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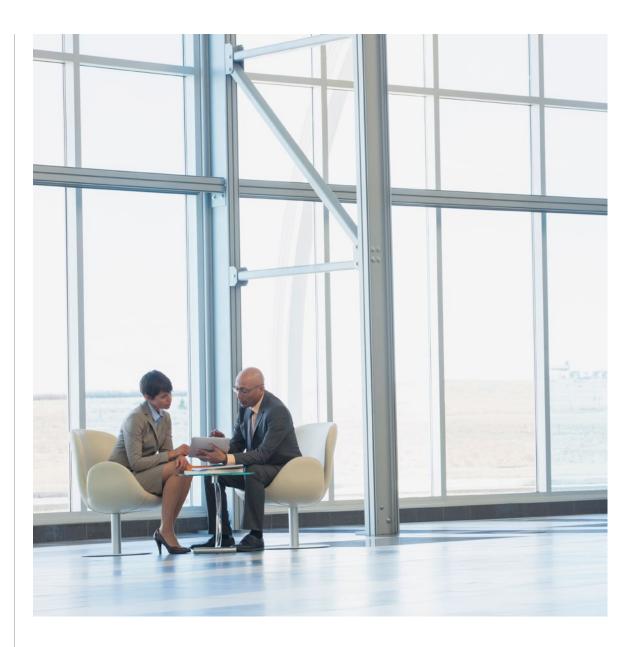
## **Foreword**

PwC is committed to contributing to a fact-based public debate on the business climate in the Netherlands. That's why we are publishing the Business Climate Heatmap for the second year in a row. As in the previous edition, this heatmap takes a broad view of the business climate – covering everything from the availability and cost of human capital, infrastructure and environmental capacity to macroeconomic indicators and tax competitiveness.

This year's heatmap tracks the development of the Dutch business climate using 65 indicators, spanning the period from 2013 to 2024. Compared to last year, we have extended the heatmap by five indicators. We also compare the Dutch business climate to that of the same seven countries included in last year's sample: Belgium, Denmark, France, Germany, Luxembourg, Switzerland, and the United Kingdom (UK). Furthermore, this year, we've added Ireland and the United States (US) to the comparison, both countries with which the Netherlands competes internationally in attracting new investment. In addition to the heatmap, we are introducing a new approach that visualises the news coverage of the Dutch business climate from 2013 to July 2025.

The Dutch business climate has steadily deteriorated since 2018, with the decline accelerating over the past three years, sliding back below 2013 levels. In 2024, it has fallen slightly below 2023 levels. Compared to the nine other countries in our sample, the Netherlands still performs reasonably well, ranking number five, which is one position lower than in 2013. These trends are confirmed by our news coverage analysis. We found that indeed with a worsening overall business climate in the Netherlands since 2018, news coverage of the topic increased.

While the heatmap covers data up to 2024, looking ahead to 2025, the outlook is likely to worsen. The Dutch government's decision – within the NATO framework – to significantly increase defence spending will either raise public debt or lead to cuts in other public expenditures. Already, spending on education, knowledge and innovation has been reduced. These and other budgetary pressures may further impact the business climate score in the coming years.



The growth potential of the Dutch economy is under strain. The only remaining engine of growth in an ageing society, labour productivity, is faltering. At the same time, the economy is increasingly constrained by limited capacity: labour, land, nitrogen space and clean water are all scarce. Roads, railways, and the electricity grid are overloaded. Without government intervention, stagnation looms.

Stimulating economic growth will require difficult choices. Decisions must be made about which activities need to be adapted, scaled down, or relocated – especially those that consume large amounts of scarce resources but generate relatively little value. These choices may be uncomfortable, but they are unavoidable.

We hope this Business Climate Heatmap will support policymakers and stakeholders in making informed decisions to create room for future growth.

#### Barbara Baarsma

## **Executive summary**

This second edition of PwC's Business Climate Heatmap shows how the Dutch business climate changed from 2013 to 2024. The Dutch business climate has worsened since 2018, even more so in the last three years, sliding back below 2013 levels. Compared to 2023, there has been a slight further decline.

Comparing the Dutch business climate with that of other countries reveals that it has consistently outperformed Belgium, the United Kingdom (UK), France, Germany and the United States (US). However, the Netherlands has been losing ground against Switzerland, Luxembourg, Denmark and Ireland since 2013.

#### The Dutch business climate heatmap over time

The business climate is a multi-faceted issue. Hence, last year we developed an approach to looking at the Dutch business climate from a broad perspective that includes many variables and takes two angles – changes in the Dutch business climate over time and comparison with other countries. This is the second update of the Business Climate Heatmap. Figure 1 summarises the main changes from last year.

Figure 1 Summary of analysis and changes from last year's edition

### **Dutch Business Climate Heatmap Over Time**

#### 65 indicators in six categories

 Seven indicators were added and two removed from last year's 60 indicators

## Business climate news coverage analysis

 Analysis of 10,375 FD articles from 2013 to July 2025

### The International Business Climate Heatmap

#### 65 indicators in six categories

- Seven indicators were added and two removed from last year's 60 indicators
- All countries compared have the same 65 indicators covered

#### Ten countries compared

- Ireland and the US added besides Belgium, Denmark, France, Germany, the Netherlands, Luxembourg, Switzerland and the UK
- Due to limited data availability for Singapore, it is included as a comparison to the Netherlands in a separate section

First, we create a 'Dutch business climate heatmap over time'. This heatmap evaluates the Dutch business climate from 2013 to 2024 using **65 indicators** organised in the following six categories:

- **Human Capital**: measures the availability, quality, skills and productivity of the current and future labour force.measures the availability, quality, skills and productivity of the current and future labour force.
- **Infrastructure and Physical Space**: captures the quality and pressure on energy, physical infrastructure, housing, physical space and the natural environment.
- Macroeconomics: looks at the economic performance and stability.
- **Physical Safety and Security**: measures crime, safety and external threat levels, as well as the prevalence and preparedness for natural disasters.
- **Politics**, **Regulation**, **Institutions and Society**: captures the functioning of the democratic, legal, regulatory and government institutions, policy stability and the level of equality and taxation.
- Trade, Investment and Market Opportunities: measures the functioning of capital markets and lending institutions, the degree of economic competition, and openness to trade and investment.

This year, we pay special attention to changes from 2023 and 2024 in the Dutch business climate, looking into changes in both category and indicator level. Additionally, we quantitatively measure how different business climate themes have been covered in the press. We align these themes to our heatmap categories.

While most current research on the Dutch business climate relies on qualitative studies or company interviews, and although there are international rankings like the IMD World Competitiveness Ranking, these tend to overlook the specific dynamics within the Netherlands and focus primarily on global comparisons. What has been missing is a more data-driven, in-depth perspective comparing not only the Dutch business climate dynamics over time but also against peer countries.

