

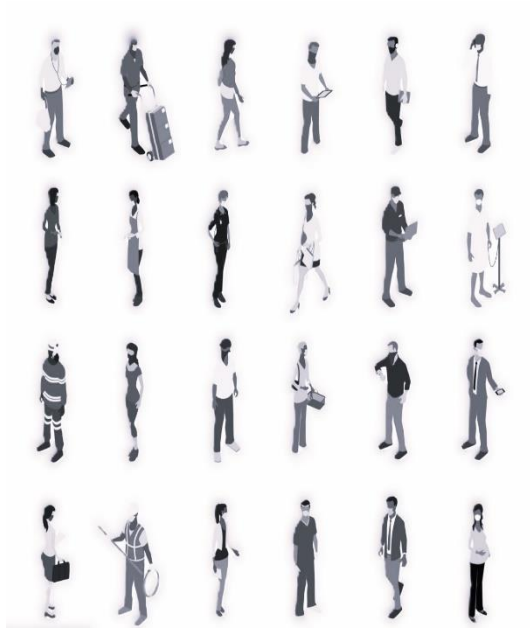


# Addressing labour market shortages in an ageing society

***Creative Strategies to Align Migration with Labour Market Needs***

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## CONTENTS

1. Demographic Shifts and Labour Market Pressures - Key Facts

2. Migration as a Strategic Policy Lever

3. Indicator of Labor Market Needs (INeLab)

4. Concluding Remarks

## 1- Demographic Shifts and Labour Market Pressures



## 1. Demographic Shifts and Labour Market Pressures - Key facts



The labor market in developed countries will face significant changes in the coming decades:

**F1. POPULATION AGEING IS TRANSFORMING THE COMPOSITION OF LABOUR FORCE**

**F2. INCREASING AUTOMATIZATION AND DIGITALIZATION WITH ADJUSTMENT IN THE SKILL DEMANDED**

**F3. PUBLIC OPINION REMAINS SKEPTICAL ABOUT IMMIGRATION**

**F4. INCREASING SHARE OF MIGRANT WORKERS IN THE LABOR FORCE**

## 1. Demographic Shifts and Labour Market Pressures - Key facts



### F1. POPULATION AGEING IS TRANSFORMING THE COMPOSITION OF LABOUR FORCE

- [The Economist, 22/10/2025](#): “Almost every where in the rich world, native-born workforces are shrinking, with industries such as child care, construction and farming facing staff shortages. Worse may be to come”.
- [OECD \(2024\)](#): By 2050, one in four people in OECD countries will be aged 65 years or older.
- **SPANISH CASE:**
  - [Population projections. Years 2024-2074](#) (National Statistics Institute, INE):
    - ✓ The percentage of the population aged 65 and over, which currently represents 20.4% of the total, will reach a peak of 30.5% around the year 2055.
    - ✓ The population born in Spain will gradually decline, decreasing from the current 81.9% of the total to 61.0% within 50 years.
  - [The 2024 Ageing Report](#) :
    - ✓ The dependency ratio in Spain will rise from 33 in 2022 to 64.5 in 2054, nearly doubling.
    - ✓ Long-term care spending in the EU is projected to rise from 1.7% of GDP in 2019 to 2.5% by 2050.

## 1. Demographic Shifts and Labour Market Pressures - Key facts



### F2. INCREASING AUTOMATIZATION AND DIGITALIZATION WITH ADJUSTMENT IN THE SKILL DEMANDED

- *World Economic Forum* ([The Future of Jobs Report 2025](#)): 60% of employers worldwide expect that the expansion of digital access will be the most transformative trend for their businesses by 2030.
- SPANISH CASE:
  - [Cinco Días, 03/09/2025](#): The digital sector increased its revenue by 5.6% in 2024, reaching 138.2 billion euros, reflecting part of the boost driven by digitalization.
  - [Ferreiro-Seoane et al. \(2023\)](#): Digitalization entails a polarization of employment: growth in highly skilled and low-skilled jobs, accompanied by a decline in medium-skilled occupations.
  - [Albanesi et al. \(2023\)](#): Recent evidence shows a positive relationship between potential exposure to AI and the prevalence of occupations dominated by highly educated young people.

