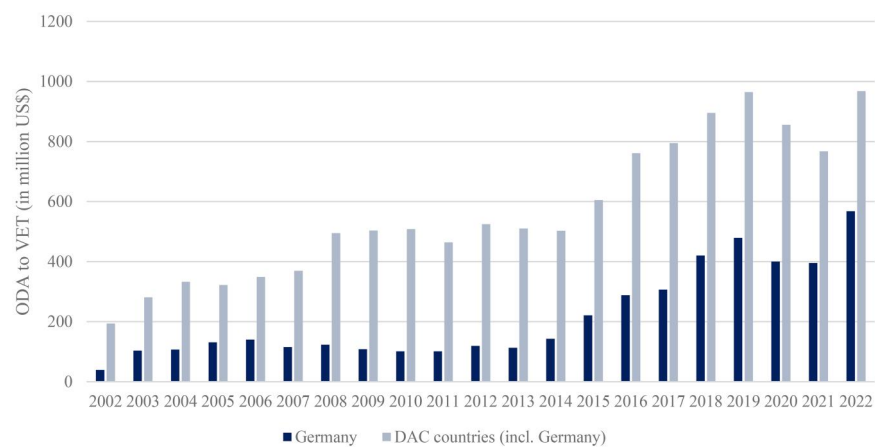


Figure B.2. Official disbursements to the sector of VET (in million US\$, constant prices, *Source: OECD n.d.*).

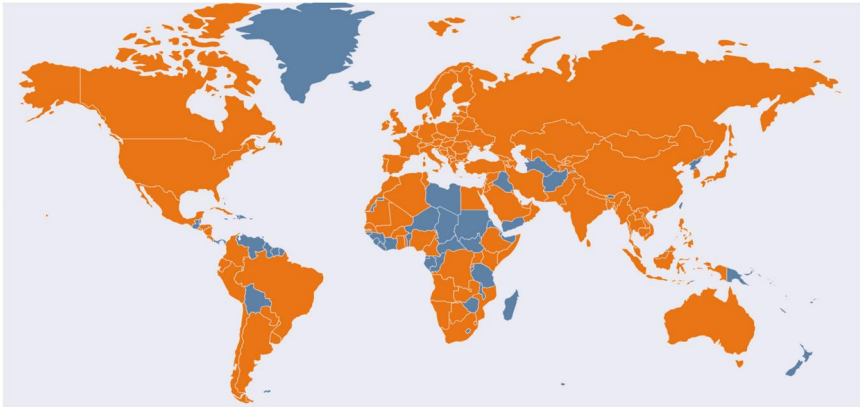


Figure B.3. Countries with which Germany is engaged in VET cooperation (coloured in orange, Source: GOVET 2024, reprinted with permission of copyright owner GOVET).



Figure B.4. AHKs that offer qualified VET programmes (blue: location with VET offers, yellow: Skills Expert Centre) (Source: DIHK 2024, reprinted with permission of copyright owner DIHK).

infrastructure essential for facilitating international transfers in VET—a key element of externalisation. This infrastructure is crucial for developing the mid-level VET skills required by companies that increasingly ‘produce where they sell’ as well as for addressing domestic skill shortages, particularly within transnational skill partnerships.

Figure B.1 shows that, since 2008, Germany’s ODA disbursements to the VET sector have quadrupled. Figure B.2 demonstrates Germany’s position as the largest contributor to the VET sector among all DAC countries. Figure B.3 illustrates Germany’s VET cooperation

with over 100 countries (these can be at the system, sectoral or project level). Finally, [Fig. B.4](#) shows the location of the AHKs providing specialised services in dual VET, such as training and certification, in more than fifty countries.

B.2. Evidence demonstrating externalisation within migration policy

[Figure B.5](#) illustrates how a significant increase in labour migration can be observed following the implementation of migration-liberating regulations, including the Western Balkan Regulation Act in 2015 and the Skilled Workers Immigration Act in 2020. The Western Balkan Regulation Act operates on a quota system (25,000 per year, 50,000 from 2024 onwards). The initial implementation of the Skilled Workers Immigration Act in 2020 coincided with the onset of COVID-19 restrictions, restricting entry into Germany and limiting the full assessment of the impact of this new regulation in quantitative terms. [Figure B.6](#) shows how the number of requests for recognising foreign qualifications has substantially increased since the introduction of the Recognition Act in 2012. The large majority of requests receive the recognition of full or partial equivalence. [Table B.1](#) provides an overview of the origins and qualification level of migrants. The majority of labour migrants entering Germany through the Western Balkan Regulation Act and the ‘Occupations in Demand’ regulation (specifically for health, construction, and care occupations) possess mid-skilled VET qualifications. Individuals entering via these pathways exhibit a qualification structure similar to that of Germans, with a majority holding vocational qualifications. It is important to note that the qualification level of migrants from third countries does not yet reflect the effects of the Skilled Worker Immigration Act, as the Act was only adopted in 2020.