#### The international business climate heatmap

The national business climate heatmap can tell how the Netherlands has compared over time with itself. However, countries compete internationally by maintaining the attractiveness of domestic firms to expand their businesses and attract new investment from abroad. Hence, it is important to also consider how the Netherlands has performed over time compared to its peers. That's why we compare the position of the Netherlands to that of Belgium, Denmark, France, Germany, Ireland, Luxembourg, Switzerland, the UK and the US, using the same set of indicators and categories. We refer to this as 'the international business climate heatmap'.

## The business climate heatmap over time: the Dutch business climate from 2013 to 2024

Since an uptick from 2013 to 2018, there has been a deterioration in the business climate in the Netherlands. This has become more pronounced in the last three years with a further decline from 2023 to 2024.

Out of the six categories, four have declined since 2023: **Human Capital, Infrastructure** and Physical Space, Macroeconomics and Trade, Investment and Market Opportunities. Two categories have improved slightly: Physical Safety and Security and Politics, Regulation, Institutions and Society. However, gains in those two categories have not offset declines elsewhere, resulting in a lower overall score.

Here is an overview of the results of the comparison of the Dutch business climate since 2013 for each of the subcategories under the six main categories.

#### • Human Capital:

- Looking at the **Demographics** indicators, the Dutch population has been growing faster than the average level from 1990 to 2024 in recent years, reflecting the shortages in the labour market and the attractiveness of the Netherlands for foreign workers. This has led to an increase in population density, which poses challenges for the business climate. In addition to the ageing population, this trend has been straining the infrastructure and public services. Yet, the overcrowded infrastructure and public services are primarily due to a lack of long-term economic policies and underinvestment. Compared to last year, indicators in this category have not significantly changed, except population growth has slightly weakened, which is a negative trend for the business climate.
- **Education** has improved as a larger share of the Dutch adult population has at least tertiary (post-high school) education, and education spending and quality have recovered to around the average levels from 2013 to 2024. There are no notable changes between 2023 and 2024.
- In addition, **Human capital and research** indicators have improved, with average net incomes, life expectancy, and spending and quality of research and development (R&D) rising slightly over time. Since 2023, the R&D pillar has slightly recovered above the historical average level.
- Similarly, in **Labour productivity, shortages and costs**, labour productivity has been stagnating despite rising labour costs. In addition, labour shortages have become more pronounced since the Covid-19 pandemic. Compared to 2023, both labour shortages and labour costs have become more of an issue for the business climate, impacting the ability of companies to increase labour productivity and boost competitiveness.

#### Infrastructure and Physical Space:

- Among **Energy and environment** indicators, while over the last years there has been an improvement (reduction) in CO<sub>2</sub> emissions per capita and nitrogen emissions per square kilometre, this reduction has not been fast enough to match nitrogen and carbon targets. For nitrogen, CO<sub>2</sub> emissions and water stress levels, however, we are unable to capture change from 2024 to 2023 due to a lack of recent data. At the same time, enforcement of environmental regulations—particularly those related to nitrogen emissions—has become stricter in recent years following Dutch court rulings. As a result, the business climate continues to be affected by persistently high emission levels. Other environmental performance indicators, such as energy import dependency and electricity prices, have worsened over the past three years.
- In addition, within **Housing and physical space**, housing has become significantly less affordable in the last five years, with the trend continuing in 2024. Physical space availability has also consistently remained an issue. noticeable change from last year.
- Within **Infrastructure and transport**, ICT use and access, as well as global connectedness, improved slightly above the historical average trend. However, infrastructure quality, for which we only have data up to 2023, remained at the historical average level.

#### • Macroeconomics:

- Looking at **Government debt and spending**, the government was spending more around the Covid-19 pandemic, but recently spending and fiscal health (in terms of deficits and debt levels) returned to average levels from 2013 to 2024. Comparing 2024 to 2023, fiscal health slightly worsened.
- In the **Macroeconomic trends** subcategory, there were some improvements over the past year, as consumer and business confidence and real GDP growth, although still below the historical average, improved from 2023. Inflation again became more of a concern from 2023 to 2024.
- **Uncertainty**, after peaking in the 2016-2017 and 2019-2020 periods, diminished in 2023 and continued to fall in 2024, below the historical average level.<sup>1</sup>

#### • Physical Safety and Security:

- **Crime and safety** shows that safety levels improved since 2016, indicating that the Netherlands remains a generally safe country with low crime rates.
- It is notable that many **Risk and disasters** indicators covering rising risks of natural hazards, climate change and geopolitics, as well as risk preparedness, have been rising over the last three years with an even sharper increase in 2024.

#### Politics, Regulation, Institutions and Society:

- Democracy, Governance, and Regulatory and policy environment indicators have been deteriorating slightly compared to their historical averages. The decline in those subcategories continued also in 2024. In addition, economic policy uncertainty has picked up recently, both because of the domestic and international context. However, as our data goes up to 2024, we have not captured the recent rise in economic policy uncertainty coming from US tariffs. The Netherlands has historically performed well in governance and the regulatory and policy environment compared to other countries. However, recent years have seen a decline to historically low levels, driven by reduced government efficacy and increased policy uncertainty. Although the country still ranks relatively high, its score has steadily fallen over the past four years. This prolonged period of strong performance may have left Dutch businesses less prepared for the decline, potentially amplifying its impact on the business climate compared to countries where firms are already accustomed to operating under less effective governance conditions.
- The **Equality** category shows that income inequality remained slightly below average levels. Similarly, the gender gap diminished slightly in the past few years.
- On **Taxes**, the Dutch tax competitiveness worsened in 2024 compared to 2023, although the tax burden became less of an issue with top marginal income and corporate tax rates declining slightly.

#### • Trade, Investment and Market Opportunities:

- Within **Capital markets**, the performance of capital markets worsened over the past four years, while the number of listed companies constantly remained below the historical average since 2013.
- In terms of **Credit**, the cost of borrowing continued to rise in 2024, while before that, it was low compared to the average from 2013 to 2024. The ease of lending and the share of loans in GDP were around the historical average, with a slight improvement recently.
- New firm entries and exits have boosted **Economic dynamism and competition** over the past three years, while the role of large companies has been rising, and openness, competition and market scale indicators have decreased recently. Together, these two opposing effects explain why the results remain similar to last year.
- **Financial soundness** remained good, with banks well-capitalised and the share of non-performing loans low.
- In terms of **Investment**, foreign direct investment inward and outward positions slightly worsened over the past five years. Investment freedom was around the historical average of 2013 to 2024 without any changes.
- Lastly, the role of **Trade** for the Dutch economy has increased since 2013. Although it declined slightly from 2024 to 2023, it remains well above the historical average levels.