*“The major challenge of generational replacement. Population ageing and the demand for new skills complicate the renewal of the workforce — a global issue with serious consequences for the economy.”* [El País, 06/07/2024](#)

## 1. Demographic Shifts and Labour Market Pressures - Key facts



### F3. PUBLIC OPINION REMAINS SKEPTICAL ABOUT IMMIGRATION

- Rising trends in international migration clash with widespread hostility toward the growing migrant population ([Fasani, et al. 2020](#)).
- 7 out of 10 European citizens overestimate the share of the population born abroad in their country. ([World Values Survey Wave 7: 2017-2022](#); [CaixaBank Research, 2025](#)).
- SPANISH CASE:
  - [CIS Opinion Barometer \(Sept. 2025\)](#): Immigration appears as the second most important national issue, with 20.7% of mentions (compared to 18.4% in the previous barometer).
  - [OBERAXE 2024 Report](#): Hostility toward migrants persists beyond concrete facts. Hostile messages predominantly target people from North Africa (35%), people of African descent (24%), immigrants in general (21%), and Muslim individuals (20%). There is also notable hostility toward unaccompanied migrant children and adolescents (5%).

**Exaggerated perceptions and hostility toward migration contrast with demographic reality, fueling social tensions that require for informed responses and public policies focused on social cohesion.**

## 1. Demographic Shifts and Labour Market Pressures - Key facts



### F4. INCREASING SHARE OF MIGRANT WORKERS IN THE LABOR FORCE

#### International Migration Outlook 2024, OECD:

- **Permanent migration to OECD countries grew by +10% in 2023**, reaching 6.5 million new immigrants (a record), +28% compared to 2019.
- **Patterns of circular migration have intensified in recent decades**, driven by globalization, technological advances, and changes in the labour market.
- **SPANISH CASE:**
  - In 2024, 18.2% of Spain's population had been born abroad (EU: 13.9% – [CaixaBank Research, 07/09/2025](#)).
  - The INE forecasts 375,000 net entries per year until 2053.
  - Between 2022 and 2024, over 2 million migrants were regularized (OPI).
  - Since 2022, more than 10,000 people have participated in circular migration programmes (GECCO).
  - In 2025, entries through GECCO increased by 23.3% compared to the previous year (SEM).

**Migration stands out as the key demographic lever to offset population decline.**

## 2- Migration as a Strategic Policy Lever



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### ❖ Migration: Powerful Lever when Combined with Proactive Labour Policies.

- [González-Pardo \(2025\)](#): Well-managed labor migration boosts productivity and economic dynamism, requiring policies aligned with regional and sectoral demands.
- [Adeusi et al. \(2021\)](#): It is essential to align migrants' skills with labor market needs, fostering their integration and enhancing adaptability to economic changes → *This includes both formal qualifications and soft skills, experience, and sectoral abilities (e.g., ILO Skills Passport).*
- Particularly successful are migration programs that combine well-regulated temporary schemes with possibilities for permanence, especially in sectors facing structural labor shortages ([Peri, 2016](#); [Anderson et al., 2022](#)).
- BUT, labour migration can exacerbate wage polarization, although this effect tends to diminish as labor supply and demand converge ([Holzer, 2019](#)).
- When migration policies are planned together with labour market needs, it becomes easier to fill hard-to-cover jobs, improve productivity, and create more employment—without causing big wage gaps ([Peri, 2016](#); [Holzer, 2019](#)).

## 2- Migration as a Strategic Policy Lever

- ❖ From Competition to Complementarity: Aligning Migration Policy with Labor Market Needs.

