

Benchmarking Migrant Talent Integration in Southern Europe: An Exploratory PROMETHEE II Analysis

Kiriakos Tsaousiotis

dmst00031@uowm.gr

University of Western Macedonia

Konstantinos Panitsidis

University of Western Macedonia

Konstantinos Spinthiropoulos

University of Western Macedonia

Eleni Zafeiriou

Democritus University of Thrace

Paschalina Mikie

University of Western Macedonia

Research Article

Keywords: migrant integration, brain waste, overqualification, macro-talent management, PROMETHEE II, Southern Europe, migration policy

Posted Date: August 6th, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-10479587/v1>

License:   This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Additional Declarations: No competing interests reported.

Benchmarking Migrant Talent Integration in Southern Europe: An Exploratory PROMETHEE II Analysis

Kiriakos Tsaousiotis^{1,*}, Konstantinos Panitsidis¹, Konstantinos Spinthiropoulos¹, Eleni Zafeiriou^{2,*} and Paschalina Miki¹

¹ Department of Management Science and Technology, School of Economic Sciences, University of Western Macedonia, GR-68100 Kozani, Greece

² Department of Agricultural Development, School of Agricultural and Forestry Sciences, Democritus University of Thrace, GR-68200 Orestiada, Greece

* Correspondence: dmst00031@uowm.gr (K.T.); ezafeir@agro.duth.gr (E.Z.)

The present study is exploratory and assesses the capacity of Southern European countries—Portugal, Spain, Italy, Greece, Cyprus, and Malta—to integrate migrant talent into their human-capital systems. Nine indicators are examined across three dimensions: institutional policy inputs (D1), capturing formal arrangements for the integration of third-country nationals; socio-economic outcomes (D2), reflecting the degree of integration of the foreign-born population; and asylum-system pressure (D3), representing the administrative burden associated with asylum applications. The assessment is based on a cross-sectional matrix combining MIPEX 2020 scores with Eurostat indicators for 2023. All indicators are assigned equal weights and evaluated using predefined preference thresholds within a PROMETHEE II framework. Portugal and Malta obtain the most favourable overall positions, while Cyprus is located close to the neutral point. Spain, Italy, and Greece record negative net outranking flows, indicating less favourable configurations of policy, socio-economic outcomes, and administrative pressure. The analysis also identifies substantial divergence between formal policy inclusiveness and observed integration outcomes. Overqualification emerges as an important indicator of migrant skill underutilization. A one-at-a-time weight-stability analysis shows that the overall ranking is relatively stable, although asylum applications and access to nationality are comparatively sensitive criteria. The findings should not be interpreted causally or longitudinally because they depend on indicator selection, mixed reference years, weighting choices, preference thresholds, and the use of absolute asylum caseloads. The study's main contribution is a transparent diagnostic framework for identifying policy–outcome divergence and cases requiring deeper institutional and micro-level investigation.

Keywords: migrant integration; brain waste; overqualification; macro-talent management; PROMETHEE II; Southern Europe; migration policy

1. Introduction

Population ageing, occupational shortages, and the international mobility of skilled workers have made the effective use of migrant human capital an increasingly important policy issue. At the organisational level, talent management traditionally focused on identifying and retaining high-performing employees. Macro-Talent Management (MTM) extends this perspective by examining how national institutions, labour-market arrangements, education systems, and migration rules influence the attraction, development, and utilisation of human capital (Collings and Mellahi 2009; Khilji, Tarique, and Schuler 2015; McDonnell et al. 2017). Within this broader framework, migrants and refugees are not treated only as recipients of protection or subjects of border control, but also as workers whose skills may contribute to demographic resilience, public services, and economic development (Guo and Al Ariss 2015; Ortlieb and Knappert 2023).

This issue is especially salient in Southern Europe. Portugal, Spain, Italy, Greece, Cyprus, and Malta combine ageing populations and recurrent labour shortages with substantial differences in integration policy, labour-market segmentation, informality, housing conditions, and asylum-system pressures. Their geographic position at the external borders of the European Union also exposes them to uneven and sometimes rapidly changing migration flows. These shared features justify comparison, but they do not imply institutional homogeneity.

Large economies and microstates differ markedly in population size, administrative capacity, labour demand, and the scale of asylum caseloads.

A central concern is 'brain waste': the underutilisation of education, qualifications, and professional experience when migrants work in occupations below their skill level or remain outside employment. Overqualification can reflect barriers to the recognition of foreign credentials, language requirements, legal status, discrimination, weak professional networks, and segmented labour markets. It therefore represents an outcome of interactions between individual resources and host-country institutions rather than a single administrative failure (Reyneri 2003; Blouchoutzi, Manou, and Papathanasiou 2021; Ortlieb and Weiss 2020).

Existing comparative research offers valuable policy indices and labour-market statistics, but the indicators are often examined separately. A multi-criteria decision-analysis framework can organise policy inputs, social outcomes, and administrative pressures within a single, explicitly parameterised comparison. PROMETHEE II is suitable for this purpose because it compares alternatives pairwise and produces positive, negative, and net outranking flows without requiring all dimensions to be reduced to a single common unit (Brans and Vincke 1985; Brans and Mareschal 2005). Nevertheless, the resulting ranking is conditional on the selected criteria, their direction, weights, and preference thresholds. It is a decision-support representation, not a causal estimate or an objective league table of national performance.

The study therefore addresses three research questions: (RQ1) How do the six Southern European countries compare when integration policy, labour-market and social outcomes, and asylum-system pressure are considered simultaneously? (RQ2) Which criteria are most closely aligned with the observed PROMETHEE II country profiles? (RQ3) How stable is the leading position under one-at-a-time changes in criterion weights? By answering these questions, the article provides an exploratory benchmark intended to support hypothesis formation, policy comparison, and the identification of cases for more detailed longitudinal and qualitative research.

2. Theoretical and Analytical Framework

2.1. Macro-Talent Management and National Integration Systems

To evaluate talent at the aggregate level, Macro-Talent Management (MTM) must be distinguished from traditional talent management conducted within individual organizations. MTM analyzes the national talent system—comprising migration and citizenship rules, education and training frameworks, labor-market institutions, public administration, and professional recognition mechanisms across macro-, meso-, and micro-levels. These systems collectively govern the supply, allocation, and productive utilization of human capital, generating national-level outcomes that extend beyond the scope of single enterprises (Khilji, Tarique, and Schuler 2015; Vaiman et al. 2018).

From an MTM perspective, migrant labor-market integration is shaped by a complex interplay of formal and informal rules, practices, and actors. National-level institutions (e.g., migration and citizenship authorities) regulate legal entry, residence, and work entitlements; state or provincial bodies oversee the formal recognition of foreign qualifications; local authorities and civil society organizations facilitate local integration and employment services; and employers ultimately determine the extent to which migrant skills are recognized and deployed in the workplace (Vaiman et al. 2018).

Ortlieb and Knappert (2023) take a quantitative perspective on the labor market integration of refugees. Their framework for the labor market integration of refugees depicts the integration process as multi-stage: first the legal admission of a refugee to a host country or region, then access to the labor market and finally integration into the workplace. In principle, formally inclusive labor market integration policies for refugees exist in many countries. However, mere inclusion on the labor market is not sufficient to guarantee positive outcomes on the labor market. Instead, the integration of refugees on the labor market is influenced by the implementation capacity of governments on the one hand and by regional and local labor market conditions, demand for labor

as well as the behavior of employers on the other hand. Finally, also the skills and capital that individual refugees bring with them play a role for the effective implementation of the rights enshrined in integration policies and the productive use of these rights (Ortlieb and Knappert, 2023).

Research studies on the effects of integration policies and of labor market institutions for different groups of migrants have found considerable differences between and also within countries with respect to the effects of these factors on participation in the labor market, on unemployment, on the share of precarious and temporary contracts as well as on occupational position and hierarchical status (Guzi, Kahanec and Kureková, 2021; De Coninck and Solano, 2023). Next to the recruitment of foreign talent for enterprises also the effective use of these foreign workers is crucial. Many countries are able to absorb foreign workers in employment while others use these workers in a less satisfactory way: in overqualified or downgraded employment. Research on the transfer of the education and vocational qualifications of foreign students has shown that students with foreign education have a more difficult transfer than students with qualifications of the host country.