On one hand, when looking at all indicators, we found that from 2023 to 2024 the top three improvements were in terms of lower tax burden, lower geopolitical risk and an improved investment environment. Other notable improvements were in consumer confidence, lower electricity prices, improving political stability, decreasing risk levels and vacancy rates, as well as higher GDP growth and net income. Except for after-tax income, all of the indicators, however, remained below the historical average level, meaning that they rebounded from bad to less bad levels for the business climate. On the other hand, the top three worst impacts to the business climate score came from decreasing population growth, worsening policy environment for businesses and rising inflation. While geopolitical risks decreased, both general and economic policy uncertainty increased. Similarly, tax competitiveness, environmental performance, fiscal health and trade as a share of GDP worsened, while unit labour costs increased. In terms of historical trends, only population growth and trade as a share of GDP remained above the historical average.

#### Business climate news coverage analysis

This year, we also measured the news coverage of the 'business climate' topic by quantifying to what extent media articles, retrieved from the Dutch newspaper 'Het Financieele Dagblad' (FD), cover topics related to the business climate heatmap. In contrast to backwards-looking economic data, the news coverage analysis allows us to estimate in near real-time, also capturing the business climate sentiment in 2025. Additionally, it acts as a robustness check for the trends that we see in the data. We found that indeed with a worsening overall business climate in the Netherlands since 2018, news coverage of the topic increased. We found an inverse relationship, as news coverage on business climate is higher in years when business climate score either in total or per category decreases.

According to the news coverage data from 2013 to July 2025, the most important categories shaping the business climate discourse were: **Trade, Investment and Market Opportunities, Macroeconomics**, and **Politics, Regulation, Institutions and Society**. Together, these three categories accounted for more than 75% of article mentions in our sample related to the Dutch business climate. This shows that these three topics received the most news attention and can be interpreted as more prevalent factors impacting the Dutch business climate. In contrast, the categories **Infrastructure and Physical Space**, **Human Capital**, and **Physical Safety and Security** have been less covered in the news over the same period, indicating relatively lower news coverage and importance.

#### The international business climate heatmap

The Netherlands has historically outperformed Belgium, France, Germany, the UK, and the US on average business climate scores, grouping with Denmark, Luxembourg and Switzerland. However, since 2013, it has lost ground to Denmark, Ireland, Luxembourg and Switzerland. We can see that the Netherlands in relative terms in 2024 is slightly below where it was in 2013.

Compared to other ten countries in our sample, the Netherlands has stayed in the top five countries in all categories, except for **Human Capital**.

- In **Human Capital**, the Netherlands has largely kept its low position, and since 2013, the Netherlands has managed to only exceed Belgium.
- In **Infrastructure and Physical Space**, the Netherlands was among the top three countries in 2014. However, since then, the Netherlands has dropped to the fourth place.
- Within **Macroeconomics**, the Netherlands was in sixth in 2013 and has now taken the fifth place. This has been the most volatile category for all countries because of the Covid-19 shock.
- The relative position of the Netherlands in **Physical Safety and Security** has remained stable at fourth place, one higher than where it was in 2013.
- In **Politics, Regulation, Institutions and Society**, the Netherlands started fourth in 2013 and dropped to fifth in 2024, lagging behind Switzerland, Ireland, Denmark and Luxembourg.
- Lastly, in the **Trade**, **Investment and Market Opportunities** category, the Netherlands was in the fourth position in 2013 and remained there in 2024.

These developments underscore two points. First, since 2018, there has been a downward trend in the Dutch business climate, bringing the Netherlands even below 2013 levels. Back then the Dutch economy was still in the aftermath of the global financial crisis, that impacted the economy much longer than elsewhere in Northwestern Europe. Although the Dutch economy is in better shape now, the decline of the business climate has continued from 2013 to 2024.

Second, other countries that we include in our comparison, namely Belgium, Germany, UK and US, have experienced an even steeper decline. In relative terms, the Dutch business climate has deteriorated less than in other countries due to more severe problems abroad.

Although we include countries that are comparable to the Netherlands in many aspects, these relative results still depend on the sample of countries included. This underscores the need for a nuanced debate on the topic. When assessing the Dutch business climate, policymakers and business leaders should consider the backdrop against which it is measured.

## Introduction

#### **Definition of business climate**

In Dutch, there are two terms that are frequently used interchangeably in business climate discussions: ondernemingsklimaat (business climate) and vestigingsklimaat (investment climate for multinationals). The first term refers to the conditions that companies face when establishing, operating and expanding in a country. The second term is part of the business climate and focuses on the attractiveness of a country or region for internationally operating companies. Both the business and investment climates of a country largely overlap and are influenced by a similar set of factors.<sup>2</sup>

Here, we focus on the business climate, which can be defined as 'the sum of factors in a country that weigh in a company's decision to start or expand activities'. In our interpretation, we follow this logic and try to incorporate as many relevant factors that are mutually exclusive but collectively exhaustive to capture all the trends that influence the decisions of companies to establish themselves, operate and expand in a country.

#### Methodology and data scope

To find the categories and indicators for the heatmap, we looked at the available academic literature and the research on the Dutch business climate. Up to this point, studies have primarily been qualitative and based on survey data from companies. The main issues impacting the Dutch business climate mentioned by surveyed companies have been the instability of the tax policy, high regulatory pressure, political instability, lack of a government vision, labour shortages, less competitive financing options, and overcrowded infrastructure and physical space.

Even though such a survey-based and qualitative approach is valid and informative, we decided to follow a more data-driven approach to thoroughly understand the discussions surrounding the Dutch business climate. Hence, already last year, we developed the first edition of the Business Climate Heatmap 2024.

This year, we are updating the heatmap by using 65 indicators, including seven additional ones and removing two compared to last year (see Appendix on page 50 for more information). The Business Climate Heatmap is structured into six categories and their respective subcategories and indicators, designed to provide a broad, collectively exhaustive and mutually exclusive measure of the business climate (see Figure 2).

<sup>2</sup> SEO (2023): Monitor ondernemingsklimaat.

<sup>3</sup> Rabobank (2024): Investeringen moeten prominenter op de politieke agenda.

<sup>4</sup> Some of the studies that we looked at were SEO (2023): Monitor Ondernemingsklimaat and SEO (2024): Monitor Ondernemingsklimaat, VNO-NCW (2025): National Poll Business Climate 2024, Buck (2023): Reasons Why Companies Exit the Netherlands, AmCham the Netherlands (2025): Investment Climate Study 2025.