### Impact of Migration on the Wages of Native Workers

Figure 1: Migrant Workers as Substitutes

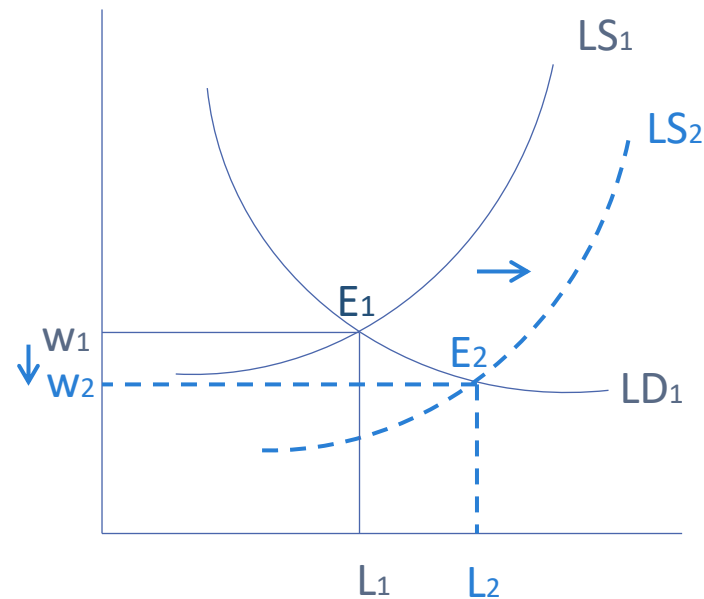
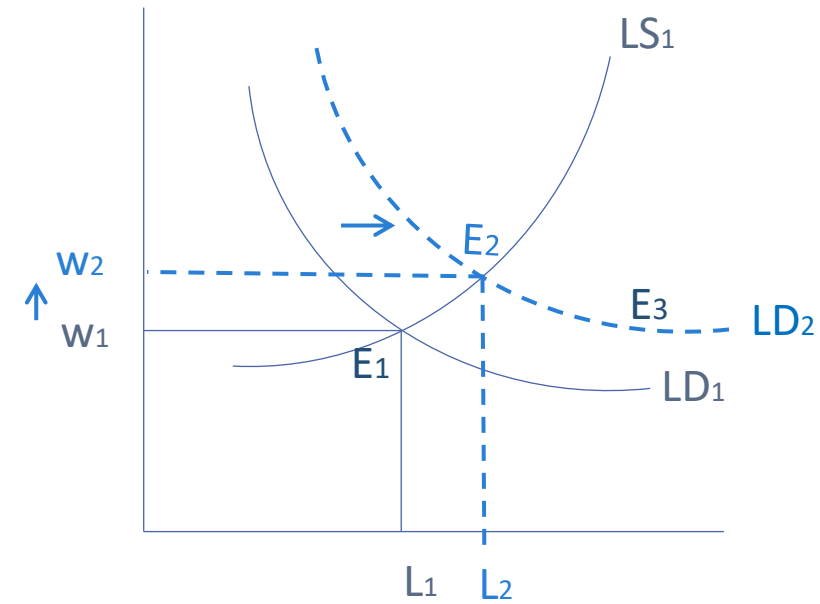


Figure 2: Migrant Workers as Complements



Source: [Holzer, H. J. \(2019\)](#). *Immigration and the US labor market: a look ahead*. Migration Policy Institute: Washington, DC, USA.

Note: [Card, D. \(1990\)](#). *The impact of the Mariel boatlift on the Miami labor market*. *Ilr Review*, 43(2), 245-257.