However, students with recognized foreign education and vocational qualifications have a better chance on the labor market and of higher earnings than their less fortunate peers with unrecognised foreign education and vocational qualifications. Apart from recognition of foreign education and vocational qualifications, however, also other factors such as language proficiency, local experience, professional contacts and acceptance by employers play a crucial role in the transfer of their human capital (Tibajev and Hellgren, 2019; Brücker et al., 2021). By ‘talent’ we mean a general term for foreign-born individuals of different backgrounds, with different skills, qualifications and experience who are seeking to be of value to a country and its workforce in different ways. Asylum seekers and refugees, labor migrants and family migrants of working age as well as international students all belong to this broad group. They are vastly different from each other and their challenges and experiences in host countries are very different from each other as well. The MTM perspective is also used to introduce a concept to analyze the extent to which foreign nationals can put their talent to use in a country. In order to differentiate this concept from existing concepts, it is referred to as the “migrant talent integration capacity” (MTIC) of a country.

The capacity of a country to integrate the talent of foreign nationals measures the extent to which talent of foreign nationals is recognized and can be used productively in a country. The national configuration of measures for the talent development and the use of foreign nationals and the various factors of influence in this respect are determinants of the MTIC of a country. Three dimensions of the capacity of a country to integrate the talent of foreign nationals can be identified. Firstly, the dimension of formal openness refers to the openness of the measures of a country for the integration of foreign nationals going to live and/or work in the country. Secondly, the dimension of labor market and social outcomes refers to the labor market and the social outcomes of foreign nationals going to live and/or work in the country. The third dimension refers to the administrative pressure that the integration process of foreign nationals is subjected to. In short, the MTIC of a country measures the extent to which the openness of the measures of a country for the integration of foreign nationals going to live and/or work in the country and the labor market and social outcomes of these foreign nationals going to live and/or work in the country coincide, or rather to what extent they differ from each other. In its current version, the capacity construct is a short version that is supposed to be used for analytical purposes only. For example, the construct does not measure the degree to which migrant talents are being retained in a country. Also, the construct does not measure the degree of satisfaction or well-being that individual migrants experience in a country. The construct does not measure the earnings of migrants, their occupational mobility or their degree of inclusion in the workplace.

Last but not least, the construct does not measure the degree to which migrants can become citizens of a country. The relationship between national policies and the various outcomes of talent management is not necessarily straightforward. There are many country-specific factors that influence various outcomes of talent management. These factors can be related to the country’s migrant population, the sectoral structure of the economy as well as to regional disparities within a country. The MTM framework is suitable for a diagnostic and comparative

study of various national systems of talent management. It helps to identify the factors that in one country facilitate the skill utilization by talents and in another country do not.

2.2. Labour-Market Segmentation, Overqualification, and Brain Waste

Southern European labour markets are characterised by marked segmentation between relatively protected core employment and sizeable secondary segments offering seasonal, low-paid, temporary, or informal work. Migrants are disproportionately concentrated in sectors such as agriculture, tourism and hospitality, construction, domestic work, and care services, where entry barriers may be comparatively low but opportunities for wage progression, occupational mobility, and skills development are often limited. Consequently, relatively rapid access to employment does not necessarily indicate effective labour-market integration. Comparative European research identifies a Southern European pattern in which migrants may achieve employment while simultaneously experiencing poor job quality and high levels of education–occupation mismatch (Aleksynska and Tritah, 2013; Birgier and Cantalini, 2025).

This distinction is central to the concept of **brain waste**, understood as the underutilisation or depreciation of migrants’ education, professional experience, and occupational skills. Overqualification is therefore included in the present model as the most direct available quantitative proxy for brain waste. OECD evidence shows that highly educated immigrants are substantially more likely than native-born workers to be employed below their qualification level and that the disadvantage is especially pronounced in several Southern European countries. However, overqualification captures only one dimension of skills underutilisation. It should be interpreted together with migrant–native employment gaps, gender disparities, early school leaving, and housing overcrowding, which provide contextual evidence of cumulative barriers to economic and social participation rather than direct measures of occupational mismatch (OECD/European Commission, 2023).

Labour-market segmentation also involves demand-side processes. Migrants may be sorted into lower-paying firms, occupations, and sectors because of restricted access to professional networks, limited information about employment opportunities, discriminatory recruitment practices, geographical constraints, or weak opportunities for job-to-job mobility. Recent employer–employee evidence indicates that a substantial part of the immigrant earnings gap is associated with migrants’ concentration in lower-paying firms and sectors, suggesting that integration depends not only on individual human capital but also on access to higher-quality employers and career pathways (OECD, 2025).

Credential recognition represents an important mechanism influencing occupational matching, particularly for qualifications acquired outside the destination country. Host-country qualifications are associated with considerably smaller migrant overqualification gaps, indicating that the transferability and institutional valuation of foreign credentials matter. Nevertheless, country-level overqualification cannot be attributed to recognition systems alone. Language proficiency, field of study, professional licensing requirements, duration of residence, migration pathway, family and care responsibilities, social networks, discrimination, and local labour demand may all shape observed outcomes. These disadvantages may be particularly pronounced among migrant women, who can experience the combined effects of migrant status, gendered employment structures, and care obligations (Akgüç and Parasnis, 2023; Baran, 2024).

Accordingly, empirical analysis adopts an associative and comparative interpretation. Overqualification is treated as an indicator of potential skills underutilization, not as proof that a particular institution has caused brain waste. Similarly, the PROMETHEE positions summarize countries’ relative performance across the selected criteria; they do not identify causal effects, individual employment trajectories, or the precise mechanisms producing occupational mismatch.

2.3. Three-Dimensional Evaluation Framework

The evaluation framework comprises three analytically distinct but interrelated dimensions: institutional policy inputs, socio-economic integration outcomes, and asylum-system pressure. Migrant talent integration capacity

cannot be inferred from formal policy or observed outcomes alone; it reflects the interaction between legal and institutional access, the utilisation of human capital, and the administrative context in which integration measures are implemented. Grouping indicators according to their conceptual role before weighting and aggregation is consistent with established guidance on composite-indicator construction (OECD/European Union/JRC, 2008).

The first dimension, institutional policy inputs, captures the formal inclusiveness of national migration, integration, and citizenship arrangements. It concerns legal rights, eligibility conditions, safeguards, and institutional opportunities rather than the outcomes migrants ultimately achieve. MIPEX similarly evaluates whether national systems promote equal rights, opportunities, and long-term security across labour-market mobility, education, family reunification, political participation, permanent residence, nationality, and anti-discrimination (Solano and Huddleston, 2020). These indicators are therefore interpreted as measures of *de jure* openness, not direct evidence of implementation quality or integration success.

The second dimension, socio-economic integration outcomes, captures observed disadvantages relevant to the use of migrant human capital, including employment and gender gaps, overqualification, early school leaving, and housing overcrowding. This multidimensional approach follows European monitoring frameworks that assess integration across employment, education and skills, social inclusion, living conditions, and civic participation (Huddleston, Niessen and Tjaden, 2013; OECD/European Commission, 2023). Cross-country differences nevertheless remain associative and may also reflect migrant composition, duration of residence, migration channel, economic conditions, regional labour demand, and welfare-state institutions.

The third dimension, asylum-system pressure, represents workload associated with applications and decisions for international protection. Large or rapidly changing caseloads can strain registration, reception, legal assistance, accommodation, and local administration. These variables are treated as contextual pressure indicators rather than measures of decision quality or integration failure; pending cases and processing times would provide more direct evidence of administrative performance (EUAA, 2025).

Because the baseline uses absolute caseloads, it introduces a country-size effect: larger destination countries may record high totals despite moderate relative pressure, whereas small states may face substantial per-capita burdens with fewer applications. Eurostat therefore reports both totals and rates per 100,000 inhabitants (Eurostat, 2026). Population-normalised applications, pending-case ratios, processing duration, and caseloads relative to administrative capacity are priorities for subsequent robustness analysis.

Taken together, the three dimensions distinguish the formal opportunity structure, observed socio-economic disadvantages, and administrative context. The PROMETHEE positions summarise relative country profiles under the selected criteria, directions, weights, preference functions, and thresholds; they do not constitute a causal model or a definitive league table. Their interpretation must therefore remain sensitive to indicator selection, overlap, scaling, weighting, and country size (OECD/European Union/JRC, 2008; Brans and Mareschal, 2005).

3. Materials and Methods

3.1. Comparative Design and Case Selection

The analysis is a cross-sectional, small-N comparative assessment of Portugal, Spain, Italy, Greece, Cyprus, and Malta. The cases were selected because they are commonly associated with the Southern European welfare regime and are located on major Mediterranean or Atlantic migration routes into the European Union (Ferrera 1996; King 2000). The design maximises regional comparability while retaining substantial variation in country size and institutional arrangements. This variation is substantively relevant, but it also limits direct comparisons based on absolute administrative caseloads.