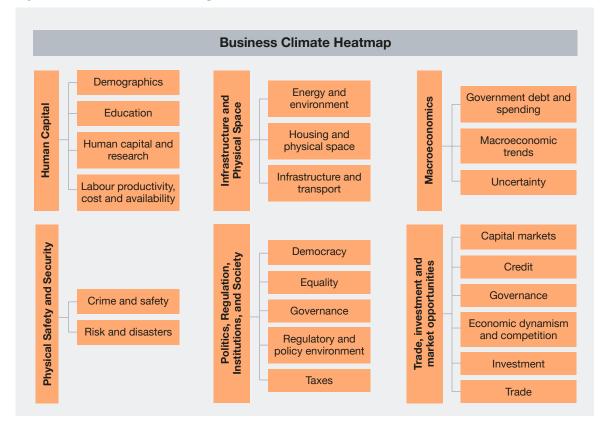


Figure 2 Business Climate Heatmap overview

Moreover, we focus on a a twelve-year time span from 2013 to 2024. That allows us to both zoom in on the latest developments while also contrasting them with medium-term trends. We pay special attention to changes from 2023 to 2024 in this year's edition.

In last year's edition, we attached equal weights to each of the then 60 indicators by leaving them unweighted, as there is limited evidence to understand which factors are relatively more important for the business climate in each country. Nevertheless, we incorporated as many indicators as possible that are well representative of different dimensions in each category while mutually exclusive.

This year, we have made a slight adjustment to how we calculate the average business climate score by giving equal weights not to all indicators but to all six categories of indicators. Both approaches match very closely (see the Appendix on page 47).

Next, the indicators in our data come from several sources and have different measurements. For example, we have measures such as inflation and population growth, which are difficult to compare against each other. To allow for comparisons across indicators, we perform standartisation of each indicator, using as many historical data points from 1990 as possible (see the Appendix on page 46 for more details).

This means that for each indicator, 0 represents its historical average, and the standard deviation, which measures how much the indicator deviates from the average, is 1. If an indicator is above (below) by one standard deviation from its historical average, we call that high (low) compared to the historical average and colour it white (orange). The colour intensity changes to lighter (darker) shades of orange if the indicators are more above (below) their historical average.

In the international heatmap, we follow a similar approach to the heatmap for the Netherlands over time and the other countries in our sample over time. The difference is that we standartise all indicators for all countries to be in the range from 0 to 1, with 0 being the lowest value of that indicator for all countries overtime and 1 being the maximum. See the Appendix on page 49 for more details.

Additionally, it is important to keep in mind that some categories have more indicators than others. Therefore, when reporting the average score per category, indicators in categories with fewer indicators would weigh more than indicators in categories with more indicators. Hence, it is important to contrast the average category score with the scores of each indicator within that category as well.

Furthermore, besides including the same set of countries as in last year's edition, namely Belgium, Denmark, France, Germany, Luxembourg, Switzerland and the UK, we have also included Ireland and the US for the international comparison this year.

Compared to last year, we supplement our data-driven business climate heatmap analysis with a news coverage analysis. First, for each of the subcategories we develop a list of keywords (Appendix on pages 47 and 48). Then we take a sample of 10,375 articles from the FD that in any way relate to those keywords for the period from 2013 to 2025. By focusing on one media outlet instead of many, which generally reports on all major business-related issues in the Netherlands, we can more clearly isolate business climate-related coverage. We count which articles mention any of the subcategories in our heatmap and how these trends have developed over time. Then, we aggregate the results to show how the news coverage regarding the business climate but also each category has changed over time for the Netherlands. This allows us to analytically measure the more qualitative business climate trends.

# The Dutch business climate heatmap over time

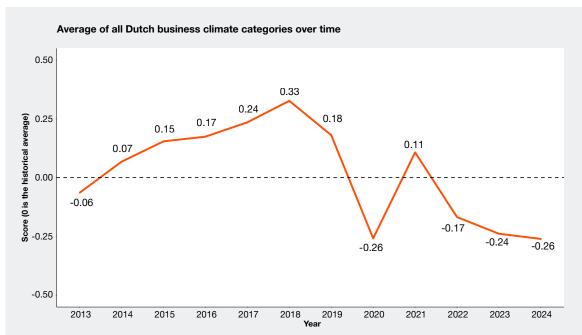
We look at

indicators over time across



In this chapter, we look at the Dutch business climate from 2013 to 2024 and in more detail at the change from 2023 to 2024, using historical data from 1990 for 65 indicators organised into six categories. Figure 3 shows the average of all 65 indicators in the Dutch business climate heatmap over time.

**Figure 3** After improvement from 2013 to 2018, the business climate in the Netherlands remains at a low level in 2024



This is the average of 6 categories, with the dashed line representing the historical average. Each category containts indicators (in total 65) that are standartised by calculating Z-scores, which have 0 as the historical average and 1 as the standard deviation, based on as much data as is available from 1990.

From 2013 to 2018, there was an improvement in the business climate as the average score of all indicators increased above the historical average. Nevertheless, since 2018, a sharp deterioration has taken place, exacerbated by the Covid-19 pandemic. Although from 2020 to 2021 a recovery was underway, it was interrupted by another sharp decline from 2021 to 2022, and an even further decline since 2022.

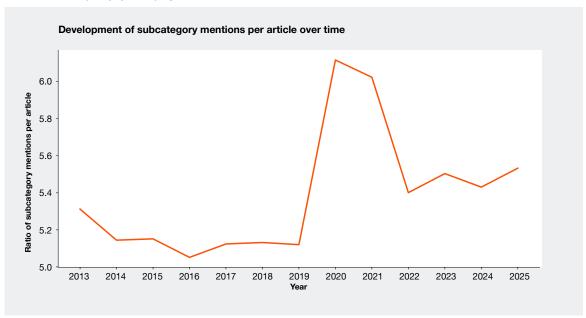
Zooming in on the change from 2023 to 2024, given that 0 is the historical average, the business climate score slightly decreased from -0.17 in 2023 to -0.26 in 2024. However, coming back to longer-term trends, the score in the past three years has remained noticeably below the historical average.

10,375 business climaterelated news articles were analysed.

#### Business climate news coverage

In addition to the Business Climate Heatmap, we are introducing a novel approach that illustrates news coverage of the Dutch business climate. We analyse 10,375 business climate-related news articles from Het Financieele Dagblad (FD) from 2013 until the end of July 2025. This enables us to understand the media coverage of the Dutch business climate as well as its categories and subcategories. Figure 4 visualizes the frequency with which the Dutch business climate has been covered in the news from 2013 to the end of July 2025.

**Figure 4** After improvement from 2013 to 2018, the business climate in the Netherlands remains at a low level in 2024



While the analysis does not assess the sentiment of individual articles, it does measure the intensity of coverage. Given that media outlets tend to have a negativity bias, prioritising reporting on economic risks, disruptions and uncertainties over positive events, the results from Figure 4 can be cautiously interpreted as heightened concern about the Dutch business climate. Figure 4 therefore depicts the inverse relationship between FD news coverage and the Dutch business climate, meaning that when the business climate improved (declined) in our data, as shown in Figure 3, the news coverage lessened (intensified).