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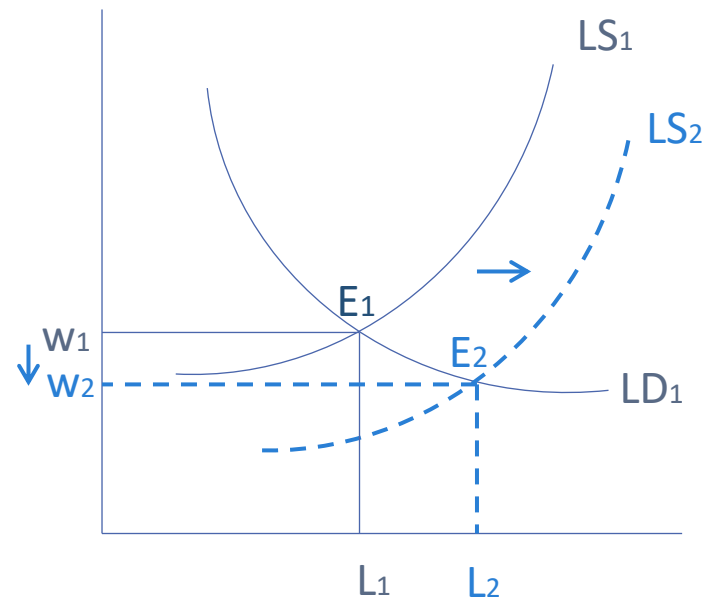
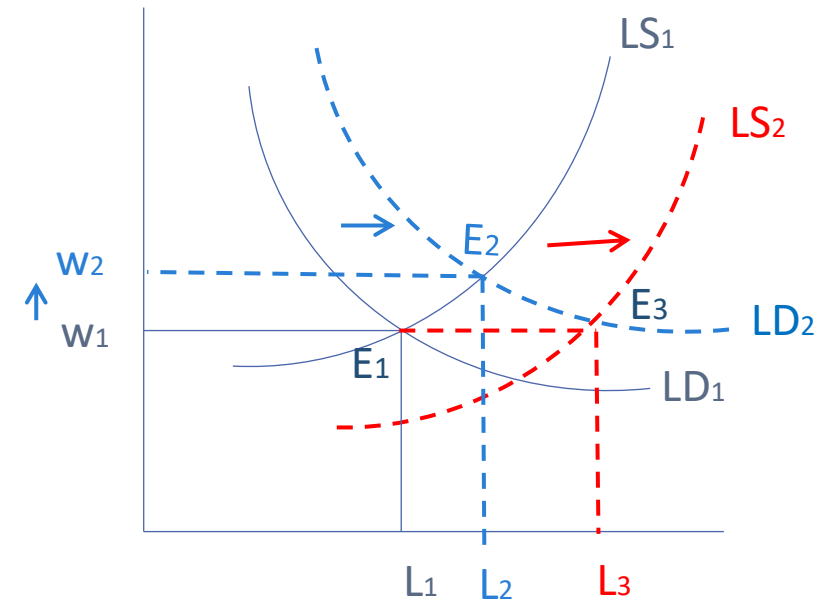