The baseline matrix combines MIPEX 2020 policy measures with Eurostat indicators reported for 2023. The analysis therefore compares relatively durable policy settings with recent socio-economic and asylum-system

observations. It does not measure changes between 2019 and 2023 and should not be interpreted as an assessment of pre- and post-pandemic trajectories.

Table 1. Southern European countries included in the comparison.

Country	ISO code	Subregion	Comparative rationale
Portugal	PT	Iberian Peninsula	Southern European welfare regime; Atlantic and Mediterranean migration context
Spain	ES	Iberian Peninsula	Large destination and border country with diverse regional labour markets
Italy	IT	Central Mediterranean	Large destination and entry country with substantial asylum caseload
Greece	EL	Eastern Mediterranean	External-border country with persistent integration and matching challenges
Cyprus	CY	Eastern Mediterranean	Small island state with high migration pressure relative to population
Malta	MT	Central Mediterranean	Microstate and external-border case with distinctive labour absorption patterns

3.2. Indicators and Data Architecture

Nine indicators were organised into the three dimensions described above. The directions of preference were specified a priori. Higher MIPEX and access-to-nationality scores were treated as favourable. Employment disparities, gender gaps, housing overcrowding, overqualification, early school leaving, negative asylum decisions, and asylum applications were treated as conditions to be minimised. This coding does not imply that every negative asylum decision is administratively undesirable; rather, the variable is used as a caseload-related pressure indicator. Its interpretation is therefore limited and should not be confused with the quality or legality of asylum decisions.

Table 2. Evaluation criteria, direction, and interpretation.

Code	Criterion	Dimension	Source/year	Direction	Interpretive role
g1	Employment-rate gap	Socio-economic outcome	Eurostat, 2023	Min	Labour-market disparity; negative values indicate a reversed or smaller gap
g2	Overall MIPEX score	Policy input	MIPEX, 2020	Max	Breadth of formal migrant-integration policy
g3	Negative asylum decisions	System pressure	Eurostat, 2023	Min	Absolute decision caseload; not a measure of decision quality
g4	Access to nationality	Policy input	MIPEX, 2020	Max	Formal accessibility of naturalisation and citizenship

Code	Criterion	Dimension	Source/year	Direction	Interpretive role
g5	Housing overcrowding	Socio-economic outcome	Eurostat, 2023	Min	Material and residential disadvantage
g6	Gender employment gap	Socio-economic outcome	Eurostat, 2023	Min	Gender inequality in labour-market participation
g7	Overqualification rate	Socio-economic outcome	Eurostat, 2023	Min	Primary proxy for migrant brain waste
g8	Early leavers from education	Socio-economic outcome	Eurostat, 2023	Min	Educational vulnerability and future skill loss
g9	Asylum applications	System pressure	Eurostat, 2023	Min	Absolute administrative caseload; sensitive to country size

The total MIPEX score includes the access-to-nationality domain, while asylum applications and negative decisions both capture aspects of administrative caseload. These overlaps may increase the influence of related constructs and are treated as a limitation of the baseline specification. Non-redundant variants should be examined in robustness analysis.

Table 3. Baseline evaluation matrix used in the PROMETHEE II analysis.

Country	g1	g2	g3	g4	g5	g6	g7	g8	g9
Portugal	-3.1	81	125	81	18.1	12.0	16.6	14.7	2,695
Cyprus	0.0	49	7,480	51	5.4	9.7	30.0	25.3	11,670
Italy	-2.5	58	24,180	54	37.9	29.0	21.9	25.5	135,820
Malta	-9.3	61	785	57	6.2	8.0	22.1	24.6	855
Spain	1.7	69	37,260	65	17.3	13.8	35.8	28.9	162,420
Greece	-0.9	49	15,305	41	45.4	35.3	31.4	19.9	64,225

Notes: g1 and g6-g8 are expressed in percentage points or percentages according to the source definitions; g2 and g4 are index scores; g3 and g9 are absolute counts. The mixture of policy-year and outcome-year observations is intentional but limits temporal interpretation.

3.3. PROMETHEE II Procedure

PROMETHEE II was employed to construct a complete ranking of the six countries through systematic pairwise comparisons across the nine evaluation criteria. For each criterion (j), the performance difference between countries (a) and (b), denoted by ($d_j(a,b)$), was oriented so that a positive difference indicated an advantage of country (a). This difference was then converted into a unicriterion preference degree, ($P_j(a,b)$), bounded between 0 and 1, where 0 indicates no established preference for (a) over (b), intermediate values represent partial preference, and 1 indicates strict preference. This transformation allows indicators expressed in different units and ranges to be incorporated into a common preference-based framework without directly aggregating their original measurement scales (Brans & De Smet, 2016).

A The criterion-level preferences were combined into the global preference index:

$$[\pi(a, b) = \sum_{j=1}^9 w_j P_j(a, b),] [1]$$

where (w_j) denotes the weight assigned to criterion (j). The positive preference flow, ($\phi^+(a)$), measures the extent to which country (a) outranks the remaining countries, whereas the negative flow, ($\phi^-(a)$), captures the extent to which it is outranked by them. PROMETHEE II produces a complete ranking based on the net preference flow:

$$[\phi(a) = \phi^+(a) - \phi^-(a)] [2]$$

Countries with larger positive net flows are therefore positioned higher in the final ranking. The net-flow procedure provides a synthetic representation of the full matrix of pairwise preferences, although recent methodological research emphasises that the coherence and stability of the resulting ranking should also be evaluated rather than assumed automatically (Coquelet et al., 2025).

Equal criterion weights were adopted in the baseline model, with ($w_j=1/9$), so that each indicator contributed approximately 11.1% to the global preference index. Equal indicator weighting is transparent and avoids introducing unsupported judgements about the relative importance of individual indicators. It should not, however, be interpreted as dimension-neutral weighting. Because the socio-economic outcomes dimension contains five indicators, it accounts for (5/9), or 55.6%, of the total baseline weight. By comparison, the two indicators representing institutional policy inputs jointly account for 22.2%, while the two system-pressure indicators account for the remaining 22.2%. The baseline ranking therefore gives greater aggregate influence to the socio-economic dimension by construction. This weighting structure reflects the number of indicators included in each dimension rather than an explicit theoretical judgement that socio-economic outcomes should be more than twice as important as either policy inclusiveness or administrative pressure.

This distinction is methodologically important because criteria weights are not merely technical coefficients; they express the trade-offs permitted within the aggregation model. Even equal weights constitute a substantive modelling assumption. PROMETHEE rankings can change when the relative weights of criteria are modified, especially when alternatives have closely positioned net flows. Consequently, the baseline results should be complemented by sensitivity analysis using, for example, dimension-balanced weighting, under which each of the three conceptual dimensions receives one-third of the total weight and this weight is distributed equally among its constituent indicators. Additional robustness tests may include systematic weight perturbations or stochastic approaches such as SMAA-PROMETHEE, which examine the frequency with which alternatives occupy particular ranking positions across admissible combinations of weights and other preference parameters (Corrente et al., 2014; Doan & De Smet, 2018).

A V-shape preference function with an indifference region—also referred to as the V-shape function with indifference—was applied to all nine criteria. For a criterion to be maximised, the preference function can be expressed as:

$$[P_j(a, b) = \begin{cases} 0, & d_j(a, b) \leq q_j, \\ \frac{d_j(a, b) - q_j}{p_j - q_j}, & q_j < d_j(a, b) < p_j, \\ 1, & d_j(a, b) \geq p_j, \end{cases} \quad [3]$$

where (q_j) is the indifference threshold and (p_j) is the strict-preference threshold. Differences below (q_j) are treated as too small to establish a meaningful preference, differences between (q_j) and (p_j) generate a progressively stronger preference, and differences equal to or greater than (p_j) imply strict preference. For criteria to be minimized, the direction of the performance difference was reversed before applying the preference function.

The threshold values were calibrated separately for each indicator using its observed dispersion. This data-informed procedure recognises that a substantively meaningful difference depends on the variability and measurement scale of the criterion concerned. It also reduces the risk of interpreting very small numerical differences as decisive advantages. Nevertheless, dispersion-based calibration is not uniquely determined: different values of (q_j) and (p_j) can alter the intensity of pairwise preferences and, in some cases, the final ranking. Recent research therefore recommends explicit sensitivity analysis of preference-function parameters and careful evaluation of potential rank instability or rank reversal (Wulf et al., 2021; Liu & Liu, 2024; Coquelet et al., 2024).