It is therefore not surprising that the news coverage peaked during the initial years of the Covid-19 pandemic. The Dutch economy experienced a significant contraction due to the initial macroeconomic shock induced by the pandemic. In the second quarter of 2020, Dutch real GDP decreased by 8.4%, reflecting a sharp downturn in economic activity, which, according to Figure 4, was intensively covered by the FD.

While the media coverage and, thereby, the importance of the business climate discussion in the FD decreased in 2022, it has remained elevated above the average trend since the Covid-19 pandemic. This aligns with the Business Climate Heatmap data in Figure 3, indicating that the gradual decline in the Dutch business climate remains a relevant topic.

#### What have been the developments over time in each business climate category?

Looking at the change over time by category, we group all indicators into six categories. In the next chapters, we dive deeper into the indicators behind each category. But before we do that, we give a higher-level overview per category. Figure 5 shows the average score per category since 2013.

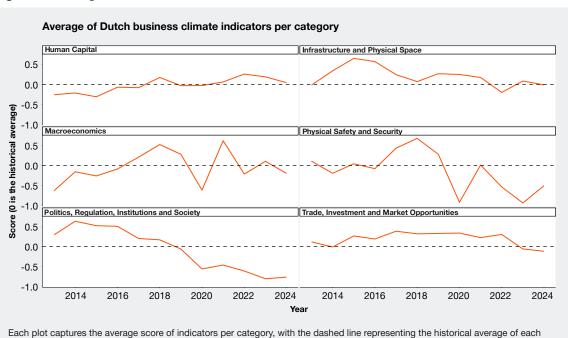


Figure 5 All categories in 2024 are below 2018 levels

Each plot captures the average score of indicators per category, with the dashed line representing the historical average of each category. Each indicator is standartised by calculating Z-scores, which have 0 as the historical average and 1 as the standard deviation, based on as much data as is available from 1990.

First of all, all categories have declined since 2018. Second, the steepest declines have been in **Physical Safety and Security** and **Politics, Regulation, Institutions and Society** categories. Macroeconomics has also notably declined since 2018. Last, relatively slight declines have taken place in **Trade, Investment and Market Opportunities, Human Capital** and **Infrastructure and Physical Space** categories.

Figure 6 illustrates the news coverage of each business climate category over time from 2013, adjusted by the size of each category (in terms of associated subcategories and keywords).

a strong increase in coverage in 2025 Share of category mentions per article over time (normalized by subcategory count)

Figure 6 The category Macroeconomics is the most covered category since 2013 and experienced

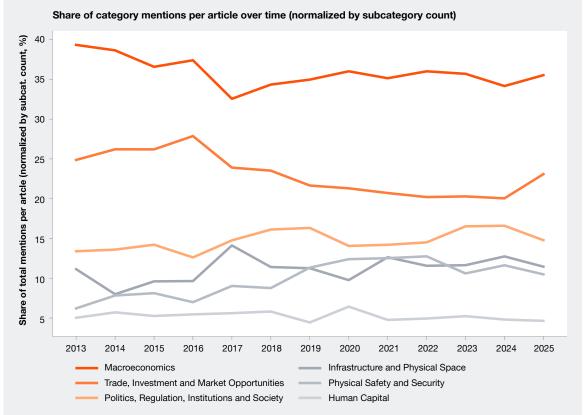


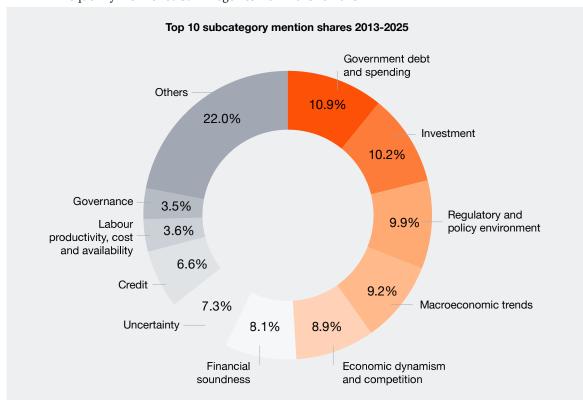
Figure 6 enables us to have an estimate of the importance of each category towards the overall Dutch business climate and its development over time. We can thereby estimate the relative importance of each category across different years, taking into account the potential bias FD and other media outlets to report relatively more on negative stories. Based on that, we can cautiously interpret an increase in coverage of a category as a proxy for heightened concern about a specific category.

Macroeconomics covers more than of all Dutch business climate news mentions.

Based on Figure 6, in 2024 the most important categories shaping the business climate discourse were: Macroeconomics, Trade, Investment and Market Opportunities, and Politics, Regulation, Institutions and Society. Together, these three categories accounted for more than 70% of article mentions in our sample related to the Dutch business climate. This shows that these three topics receive the most news attention and can be interpreted as more prevalent factors impacting the Dutch business climate.

In contrast, the categories **Infrastructure** and **Physical Space**, **Human Capital**, and **Physical Safety** and **Security** have been less covered in the news over the same period, indicating relatively lower news coverage and importance. It is important to note that one FD article often covers multiple subcategories and categories. This is not unexpected, as most issues, such as the Dutch nitrogen crisis, while predominantly associated with one category, here likely **Infrastructure** and **Physical Space**, can simultaneously impact other categories as well. For example, nitrogen issues impacting the housing shortage can impact the subcategories **Housing** and **physical space** and **Investment** at the same time. Therefore, it can be difficult to allocate trends, such as the nitrogen crisis, to specific changes in subcategories mentioned in some cases.

Looking at the trends of specific subcategories (categories specified in brackets) over our sample period in Figure 7, we can see that a similar picture emerges: most articles were linked to Government debt and spending (Macroeconomics), Investment (Trade, Investment and Market Opportunities), and Policy environment (Politics, Institutions, Regulation and Society) subcategories.



**Figure 7** Government debt and spending, Investment and Policy environment have been the most frequently mentioned subcategories from 2013 to 2025

Hence, both Figures 6 and 7 show the most discussed themes within the business climate topic. Next, we zoom in on which indicators have changed the most from 2023 to 2024.

#### Which indicators have changed the most from 2023 to 2024?

First, in Table 1 we show the top ten indicators with the biggest score increases.