Figure 2: Migrant Workers as Complements

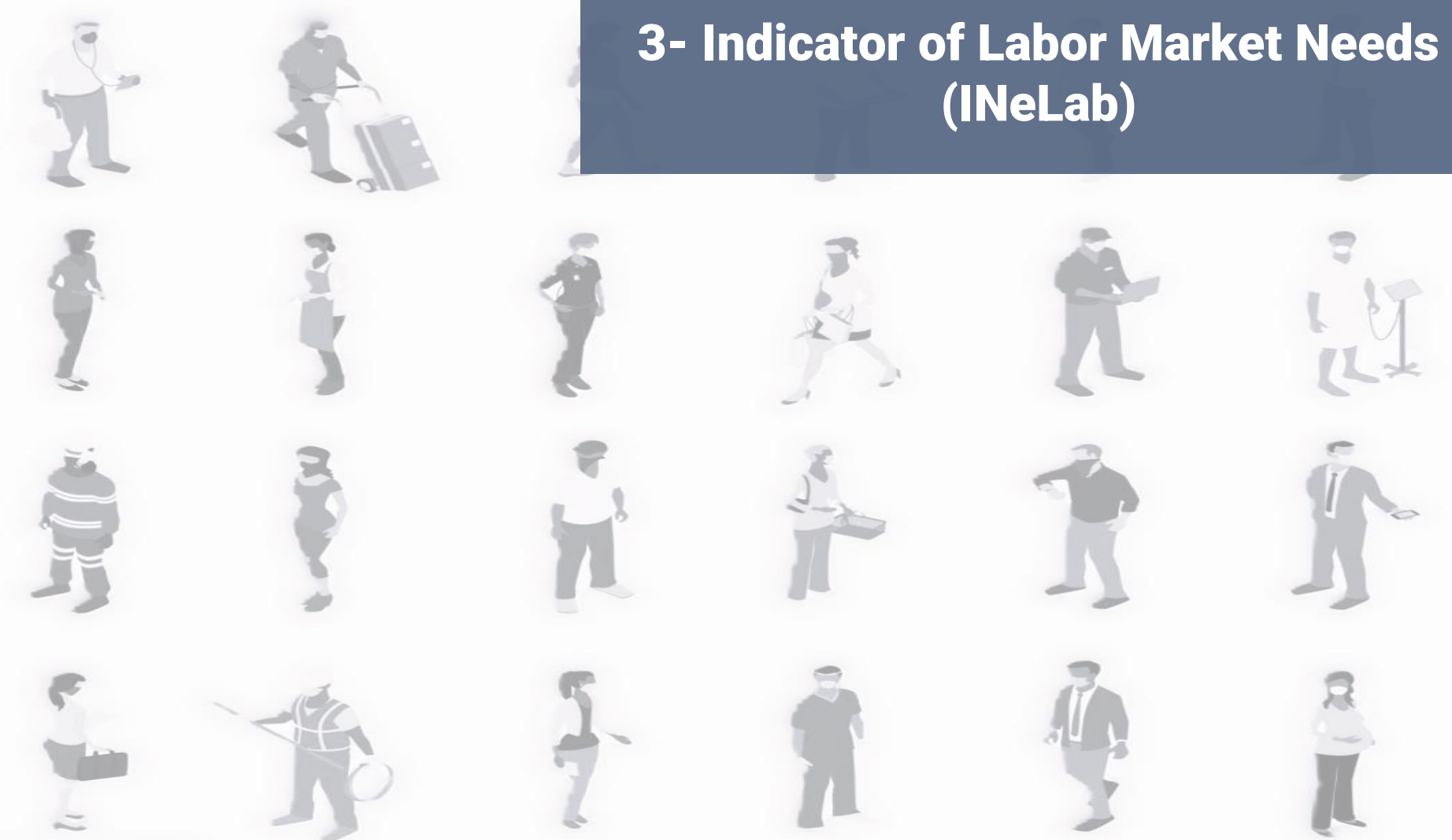


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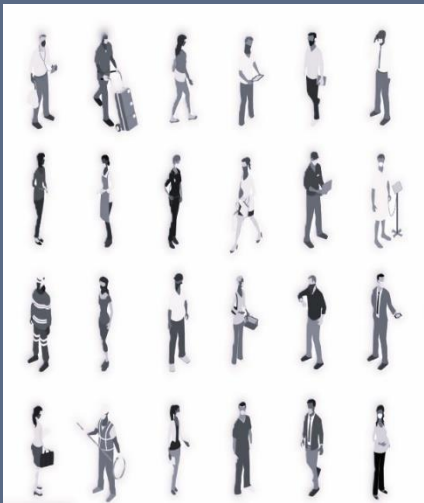
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## 3- Indicator of Labor Market Needs (INeLab)



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### Rationale for the Indicator

- Addressing labour shortages in ageing societies demands **evidence-based migration policies**.
- **Policy makers need real-time indicators** to detect emerging shortages by sector, occupation, and region.
- **The Labour Needs Indicator (INeLab)** is a pioneering tool that **identifies economic sectors experiencing labor shortages**, with the aim of **assessing the national employment situation and promoting a more orderly, legal, and secure migration process**.
- It **integrates multiple dimensions (labour shortages, ageing, migration patterns, unemployment)** into a single composite indicator of labor market tension.