For transparency and full reproducibility, the reported methodological material should include a criterion-by-criterion table specifying the optimisation direction, measurement unit, weight, preference-function type, indifference threshold (q_j), preference threshold (p_j), and any transformations applied to the original data. The Visual PROMETHEE project file, the underlying decision matrix, and the software version should also be archived. This information is particularly important because PROMETHEE outcomes depend jointly on the country evaluations, criterion directions, weights, preference-function forms, and threshold parameters.

The analysis was implemented in Visual PROMETHEE (Mareschal, 2013). GAIA projections and country action profiles were used as complementary descriptive diagnostics. The GAIA plane provides a reduced-dimensional representation of the multicriteria structure, helping to identify criteria that convey similar information, criteria that are in conflict, clusters of countries with comparable profiles, and the indicators most strongly associated with particular country positions. Contemporary research has also emphasised the value of complementary factor-analytic and sparse-principal-component approaches for improving the interpretability of PROMETHEE–GAIA structures when criteria are correlated (Abonyi et al., 2022).

The GAIA results should nevertheless be interpreted cautiously. Proximity between a country and a criterion vector indicates alignment with the preference structure represented by that criterion, while opposing criterion vectors suggest trade-offs. These geometric relationships do not establish statistical association, temporal direction, or causal effects. Similarly, the position of a country in the PROMETHEE II ranking indicates comparative performance under the specified decision model rather than demonstrating that a particular policy or institutional factor caused the observed socio-economic outcome. The GAIA plane and action profiles are therefore used to explain the internal structure of the multicriteria ranking and to identify tensions among criteria, not to infer causal mechanisms.

3.4. Sensitivity Analysis

Weight Stability Intervals were used to determine how far each criterion weight could vary individually without changing the leading country, providing a local assessment of ranking sensitivity (Mareschal, 1988; Doan & De Smet, 2018). This one-at-a-time procedure does not capture simultaneous weight variation, alternative preference functions and thresholds, criterion removal, or replacement of absolute asylum indicators with population-normalised measures. Since PROMETHEE II rankings may also be sensitive to preference-function

parameters and broader combinations of model assumptions, the findings indicate local rank stability rather than comprehensive robustness (Corrente et al., 2014; Liu & Liu, 2024).

Table 4. Weight stability intervals under the equal-criterion-weight baseline.

Criterion	Baseline weight	Stability interval	Interpretation
g1 Employment gap	11.11%	0.00%-34.66%	Wide one-at-a-time interval
g2 MIPEX score	11.11%	0.00%-27.70%	Moderate-to-wide interval
g3 Negative decisions	11.11%	0.00%-44.10%	Wide interval
g4 Access to nationality	11.11%	2.71%-20.81%	Moderate interval
g5 Housing overcrowding	11.11%	0.00%-40.51%	Wide interval
g6 Gender employment gap	11.11%	0.00%-58.02%	Wide interval
g7 Overqualification	11.11%	0.00%-36.84%	Wide interval
g8 Early leavers	11.11%	0.00%-29.28%	Moderate-to-wide interval
g9 Asylum applications	11.11%	2.46%-19.21%	Comparatively sensitive

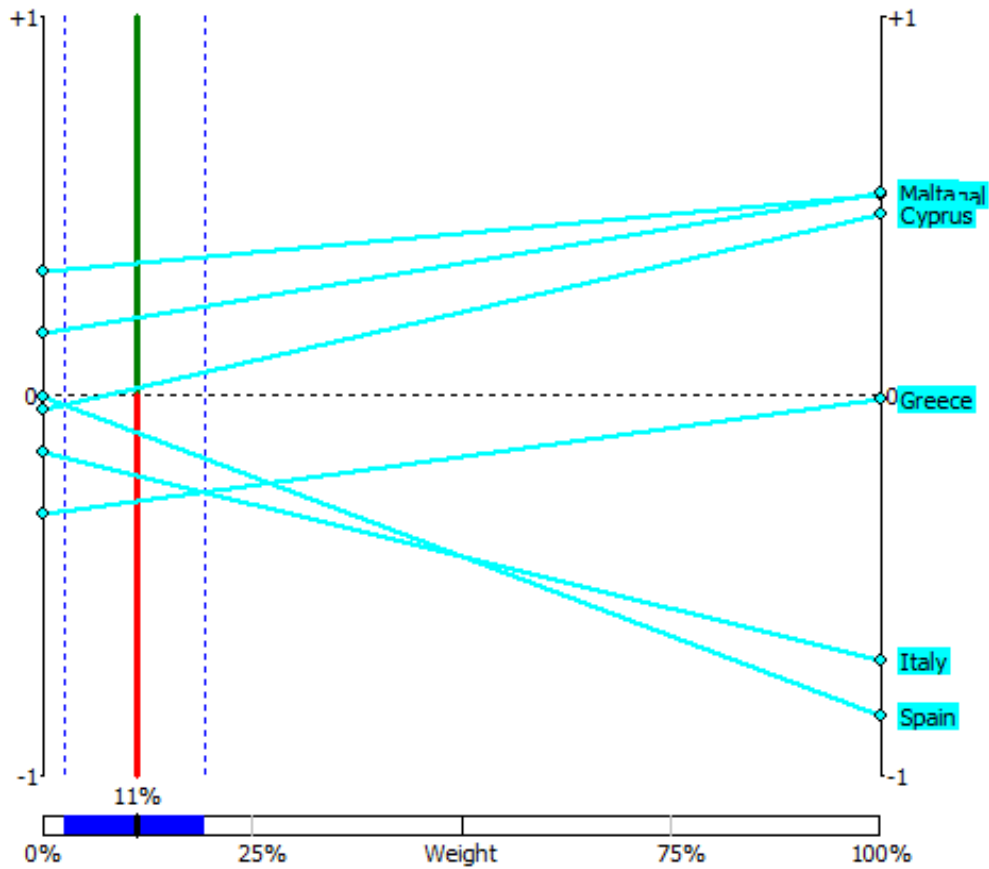


Figure 1. One-at-a-time weight-stability display for the asylum-applications criterion (g9). The figure shows the interval within which the leading alternative is retained under the baseline model.

4. Results

4.1. Net Outranking Flows and Country Ranking

The baseline PROMETHEE II specification produces the order Portugal, Malta, Cyprus, Spain, Italy, and Greece. Portugal records the highest net flow ($\Phi = 0.35$), followed by Malta (0.21) and Cyprus (0.02). Spain (-0.09), Italy (-0.20), and Greece (-0.28) obtain negative net flows. These values represent relative positions within the six-country set and under the selected indicators; they are not absolute measures of integration success.

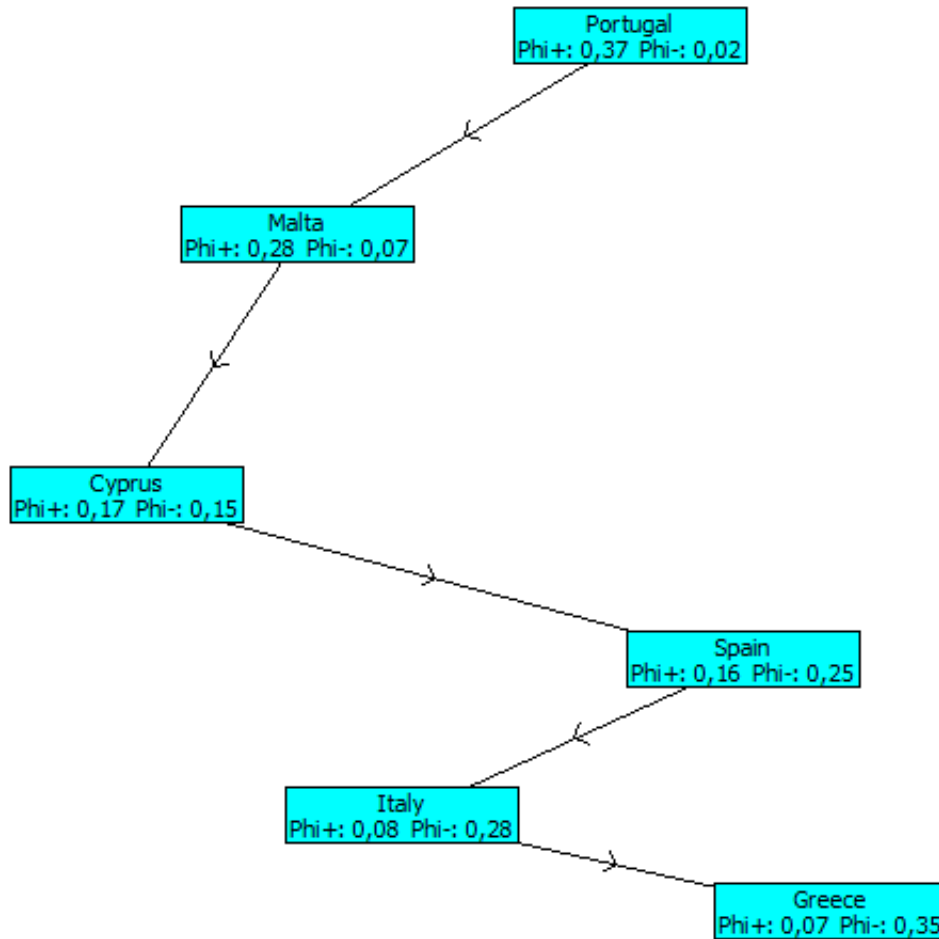


Figure 2. PROMETHEE II ranking and positive/negative outranking flows under the baseline specification.