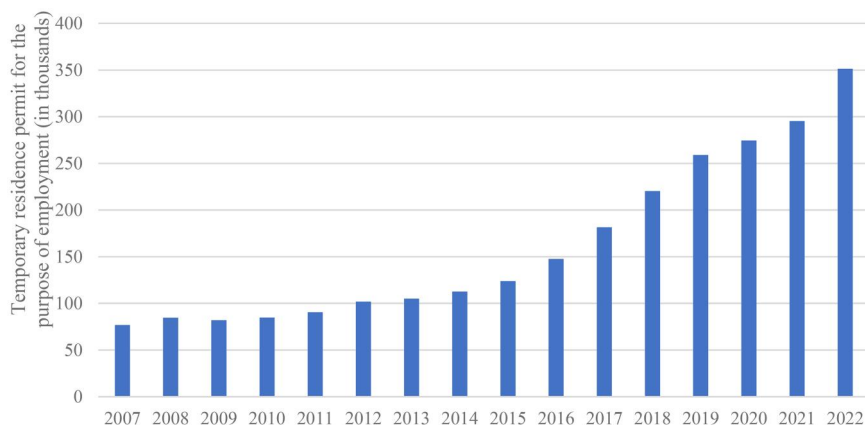


Figure B.5. Foreign population in Germany with a temporary residence permit for employment (in thousands) (Source: [Destatis, 2023](#)).

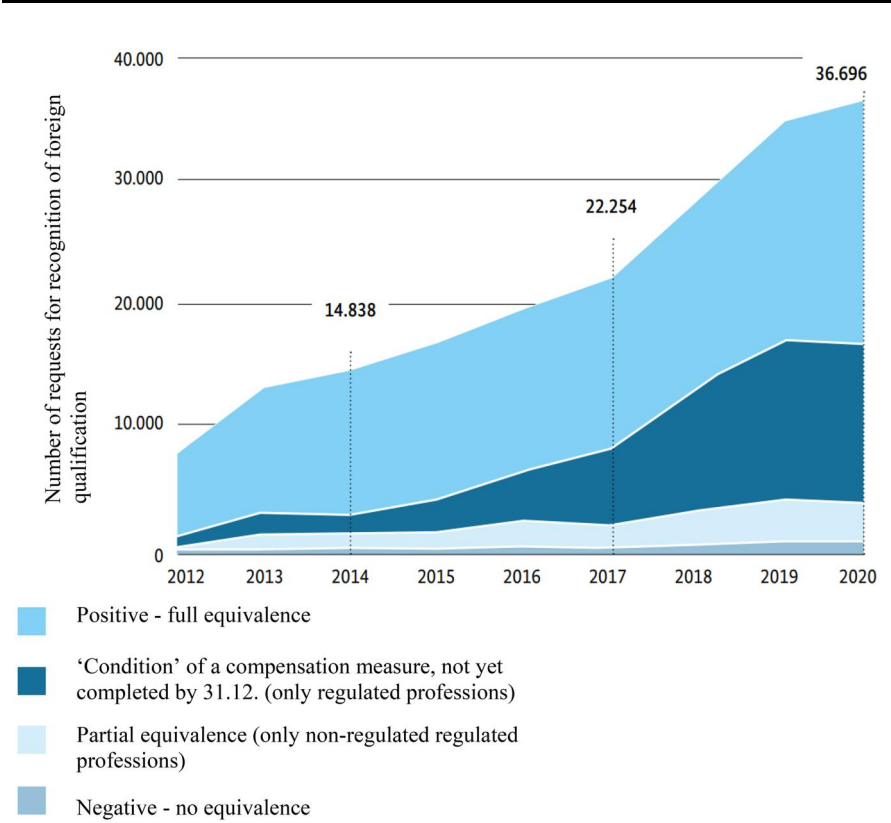


Figure B.6. Number of requests for recognition of foreign qualification and equivalence decision (Source: Federal Ministry of Education and Research 2022: 23).

Table B.1. Qualification structure of the German labour force in 2020 (Source: Brücker et al. 2020: 42).

Qualification level:		No training	Vocational qualification	Tertiary education
Migrants originating from the Western Balkans	Via Western Balkan Regulation	31	59	19
	Via highly qualified regulation route (blue card)	1	7	92
	Via Occupations in Demand regulation [Engpassberufe] (WB)	11	81	8
	Via asylum	63	30	8
Other migrant groups	Croatia	26	58	16
	EU-2 (Bulgaria and Romania)	47	39	14
	EU-8 (Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Slovenia, Hungary)	26	57	17
	High-income countries	6	10	84
	Other third countries	27	15	58
Total 2% sample of IEB (integrated employment biographies)	Germans	13	68	19
	Total workforce (migrants and Germans)	16	65	19

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