*(Reference example: Multidimensional Quality of Life Indicator (INE))*

→ *A pioneering experience in the measurement of labor market pressures from an integrated perspective.*

## 3- Indicator of Labor Market Needs (INeLab)

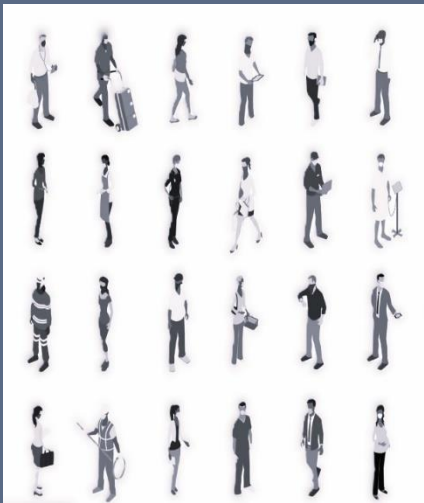
### Requirements for a Labor Needs Indicator

- *Objective and replicable method, based on indicators derived from official statistical sources:* accessible information supported by accurate and reliable data.
- **Reflection of the diverse realities of the Spanish labor market**, addressing the issue from a comprehensive and global perspective.

### Strengths of the INeLab

- **High level of detail:** Data available for economic activities and occupations (2-digit National Classification of Economic Activities – CNAE).
- **Use of variables capturing both structural aspects** (*weights*) **and dynamic trends** (*rates of change*) specific to each sector.
- **Periodically updatable:** 2018 a 2024.
- **Easily interpretable:** Integrates multiple dimensions of the labor market into a single measure.

→ **High analytical potential:** Enables *comparisons across sectors, regions, and even countries over time.*



## 3- Indicator of Labor Market Needs (INeLab)

### Construction of the Synthetic INeLab Indicator:

➤ **Methodology:** *Adjusted Mazziotta-Pareto Index Method*

➤ **Steps:**

1. Selection of dimensions ( $s$ ) and variables ( $x$ )
2. Normalization of the variables by sector ( $s$ ) within each dimensión, expressing them on a common scale with the range [70 ; 130]

$$r_{sj} = \frac{x_{sj} - \text{Min}_{xj}}{\text{Max}_{xj} - \text{Min}_{xj}} \times 60 + 70$$

High labor market tightness  
Low labor market tightness

*If indicator  $j$  has negative polarity, the complement of  $r_{sj}$  with respect to 200 is applied.*

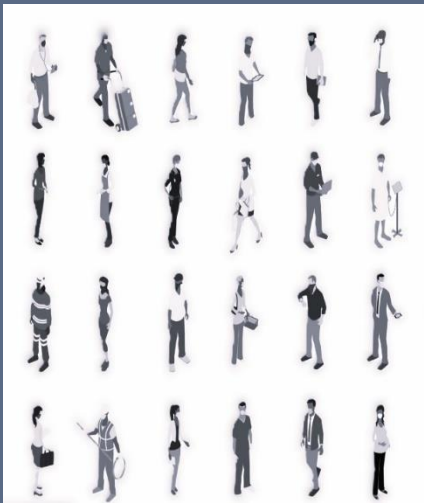
3. Computation of INeLab for each dimension ( $INeLab_j$ ), adjusting for variability.

$$INeLab_j = \text{Weighted average } (r_j) - \frac{\text{Var}(r_j)}{\text{Media}(r_j)}$$