Portugal (rank 1, $\Phi = 0.35$). Portugal combines high MIPEX and access-to-nationality scores with a relatively low overqualification rate and a small absolute asylum caseload in the baseline matrix.

Malta (rank 2, $\Phi = 0.21$). Malta's position is supported by favourable employment-related indicators and low absolute caseload values, although its microstate characteristics limit direct comparison with larger countries.

Cyprus (rank 3, $\Phi = 0.02$). Cyprus occupies a near-neutral position: favourable housing and gender-employment indicators are offset by lower policy scores, higher overqualification, and a substantial asylum caseload relative to population.

Spain (rank 4, $\Phi = -0.09$). Spain combines comparatively strong MIPEX and citizenship-access scores with high overqualification, early school leaving, and the largest absolute asylum caseload in the comparison.

Italy (rank 5, $\Phi = -0.20$). Italy presents a mixed profile of moderate policy scores, less favourable housing and gender-employment outcomes, and a large absolute asylum caseload.

Greece (rank 6, $\Phi = -0.28$). Greece records comparatively low policy scores and unfavourable values for housing overcrowding, the gender employment gap, and overqualification.

4.2. GAIA Projection and Criterion Alignment

The GAIA plane provides a two-dimensional representation of the multi-criteria decision space. Portugal lies in the direction of the MIPEX and citizenship-access vectors, while Malta is aligned more closely with favourable employment and housing indicators. Italy and Spain are positioned in the direction associated with high asylum-application counts, and Greece is separated by a combination of less favourable social-outcome vectors. Because the GAIA projection reduces nine dimensions to two, it should be read as a diagnostic summary rather than a complete explanation of the ranking.

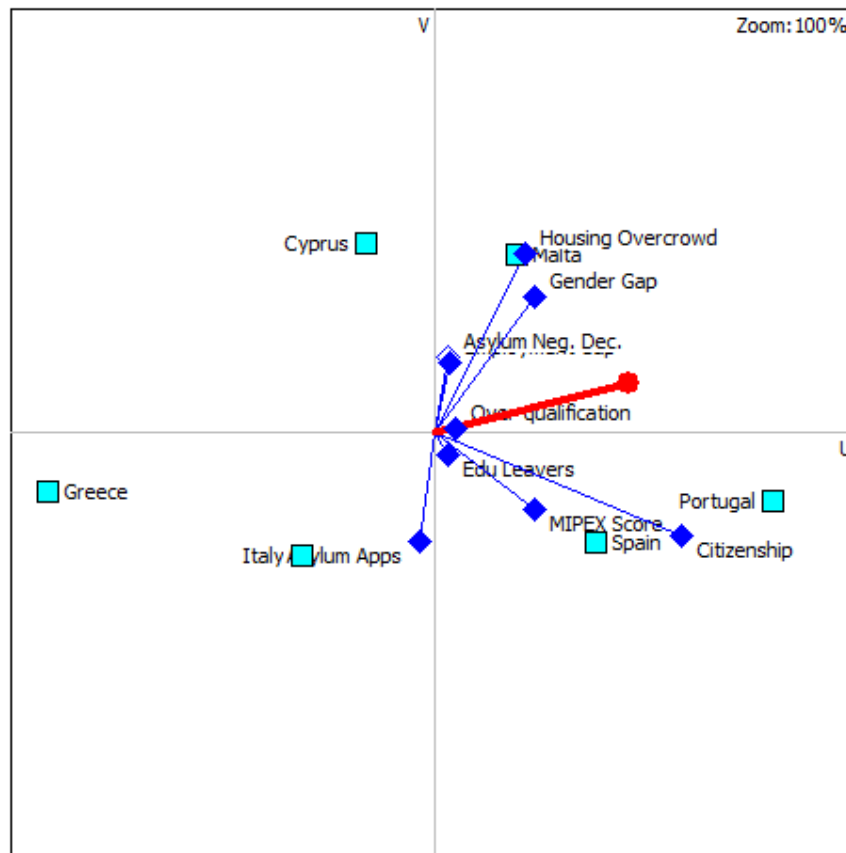


Figure 3. GAIA projection of countries and criteria. Vector direction indicates alignment within the baseline decision space; it does not indicate causality.

4.3. Country Action Profiles

The country profiles illustrate how each criterion contributes to the positive and negative outranking flows. Portugal receives positive contributions from the two policy indicators and several outcome indicators. Greece receives negative contributions from access to nationality, housing overcrowding, the gender employment gap, and overqualification. The profiles clarify the internal construction of the ranking while remaining conditional on the equal-criterion-weight specification.

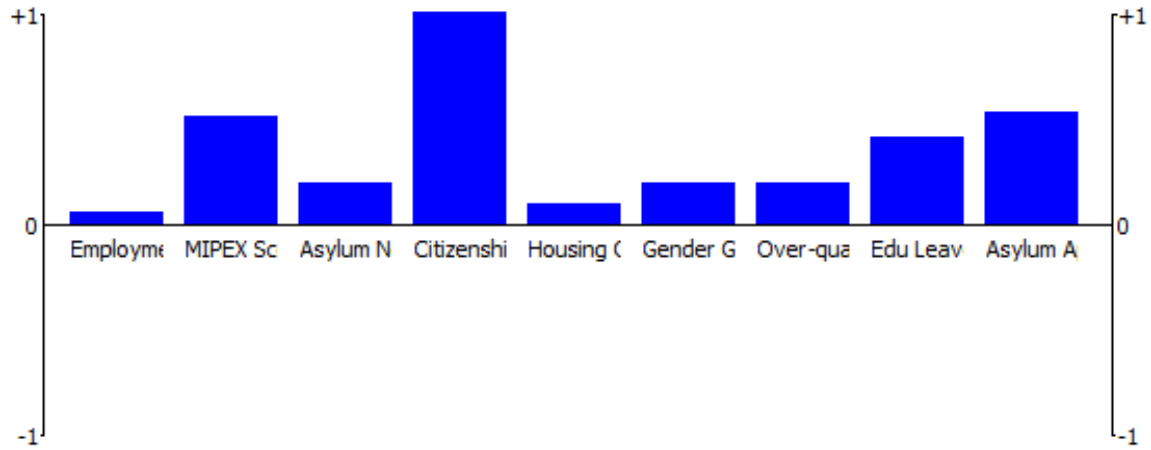


Figure 4a. Criterion-level action profile for Portugal under the baseline specification.

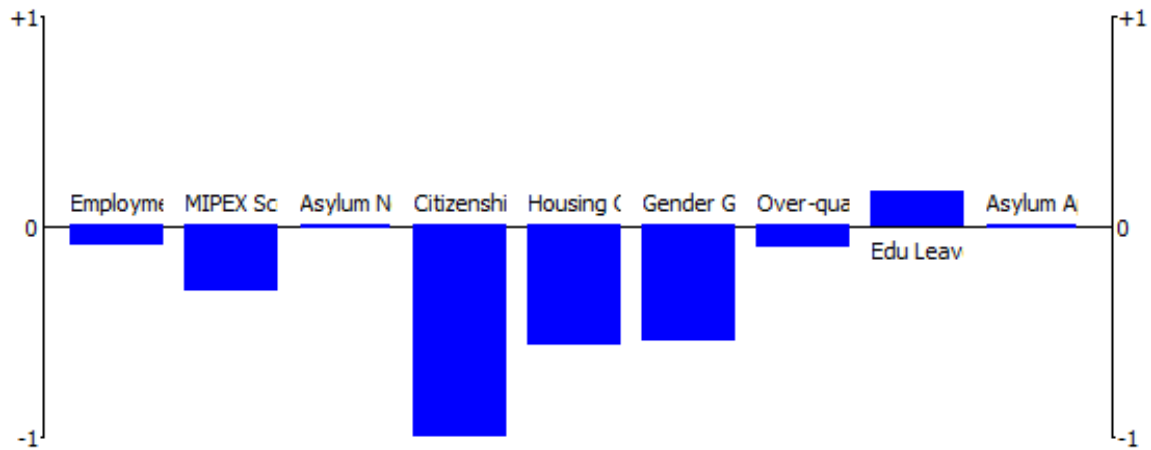


Figure 4b. Criterion-level action profile for Greece under the baseline specification.