**Table 1** From 2023 to 2024 the biggest improvements have taken place in terms of lower tax burden and geopolitical risk, and increasing market capitalisation and venture capital activity

Category	Subcategory	Indicator	2023 score	2024 score	Difference 2024-2023
Politics, Regulation, Institutions and Society	Taxes	Netherlands score in Index of Economic Freedom - Tax burden	-1.45	1.50	2.95
Physical Safety and Security	Risk and disasters	Netherlands score in the Geopolitical Risk Index	-2.36	-0.73	1.62
Trade, Investment and Market Opportunities	Capital markets	Netherlands score in Global Innovation Index - Investment	-1.59	-0.67	0.92
Macroeconomics	Macroeconomic trends	Consumer Confidence	-1.56	-0.73	0.84
Infrastructure and Physical Space	Energy and environment	Average industrial and commercial electricity price (kWh/USD)	-2.76	-1.93	0.83
Politics, Regulation, Institutions and Society	Democracy	Netherlands score in Global Innovation Index - Political and operational stability	-2.13	-1.33	0.80
Physical Safety and Security	Risk and disasters	Netherlands score in the World Risk Report	-1.07	-0.49	0.58
Macroeconomics	Macroeconomic trends	Real GDP growth	-0.92	-0.51	0.41
Human Capital	Human capital and research	Average net income after taxes	2.02	2.37	0.35
Human Capital	Labour productivity, shortages and costs	Vacancy rate	-1.58	-1.42	0.17

The top three improvements were in terms of lower tax burden,<sup>6</sup> lower geopolitical risk<sup>7</sup> and investment environment.<sup>8</sup> The tax burden lowered compared to the historical average with slight improvements in top marginal tax rates on individual and corporate income, as well as a slight reduction in the overall tax burden as a share of GDP.

Other notable improvements were in consumer confidence, lower electricity prices, improving political stability, decreasing risk levels and vacancy rates, as well as higher GDP growth and net income. Except for after-tax income, all of the indicators, however, remained below the historical average level, meaning that they rebounded from bad to less worse levels for the business climate.

 <sup>6</sup> Netherlands score in Index of Economic Freedom - Tax burden. The component score is derived from three equally weighted quantitative sub-factors: The top marginal tax rate on individual and corporate income and the total tax burden as a percentage of GDP.
 7 Netherlands score in the Geopolitical Risk Index from Caldara & Iacoviello (2022): Measuring Geopolitical Risk.

<sup>8</sup> Netherlands score in Global Innovation Index - Investment, which is measured as a composite indicator of market capitalisation as GDP share and venture capital activity per billion in GDP.

Second, we can look at indicators that have had the most negative impact on the business climate score in Table 2.

Table 2 Lower population growth, worsening policy environment for businesses and rising inflation

Category	Subcategory	Indicator	2023 score	2024 score	<b>Difference</b> 2024-2023
Human Capital	Demographics	Population growth	2.34	0.57	-1.77
Politics, Regulation, Institutions and Society	Regulatory and policy environment	Netherlands score in Global Innovation Index - Business environment	-1.24	-2.74	-1.50
Macroeconomics	Macroeconomic trends	Inflation	0.63	-0.77	-1.40
Macroeconomics	Uncertainty	Netherlands score in the World Uncertainty Index	0.39	-0.97	-1.36
Infrastructure and Physical Space	Energy and environment	Netherlands score in Global Innovation Index - Environmental performance	-0.02	-1.19	-1.17
Politics, Regulation, Institutions and Society	Taxes	Netherlands score in the International Tax Competitiveness Index	-0.69	-1.59	-0.90
Politics, Regulation, Institutions and Society	Taxes	Netherlands score in the International Tax Competitiveness Index	-0.69	-1.59	-0.90
Politics, Regulation, Institutions and Society	Regulatory and policy environment	Netherlands score in Economic Policy Uncertainty Index	-0.70	-1.56	-0.86
Macroeconomics	Government debt and spending	Netherlands score in Index of Economic Freedom - Fiscal health	0.00	-0.65	-0.65
Human Capital	Labour productivity, shortages and costs	Unit labour cost	-1.97	-2.52	-0.55
Trade, Investment and Market Opportunities	Trade	Trade as % of GDP	1.44	1.03	-0.41

The top three worst impacts to the business climate score came from decreasing population growth, worsening policy environment for businesses<sup>9</sup> and rising inflation.

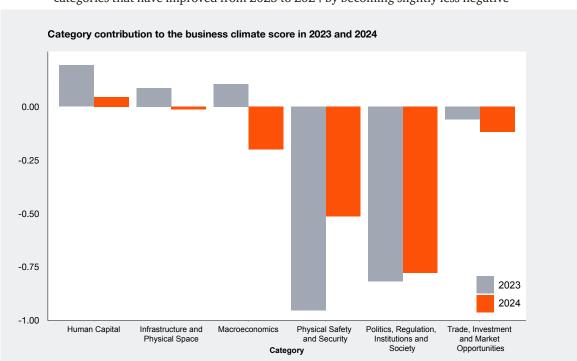
A striking negative factor in the 2024 business climate score is the decline in population growth. For many years, the Netherlands benefited from relatively strong population growth – driven in part by labour migration. That trend, however, is now reversing, which negatively impacts the business climate. A slower-growing population means fewer new entrants to the labour market, fewer consumers and reduced economic dynamism. Businesses are increasingly confronted with labour shortages, rising wage costs and limited room for expansion. At the same time, the ageing population is putting additional pressure on infrastructure and public services.

<sup>9</sup> Netherlands score in Global Innovation Index - Business environment, measured as a composite indicator of a survey measure about stable policy environment for doing business and perception score on entrepreneurial policies and culture.

While geopolitical risks decreased, both general and economic policy uncertainty increased. Similarly, tax competitiveness, environmental performance, fiscal health and trade as a share of GDP worsened, while unit labour costs increased. In terms of historical trends, only population growth and trade as a share of GDP remained above the historical average.

Note that due to a lack of recent data, we could not capture changes from 2023 to 2024 for 18 out of 65 indicators, as we used the latest available value as the value for 2024. See Appendix on pages 50-58 for more details.

Lastly, we aggregated all changes from 2023 to 2024 in categories in Figure 8.



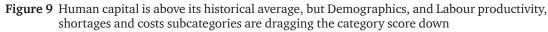
**Figure 8** Physical Safety and Security and Politics, Regulation, Institutions and Society are the only categories that have improved from 2023 to 2024 by becoming slightly less negative

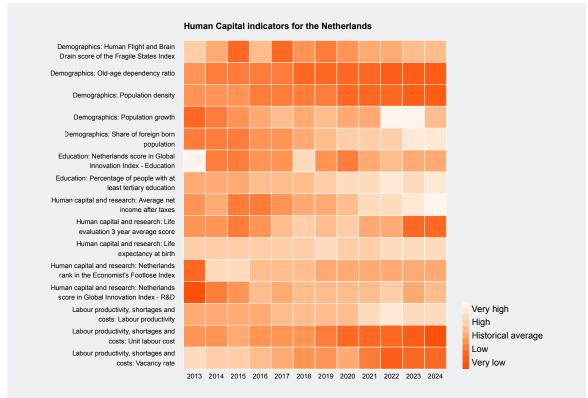
Out of the six categories, four have declined since 2023: **Human Capital, Infrastructure** and Physical Space, Macroeconomics and Trade, Investment and Market Opportunities. Two categories have improved slightly by becoming less negative: **Physical Safety and Security** and **Politics, Regulation, Institutions and Society**. However, gains in those two categories have not offset declines elsewhere, resulting in a lower overall score.