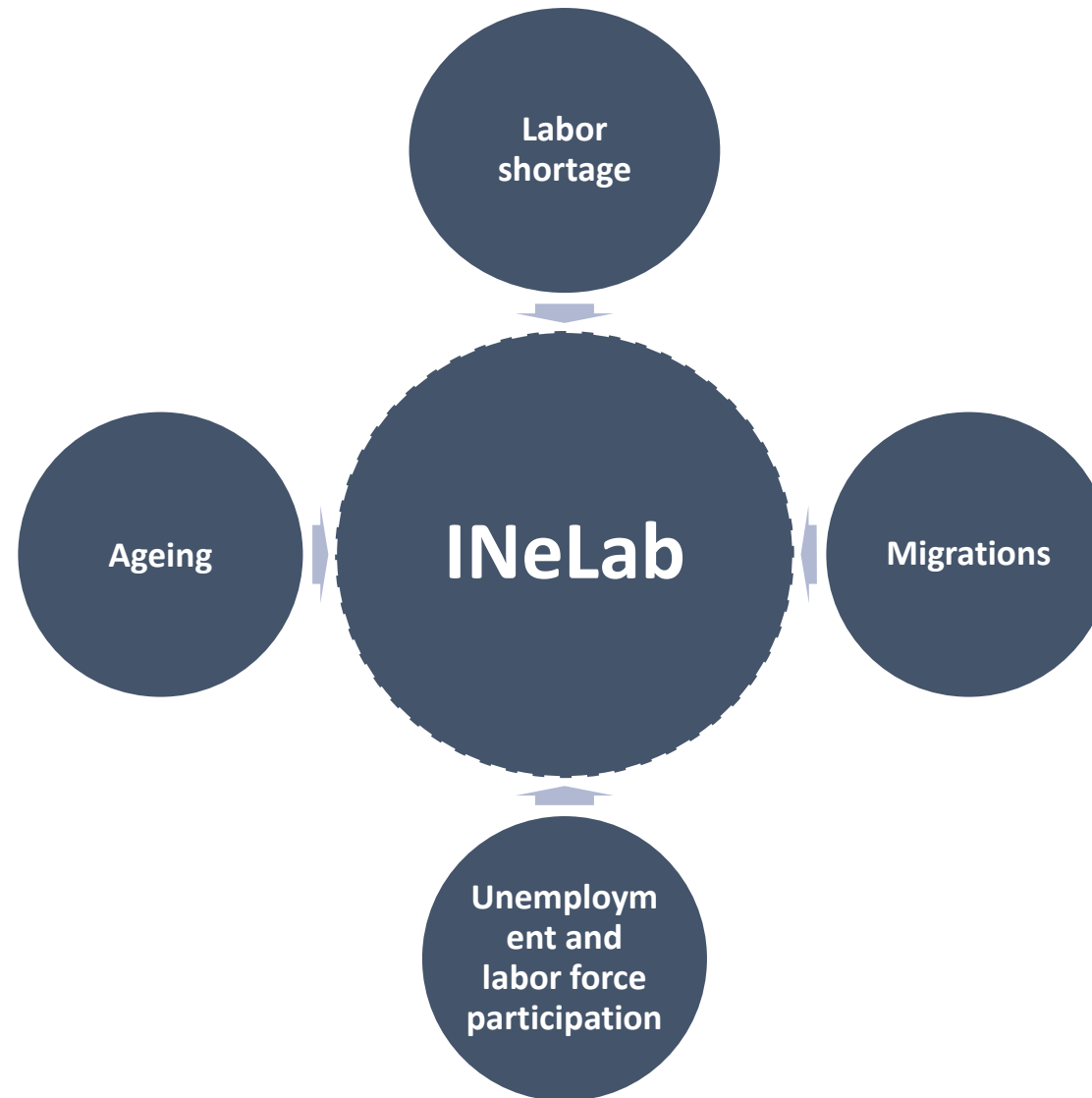
4. Aggregation of dimensions ( $INeLab_j$ ) into a composite index ( $INeLab$ ):