4.4. Interpretation of Weight Stability

The one-at-a-time stability intervals show that Portugal retains the leading position across most individual weight changes. The narrower intervals for asylum applications (g9) and access to nationality (g4) indicate greater sensitivity to these criteria. The exercise supports only local rank stability and does not resolve criterion redundancy, dimension weighting, country-size effects, or threshold selection.

5. Discussion

5.1. Policy Inclusiveness and Observed Integration Outcomes

Formal integration-policy indicators can be compared with measures of actual integration outcomes. In Portugal, highly favourable formal policy indicators are broadly reflected in positive outcomes across several dimensions of integration. Spain, by contrast, has a comparatively inclusive formal framework for immigrant integration, yet several outcome indicators reveal persistent challenges. These include a high overqualification rate, a high level of early school leaving, and an absolute asylum caseload considerably larger than that of Portugal.

Recent studies have examined the relationship between the institutional settings for immigrant integration in receiving countries and labour-market gaps between immigrants and native-born workers. The observed relationship varies according to the indicator used, including labour-force participation, occupational allocation

by skill level, and sector of employment. Consequently, the association between a country's openness to immigrant integration and the magnitude of immigrant–native labour-market disparities may take different forms. Migrant labour-market integration is a multi-stage and multi-actor process in which the receiving country plays a central role. A crucial aspect of this process is the extent to which receiving countries facilitate the employment of skilled migrants in occupations that correspond to their qualifications and experience. This requires migrants to receive appropriate and effective support from public institutions and other organisations within society.

Labour-market absorption should be clearly distinguished from the effective utilisation of skills, namely, the extent to which migrants can use their human capital productively in the host country. Although rapid access to employment is a positive outcome, there is a substantial difference between obtaining decent employment and entering a low-quality job that does not correspond to the migrant's skills. Several studies have identified a strong association between migrants' education–occupation mismatch and labour-market conditions in the host country (Aleksynska and Tritah, 2013). Recent research using employer–employee data also shows that migrants are disproportionately sorted into lower-paying firms within industries (OECD, 2025). This distinction is reflected in the indicators considered here: overqualification is higher in Spain than in Portugal, whereas the difference in low-skilled employment is smaller.

In addition to labour-force participation, overqualification indicates the extent to which migrants' skills are utilised in receiving countries. It is influenced by qualifications acquired before migration, including education and vocational training, as well as by the recognition of foreign qualifications in the host country (Tibajev and Hellgren, 2019; Brücker et al., 2021). A high proportion of overqualified workers is therefore not only a problem for individual migrants but also an indication that available qualifications are not being used effectively. Overqualification is related to, but distinct from, other indicators of foreign-born workers' labour-market integration, such as temporary employment and unemployment. These indicators are, in turn, related to but distinct from measures of migrants' access to higher-paying occupations. As Guzi, Kahanec and Kureková (2021) demonstrate across 21 indicators, associations between institutional conditions and the labour-market outcomes of foreign-born workers vary considerably: some are positive, others negative, and some statistically insignificant.

The asylum and early-school-leaving indicators require separate consideration. Refugees and their descendants often experience labour-market outcomes and patterns of persistence that differ substantially from those of other migrant groups (Fasani, Frattini and Minale, 2022). The absolute number of asylum applications may therefore indicate the administrative demands placed on a country's integration capacity when receiving newly arrived populations. Early school leaving is similarly influenced by multiple factors, including age at arrival, language proficiency, family socioeconomic background, the structure and funding of the host country's education system, and labour-market opportunities for young people. These two indicators therefore reflect different combinations of factors shaping the integration outcomes observed in Portugal and Spain.

5.2. Brain Waste and the Limits of Country-Level Inference

A prominent indicator of “brain waste” of migrants is the degree of their overqualification in terms of their education. Overqualification on the basis of education as captured in this study is defined as the visible mismatch between the education of some individual and the required education of the job for which that individual is applying. Visible mismatch between education of an individual and the required education for jobs does not automatically mean that all of the knowledge and skills obtained by the individual through his or her education are being used. Therefore, “brain waste” is a much broader concept than overqualification of foreign educated migrants as it also includes unemployment, inactivity, voluntary inactivity, part-time jobs against their will, under downgrade, low returns on the investment in education of the country of origin, foreign education not being recognized for prior experience.

To tackle these challenges, it is important to recognize first that overqualification at the country level hides a great many differences. First, there are the differences between different types of migration (short-term vs. long-term vs. refugees). Second, there are differences in origin (e.g. developing countries vs. developed countries). Third, there are large differences with respect to the field of study (e.g. the sciences vs. the humanities). Fourth, there are large differences in terms of gender (migrant women are more often subjected to qualification devaluation, to occupational segregation, to labor market discrimination and to (excessive) family responsibilities). Fifth, there are large differences in terms of age (older migrants more disadvantages in matching than younger migrants). Sixth, there are large differences in terms of the duration of residence (longer residence less disadvantage in matching). Seventh, there are large differences in terms of language proficiency (migrants with higher proficiency in the languages of the host country less disadvantage in matching). Eighth, there are large differences in terms of legal status (irregular migrants more disadvantage in matching than legal residents). Ninth, there are large differences in terms of the region of residence (migrants residing in certain regions of the country more disadvantages in matching than other migrants residing in other parts of the country).

Another aspect to consider is that foreign qualifications in themselves can be a weak or even unknown signal for employers of a foreign citizen's qualifications and experience. Even if the formal recognition of the qualifications of foreign citizens increases their labor market value (Tibajev and Hellgren, 2019; Brücker et al., 2021), there are other factors which can influence whether or not a foreign citizen can put his or her foreign qualifications and experience into use. These factors are licensing requirements or rules in specific professions, local experience, language proficiency, professional contacts, discrimination, as well as demand in the labor market for certain fields of education. For this reason overqualification at the country level cannot be attributed to the recognition procedures alone. The receiving economy's structure and the regional opportunities available play a crucial role in generating a mismatch of migrant workers and native workers. Temporary and poor quality jobs have become typical for many economies. In several economies the services sector, including tourism, agricultural, construction, and domestic services, is mostly low skilled and therefore typically geared towards low educated native workers. In many instances, also native workers are at risk of a mismatch. Average country values therefore do not only provide insight into possible institutional problems, but also in many cases highlight a large risk that also needs to be investigated by policy makers for the individual regions within a country: the metropolitan areas, the rural areas, the island regions, and the border regions.

The indicator has limitations regarding the occupational classification, the degree of aggregation and the chosen benchmark for the required education. When using an education-based indicator for overqualification not all of the formal education will be taken into account. This also refers to field-specific knowledge and expertise and to other informal skills, which the individual has acquired. In addition, work experience and voluntary downward mobility during the first years of labor market entry cannot be measured with this indicator. Therefore the indicator is just suitable for cross-country comparison and for screening purposes. PROMETHEE can be used as diagnostic tool or even to generate hypotheses as to why countries with a combination of inclusive and mismatched policies have high or low levels of mismatch while other countries do not. However, explaining why countries end up with the particular levels of mismatch that they have is a much more complex task that requires in-depth analysis that can be carried out using a range of different data sources, including: (1) longitudinal micro data; (2) multilevel analysis; (3) before-after comparison of the effects of a number of different policy reforms; and/or (4) experimental studies of the behavior of employers as well as processes of institutional change.

5.3. Country Size, Caseload Measurement, and Model Dependence

The treatment of asylum applications and negative decisions is a major limitation of the baseline model. Absolute counts capture the total workload confronting national administrations, but they also reflect country size, geographic position and the scale of the asylum system. This may disadvantage large destination countries such as Spain and Italy while favouring countries with smaller caseloads. Per-capita measures address size differences but may exaggerate pressure in small states. A more balanced assessment should therefore compare absolute

applications with applications per 100,000 inhabitants, pending cases, processing times, recognition rates and caseloads per administrative employee.