Next, we delve deeper into each of the categories of the business climate and explain the indicators used. In the Appendix on page 41, we have also included the full heatmap with all 65 indicators.

#### **Human Capital**

This category consists of five subcategories, which we will describe in the next section: **Demographics, Education, Human capital and research** and **Labour productivity**, **shortages and costs**. Figure 9 gives an overview of the subcategories and indicators within **Human Capital**. More information about the data for the indicators in this category is in the Appendix on pages 50-52.





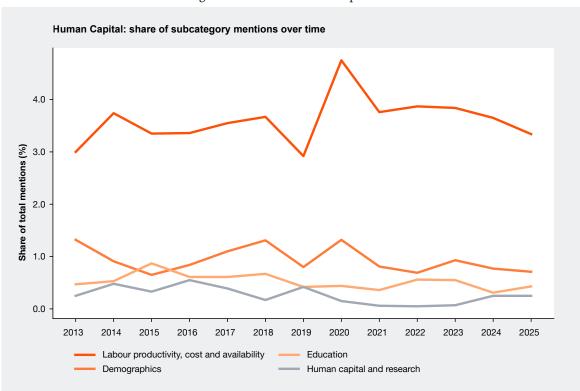
**Demographics** captures trends that are negative to the business climate, such as population ageing, brain drain and population density, and positive ones, such as population growth and openness to migration. The Dutch population was growing faster than the historical average level in recent years, with the share of foreign-born population rising and not many people leaving the Netherlands. At the same time, the population has been ageing, leading to an increase in population density and increasing strain on infrastructure and public services. Yet, the overcrowded infrastructure and public services are primarily due to a lack of long-term policies and underinvestment.

**Education** incorporates the quantity and quality of education in the current and upcoming working population. These indicators were lately on a positive trend, exceeding historical average values. However, in the coming years, the score might decline because of the budget cuts the Dutch government implemented in 2025 in the areas of education, knowledge and innovation.

Next, **Human capital and research** captures the expenditure and quality of research and education, the health of the population and the attractiveness of talent based on net income and opportunities for highly educated foreign talent, as well as subjective life satisfaction. Human capital and research indicators improved, with average net incomes, life expectancy and R&D performance rising since 2013. The Netherlands also became more attractive to foreign graduates over time. However, subjective life evaluation of the Dutch population significantly declined over the last two years.

Following that, the **Labour productivity, shortages and costs** subcategory captures labour productivity (level not growth rates), vacancy rates (a proxy of labour shortages) and the price of labour. Within this group of indicators, labour productivity was quite high but improving slowly. However, notable changes are in both labour shortages and labour costs, which became more of an issue, especially in the past three years.

Lastly, the news coverage analysis in Figure 10 shows that the four different subcategories of **Human Capital** have different levels of coverage.

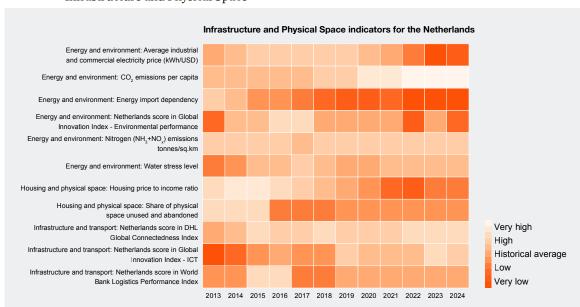


**Figure 10** Labour productivity, cost and availability is the most prominent subcategory of Human Capital in the Dutch news coverage with a Covid-19 related spike in 2020

The most prominent subcategory has been **Labour productivity, cost and availability**. This is not surprising, as the economic discourse about labour productivity in the Netherlands has been dominating the news over the last decade. The Netherlands is facing a severe labour shortage, exacerbated by its ageing society and potential restrictions on labour migrants, which is limiting labour supply. We have already written that **increasing labour productivity is the 'silver bullet'** to ensure continued economic growth in the future.

#### Infrastructure and Physical Space

This category consists of several subcategories, which we will describe here, namely **Energy and environment, Housing and physical space**, and **Infrastructure and transport**. Figure 11 gives an overview of the subcategories and indicators within **Infrastructure and Physical Space**. More information about the data for the indicators in this category is in the Appendix on pages 52-53.



**Figure 11** Environmental performance and Housing have been the worst performers within Infrastructure and Physical Space

**Energy and environment** capture the degree of decarbonisation and nitrogen-related pollution reduction, electricity prices, energy import dependency, the quality of the environment and environmental ecosystems, as well as water stress levels. Looking at the results, there was improvement (reduction) in CO<sub>2</sub> emissions per capita and nitrogen emissions per square kilometre over time, although not sufficiently fast to deal with the already saturated nitrogen levels. The space available to businesses is not determined solely by changes in emissions, but also by legal limits and how strictly these are enforced. In recent years, enforcement – particularly of nitrogen regulations – has become more stringent following court rulings. As a result, the business climate continues to be constrained by persistently high emission levels. However, these stricter enforced limits are not part of this heatmap.

For  $\mathrm{CO}_2$  emissions, even though they continued to decrease from 2023 to 2024, the decrease slowed down. In Energy import dependency rose significantly since the closure of the Groningen gas fields in 2014. Similarly, electricity prices spiked over the last three years. However, water stress levels remained relatively low.

<sup>10</sup> CBS (2022): Dutch nitrogen crisis explained.

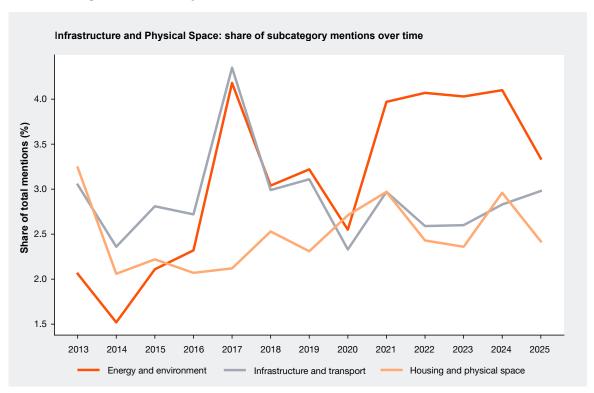
<sup>11</sup> CBS (2024): Decrease in greenhouse gas emissions levelled off in 2024.