$$INeLab = \sum_j INeLab_j \times \theta_j$$

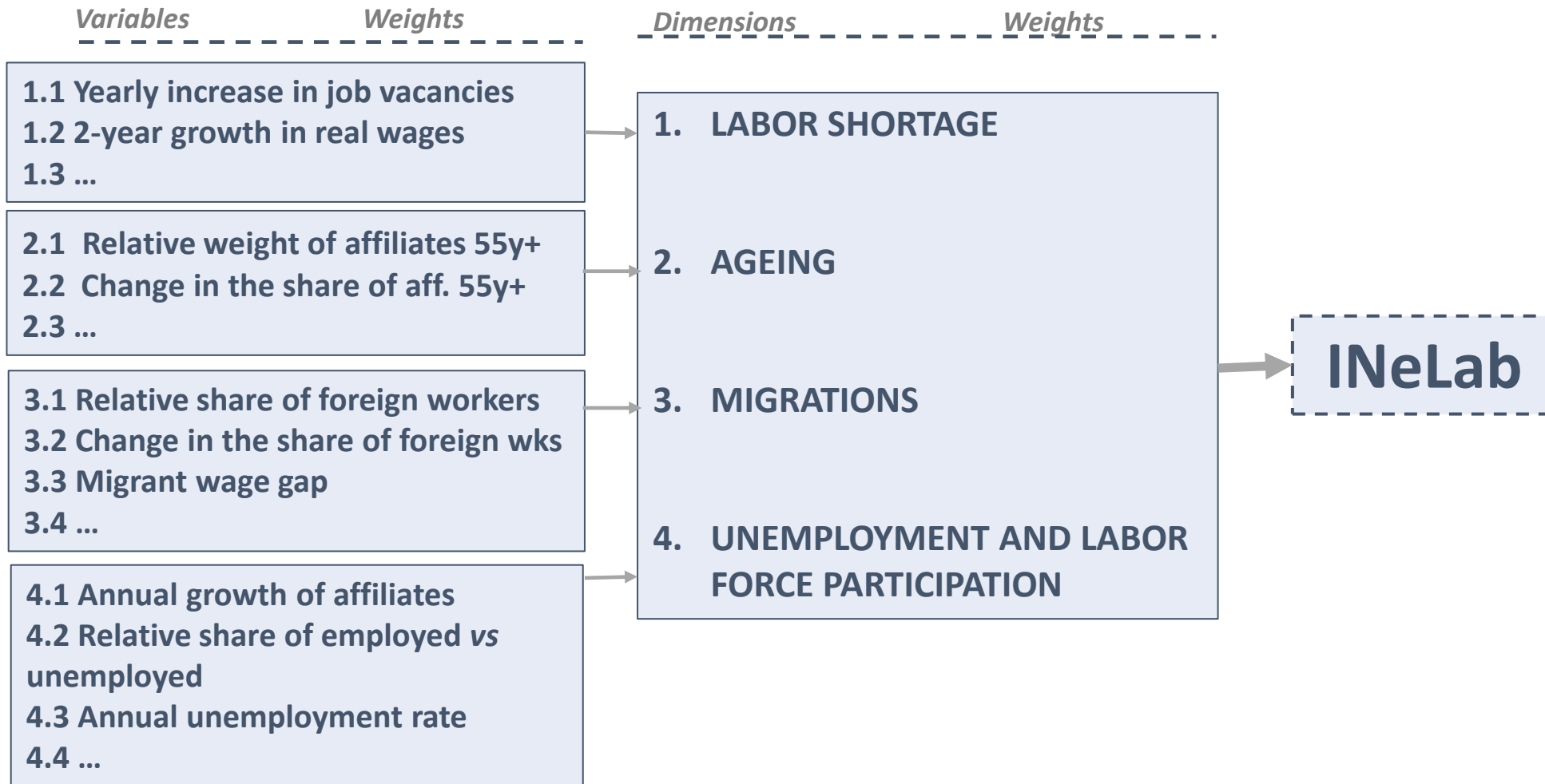
*The weights of the simple indicators have been calculated using the Principal Component Analysis (PCA) method.*



## Dimensions of the indicador INeLab



## 3- Indicator of Labor Market Needs (INeLab)



Source: National Statistics Institute (INE), General Treasury of the Social Security (TGSS) and the Spanish Public Employment Service.

Note: The weights of the simple indicators have been calculated using the Principal Component Analysis (PCA) method.

## 4- Concluding remarks



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### ➤ From Competition to Complementarity

- Population ageing is structural, not cyclical. Labour shortages are systemic. The choice is clear: adapt or fall behind.
- Migration alone cannot reverse demographic decline. But combine with labor assessment and efficient governance, it becomes a pillar of resilience and growth.
- The INeLab offers an illustrative example of how data-driven tools can guide migration policy. It is a pionering instrument designed to identify economic sectors under labor stress.
- The goal: shift from competition to complementarity. By linking migration management to empirical data, Spain moves from reactive policies to anticipatory planning.