It is also important to distinguish new applications from accumulated backlogs and administrative outcomes. A high number of applications does not necessarily indicate poor performance when cases are processed rapidly, while a moderate inflow may coexist with a large stock of unresolved cases. Similarly, negative decisions should not be interpreted automatically as evidence of restrictive policy or administrative failure, since they depend on the number and composition of applications and the stage of the asylum procedure. These indicators are better treated as measures of exposure, capacity and procedural performance rather than as direct measures of migrant integration.

The ranking is also sensitive to the weighting structure. Equal weights of 11.11% for each criterion appear neutral, but the five outcome indicators collectively account for 55.56% of the model, compared with 22.22% for policy indicators and 22.22% for pressure indicators. The baseline therefore gives greater influence to observed outcomes than to the other conceptual dimensions. An equal-dimension specification, in which policy, pressure and outcomes each receive one third of the total weight, would provide a useful alternative.

Robustness analysis should compare equal-criterion and equal-dimension weights with entropy, CRITIC and expert-derived weights. Leave-one-criterion-out tests should assess whether influential indicators, particularly asylum applications, negative decisions and overqualification, determine the results. Alternative preference thresholds and methods such as TOPSIS or VIKOR could also be applied. Spearman and Kendall rank correlations, mean rank changes and movements between performance groups would provide a more demanding assessment than one-at-a-time weight intervals alone.

The results should therefore be interpreted as conditional rankings rather than fixed measures of national performance. The strongest conclusions concern countries that remain in similar performance groups across alternative caseload definitions, weighting schemes and modelling methods. Countries whose positions change substantially should be described as size-sensitive or model-dependent rather than definitively high- or low-performing..

5.4. Implications for Migration and Skills Policy

The policies in terms of countries aimed at matching migrants with occupations suited to their skills and experience must go beyond facilitating the rapid entry of newly arrived individuals into the labour market. To ensure that formally acquired qualifications are recognized transparently, effective skills-assessment procedures must be established. Migrants should also have access to further education and training, including bridging programmes, vocational training and language courses, as well as professional networks and suitable employment opportunities. These measures are essential to enable migrants to make full use of their educational qualifications and previous work experience.

Adequate administrative capacity is equally necessary for integrating migrants' skills into the labour market. When asylum procedures are not completed promptly, applicants may face prolonged uncertainty regarding their residence status. Similarly, lengthy and poorly coordinated work-permit procedures, combined with insufficient guidance on labour-market access, residence rights and employment rights, can prevent migrants from participating in training and securing stable and gainful employment. The assessment of pressure on administrative systems should therefore consider not only the absolute number of cases but also the administrative capacity available to process them effectively.

In addition to these challenges, migrant talent-integration policies must address housing conditions and gender inequalities in the labour-market participation of third-country nationals. Unstable or unaffordable housing may prevent migrant workers from relocating closer to their workplaces, thereby limiting their employment opportunities and labour-market integration. Women who are third-country nationals face particular barriers arising from structural and social factors, including inadequate access to affordable, high-quality childcare,

disproportionate caring responsibilities and discriminatory labour-market practices. Effective migrant talent integration therefore requires a cross-policy approach encompassing migration management, employment, education, housing and childcare provision. It must also explicitly promote and protect gender equality.

The analysis should also examine whether migrant talent is used equally across different migrant groups, including in countries that generally perform well in integrating migrants' skills into employment. Some countries may demonstrate mixed outcomes, whereas others may perform consistently poorly. It is therefore necessary to assess the extent to which formal commitments to using the skills of newly arrived migrants are translated into genuine labour-market opportunities for different groups.

A more comprehensive approach to migrant skill utilisation is particularly necessary in countries where undeclared employment is widespread, administrative procedures for registering newly arrived migrants are prolonged, regional inequalities are substantial and women experience high levels of occupational segregation. Addressing these structural constraints is essential to ensure that formal integration policies are implemented effectively and that migrants' qualifications and experience are fully utilised in their countries of residence.

Table 5. Policy priorities derived cautiously from the country profiles.

Profile group	Diagnostic interpretation	Policy priorities
Portugal and Malta	Favourable baseline positions produced by different combinations of policy inclusiveness, labour-market outcomes, and administrative conditions	Protect housing affordability; monitor occupational matching and overqualification; assess outcomes separately by gender, legal status, origin, and migration channel; avoid assuming that a high aggregate rank reflects equally favourable outcomes for all migrant groups
Cyprus and Spain	Mixed profiles in which policy or employment strengths coexist with overqualification, educational inequalities, or asylum-system pressure	Strengthen qualification recognition, skills assessment, and bridging programmes; improve access to language and professional training; examine gender and education gaps; assess asylum pressure using population- and capacity-adjusted indicators
Italy and Greece	Less favourable baseline profiles across several labour-market, social, and administrative indicators	Reduce procedural and work-authorisation delays; expand recognition of foreign qualifications and prior experience; strengthen formal employment pathways; address labour-market informality and occupational segmentation; connect integration measures with housing, childcare, gender equality, and regional labour demand

Table 5 is diagnostic rather than prescriptive. It identifies dimensions requiring further country-level inquiry but does not establish the causes of national differences or the effects of particular interventions.

6. Conclusions

The PROMETHEE II method was applied in an exploratory way to study the integration of highly skilled migrants in six Southern European countries: Cyprus, Greece, Italy, Malta, Portugal and Spain. In the framework of the study, all the labor market indicators for all the dimensions of integration for all the countries were studied in order to determine the extent to which they are favorable for highly skilled migrants. Employment rates of foreign-born workers are high in all countries studied. However, while these foreign-born workers are well employed, many of them are not making use of their skills. They are overqualified for the jobs they hold and are working in fields that are not compatible with their skills and knowledge. The results of this study should be interpreted within the limits of the study itself. The study is based on the experience of 6 Southern European countries. The indicators used to measure the labor market are based on different data sources and have been calculated for different years. Therefore, results may vary when different indicators are used to measure the same dimension of integration and when different weights are assigned to the same indicators. The assessment of integration using the PROMETHEE II method is based on equal weighting of the 9 indicators used to measure the different dimensions of integration. Different preference functions and different threshold values could have been used as well. The absolute numbers of asylum applications studied contain a country size effect and the framework of the study does not allow for a differentiation between different types of migrants, between different skill profiles of migrants, between foreign born population of different length of residence and between different labor market conditions in different regions of a country. The Weight Stability Intervals in PROMETHEE only show local stability, i.e. stability of the ranking when increasing one weight within a Weight Stability Interval while keeping all other weights constant. The intervals in no way whatsoever provide information on how weights can change simultaneously within their intervals, or how results change with different thresholds, or even with the removal of single indicators. Different preference functions as well as population- and capacity-adjusted asylum indicators have not been taken into account as well. Therefore, results of the study can only be used for a transparent comparative study of the six countries studied in this report. No causal statements on integration, on migrant retention and on the quality of labor-market integration of single

countries as opposed to other countries can be made on the basis of the multicriteria study. Future research could extend the PROMETHEE decision making process from a single time period to a multi-period decision making process by setting up a decision matrix for several time periods. A comparison of the results from the different weighting schemes applied in this study could also be of interest. Instead of using the absolute asylum caseloads, more refined indicators such as asylum applications per 100,000 inhabitants, the ratio of pending to admitted asylum applications, the processing time of asylum applications and the asylum caseloads per administrative staff member could be used. By combining the multicriteria approach with individual, employer, regional and institutional data, more in-depth explanations to the phenomenon of brain waste and the effect of the inclusion of skilled migrants in a country's labor market and their effective integration in the labor market of that country could be provided.

Funding: This research received no external funding.

Data Availability Statement: The indicators used in the study are derived from publicly available Eurostat and MIPEX sources, and the processed evaluation matrix is reported in Table 3. To enable replication, the complete Visual PROMETHEE project file and criterion-specific preference thresholds will be deposited in an open repository before publication.

Conflicts of Interest: The authors declare no conflict of interest.

Declaration of Generative AI Use: Generative AI was used only to support language editing and restructuring. The authors reviewed and revised the full manuscript and remain responsible for its content, analyses, interpretations, and references.

Clinical Trial Registration: Clinical trial number: not applicable.

Ethics Approval, Consent to Participate, and Consent to Publish: Ethics, Consent to Participate, and Consent to Publish declarations: not applicable.

References

- Aleksynska, M. and Tritah, A. (2013), "Occupation–education mismatch of immigrant workers in Europe: Context and policies", *Economics of Education Review*, 36, pp. 229–244.
- Akgüç, M., and Parasnis, J. (2023), "Occupation–Education Mismatch of Immigrant Women in Europe", *Social Indicators Research*, Vol. 170 No. 1, pp. 75–98, doi: 10.1007/s11205-023-03066-0.
- Baran, J.A. (2024), "Overeducation in the EU: Gender and Regional Dimension", *Labour Economics*, Vol. 90, 102603, doi: 10.1016/j.labeco.2024.102603.
- Birgier, D.P. and Cantalini, S. (2025), "Navigating Employment and Overeducation: Comparative Study of Immigrant Experiences in 17 Western European Nations", *Journal of Ethnic and Migration Studies*, Vol. 51 No. 3, pp. 583–608, doi: 10.1080/1369183X.2024.2399638.
- Brans, J.P. and Mareschal, B. (2005), "PROMETHEE Methods", in Figueira, J., Greco, S. and Ehrgott, M. (Eds), *Multiple Criteria Decision Analysis: State of the Art Surveys*, Springer, New York, pp. 163–186.
- Brücker, H., Glitz, A., Lerche, A. and Romiti, A. (2021), "Occupational recognition and immigrant labor market outcomes", *Journal of Labor Economics*, 39(2), pp. 497–525.
- Blouchoutzi, A., Manou, D., and Papathanasiou, J. 2021. The socioeconomic integration of people in need of international protection: A spatial approach in the case of Greece. *Social Sciences* 10(12): 454. <https://doi.org/10.3390/socsci10120454>.
- Brans, J.-P., and Vincke, P. 1985. A preference ranking organisation method: The PROMETHEE method for multiple criteria decision-making. *Management Science* 31(6): 647-656. <https://doi.org/10.1287/mnsc.31.6.647>.
- Castles, S., de Haas, H., and Miller, M. J. 2014. *The Age of Migration: International Population Movements in the Modern World*, 5th ed. Basingstoke: Palgrave Macmillan.
- Collings, D. G., and Mellahi, K. 2009. Strategic talent management: A review and research agenda. *Human Resource Management Review* 19(4): 304-313. <https://doi.org/10.1016/j.hrmr.2009.04.001>.
- Corrente, S., Figueira, J. R., & Greco, S. (2014). The smaa-promethee method. *European Journal of Operational Research*, 239(2), 514-522.

- Doan, N. A. V., & De Smet, Y. (2018). An alternative weight sensitivity analysis for PROMETHEE II rankings. *Omega*, 80, 166-174.
- De Coninck, D. and Solano, G. (2023), "Integration policies and migrants' labour market outcomes: A local perspective based on different regional configurations in the EU", *Comparative Migration Studies*, 11, Article 23.
- Dries, N. 2013. The psychology of talent management: A review and research agenda. *Human Resource Management Review* 23(4): 272-285. <https://doi.org/10.1016/j.hrmr.2013.05.001>.
- Esping-Andersen, G. 1990. *The Three Worlds of Welfare Capitalism*. Princeton: Princeton University Press.
- European Union Agency for Asylum (EUAA) (2025), *Operational Standards and Indicators on the Asylum Procedure*, EUAA, Valletta.
- Eurostat. 2023. Migration and migrant population statistics. Luxembourg: European Commission.
- Fasani, F., Frattini, T. and Minale, L. (2022), "(The struggle for) Refugee integration into the labour market: Evidence from Europe", *Journal of Economic Geography*, 22(2), pp. 351–393.
- Fasani, F., and Mazza, J. 2020. Immigrant key workers: Their contribution to Europe's COVID-19 response. JRC Technical Report. Seville: European Commission.
- Ferrera, M. 1996. The Southern model of welfare in social Europe. *Journal of European Social Policy* 6(1): 17-37. <https://doi.org/10.1177/095892879600600102>.
- Guzi, M., Kahanec, M. and Kureková, L.M. (2021), "What explains immigrant–native gaps in European labor markets: The role of institutions", *Migration Studies*, 9(4), pp. 1823–1856.
- Huddleston, T., Niessen, J. and Tjaden, J.D. (2013), *Using EU Indicators of Immigrant Integration*, European Commission, Brussels.
- Khilji, S. E., Tarique, I., and Schuler, R. S. 2015. Incorporating the macro view in global talent management. *Human Resource Management Review* 25(3): 236-248. <https://doi.org/10.1016/j.hrmr.2015.04.001>.
- King, R. 2000. Southern Europe in the changing global map of migration. *Acta Sociologica* 43(1): 3-23. <https://doi.org/10.1177/000169930004300102>.
- Liu, X., & Liu, Y. (2024). Sensitivity analysis of the parameters for preference functions and rank reversal analysis in the PROMETHEE II method. *Omega*, 128, 103116.
- Mareschal, B. (1988). Weight stability intervals in multicriteria decision aid. *European Journal of Operational Research*, 33(1), 54-64.
- Polavieja, J.G., Lancee, B., Ramos, M., Veit, S. and Yemane, R. (2023), "In your face: A comparative field experiment on racial discrimination in Europe", *Socio-Economic Review*, 21(3), pp. 1551–1578.
- Guo, C., and Al Ariss, A. 2015. Human resource management of international migrants: Current theories and future research. *Human Resource Management* 54(4): 711-716. <https://doi.org/10.1002/hrm.21702>.
- Mareschal, B. 2013. *Visual PROMETHEE 1.4 Manual*. Brussels: VP Solutions.
- McDonnell, A., Collings, D. G., Mellahi, K., and Schuler, R. 2017. Talent management: A systematic review and future prospects. *European Journal of International Management* 11(1): 86-128. <https://doi.org/10.1504/EJIM.2017.081253>.
- OECD/European Commission (2023), *Indicators of Immigrant Integration 2023: Settling In*, OECD Publishing, Paris, doi: 10.1787/1d5020a6-en.
- OECD/European Union/European Commission–Joint Research Centre (2008), *Handbook on Constructing Composite Indicators: Methodology and User Guide*, OECD Publishing, Paris, doi: 10.1787/9789264043466-en.
- OECD. 2019. *OECD Data Quality Framework*. Paris: Organisation for Economic Co-operation and Development.
- OECD. 2023. *International Migration Outlook 2023*. Paris: OECD Publishing. <https://doi.org/10.1787/b0f40584-en>.
- Ortlieb, R., and Knappert, L. 2023. Labor market integration of refugees: An institutional country-comparative perspective. *Journal of International Management* 29(2): 101016. <https://doi.org/10.1016/j.intman.2023.101016>.
- Ortlieb, R., and Weiss, S. 2020. What makes inclusion work for refugees? Evidence from Austria. *Human Resource Management Journal* 30(1): 14-34. <https://doi.org/10.1111/1748-8583.12242>.
- Pesch, R., Ipek, E., and Fitzsimmons, S. 2023. Be a hero: Employ refugees like a pragmatist. *Organizational Dynamics* 52(1): 100912. <https://doi.org/10.1016/j.orgdyn.2021.100912>.
- Pritchett, L., Woolcock, M., and Andrews, M. 2013. Looking like a state: Techniques of persistent failure in state capability for implementation. *Journal of Development Studies* 49(1): 1-18. <https://doi.org/10.1080/00220388.2012.709614>.
- Reyneri, E. 2003. Immigration and the underground economy in new receiving South European countries: Manifold negative effects, manifold deep-rooted causes. *International Review of Sociology* 13(1): 117-143. <https://doi.org/10.1080/0390670032000087013>.

- Sinisterra, L., Penalver, J., and Salanova, M. 2024. Connecting organizational inputs and outcomes: A systematic review of talent management, employee engagement, and turnover intention. *Frontiers in Psychology* 15: 1439127.
- Solano, G., and Huddleston, T. 2020. *Migrant Integration Policy Index 2020*. Barcelona and Brussels: CIDOB and Migration Policy Group.
- Tibajev, A. and Hellgren, C. (2019), “The effects of recognition of foreign education for newly arrived immigrants”, *European Sociological Review*, 35(4), pp. 506–521.
- Tsaousiotis, K., Panitsidis, K., Spinthiropoulos, K., and Zafeiriou, E. 2025. A new perspective on talent management: An integrative review of the current literature. *Administrative Sciences* 15(3): 102. <https://doi.org/10.3390/admsci15030102>.
- Vaiman, V., Sparrow, P., Schuler, R., and Collings, D. G. (Eds.). 2018. *Macro Talent Management: A Global Perspective on Managing Talent in Developed Markets*. London: Routledge.