**Housing and physical space** captures housing affordability by the housing price to income ratio. It shows that housing has become significantly less affordable in the last five years. Similarly, a lack of physical space for new developments remained an issue.

**Infrastructure and transport** subcategory tracks international connectivity and quality of the digital and physical infrastructure. Over the last years, both connectivity and infrastructure improved or stayed at a relatively good level.

Next, Figure 12 shows the news coverage of the three subcategories within Infrastructure and Physical Space.

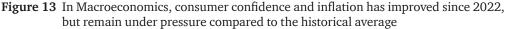
**Figure 12** Energy and environment news coverage spiked during the energy crisis in 2022-2024 while the Dutch housing crisis is increasingly mentioned over time following a strong decline after the peak of the housing crisis in 2013

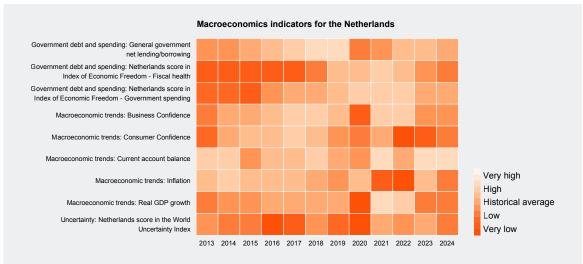


Over time, the three subcategories had varying degrees of news coverage. While the subcategory Housing decreased in coverage after the peak of the housing market crisis following the financial crisis in 2013, 12 it has been steadily increasing over time, indicating the worsening housing shortage during the sample period. Moreover, Figure 12 also shows the severe spike in the **Energy and environment** subcategory following Russia's illegal invasion of Ukraine that sparked an energy crisis in Europe and the Netherlands. In the 2014-2017 period, the subcategories **Energy and environment**, and **Infrastructure and transport** spiked, likely due to the initial introduction of the Dutch government's aim to phase out the gas production in the province of Groningen.

#### **Macroeconomics**

This category consists of the following subcategories – **Government debt and spending**, **Macroeconomic trends** and **Uncertainty**. Figure 13 gives an overview of the subcategories and indicators within **Macroeconomics**. More information about the data for the indicators in this category is in the Appendix on pages 53-54.





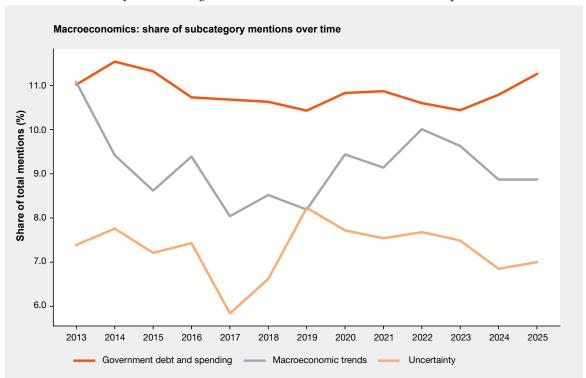
**Government debt and spending** capture the fiscal health of the economy (debt and deficit levels). The Dutch government was spending more around the Covid-19 pandemic, but recently spending returned to historical levels. In addition, the overall fiscal health improved since 2013 and remained relatively stable. However, a slight decline started in the last two years.

**Macroeconomic trends** incorporates measures of inflation, business and consumer confidence, current account balance and real GDP growth. The last three years were historically bad, with high inflation, low consumer confidence and relatively weak business confidence. Economic growth rebounded after the Covid-19 pandemic but remained below the pre-pandemic trend.

**Uncertainty** looks at general uncertainty using the World Uncertainty Index. The Dutch uncertainty measure in the index, after peaking in the 2016-2017 and 2019-2020 periods, diminished in 2023 and slightly rose again in 2024.

Figure 14 captures the news coverage for Macroeconomics.

**Figure 14** Macroeconomic trends has been more prevalent in the news since Covid-19, and 2025 ends Uncertainty's diminishing trend with the introduction of new US trade policies

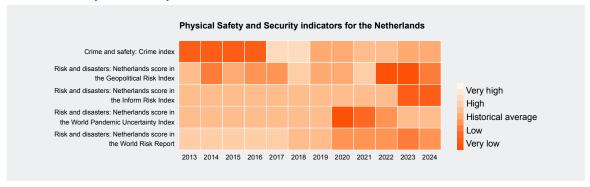


The media coverage of **Macroeconomics** mostly have focused on **Government debt and spending**, which has been experiencing an increase in coverage from 2023 following a steady decline, excluding a minor increase during Covid-19 pandemic in 2022, in the period after the peak of the Euro Crisis. Moreover, **Macroeconomic trends** have been covered increasingly following the Covid-19 pandemic and is due to the related increase in fiscal spending. While **Uncertainty** has steadily declined since it peaked in 2019, it has seen a minor uptick between 2024 and 2025.

#### **Physical Safety and Security**

This category consists of the following subcategories – **Crime and Safety**, and **Risk and Disasters**. Figure 15 gives an overview of the subcategories and indicators within **Physical Safety and Security**. More information about the data for the indicators in this category is in the Appendix on pages 54-55.

**Figure 15** Rising geopolitical and natural hazard risks have primarily negatively impacted Physical Safety and Security



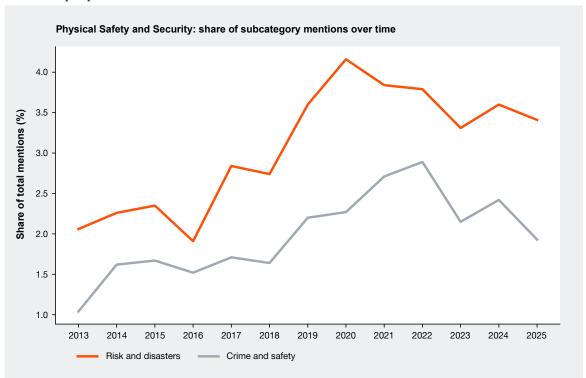
**Crime and safety** capture crime levels. This index shows that safety levels improved since 2016, indicating that the Netherlands remains a generally safe country with low crime rates.

**Risk and disasters** measure geopolitical risk, disaster, natural hazard, climate and pandemic risks. Climate and natural hazard risks and preparedness, measured by the Inform Risk Index and the World Risk Report, increased in the last two years. Similarly, the Geopolitical Risk Index was historically high for the Netherlands over the last three years, with a slight decline from 2023 to 2024.



Figure 16 captures the news coverage for Physical Safety and Security.

**Figure 16** Risk and disasters coverage spiked during Covid-19 with Crime and safety coverage decline to pre-pandemic levels in 2025

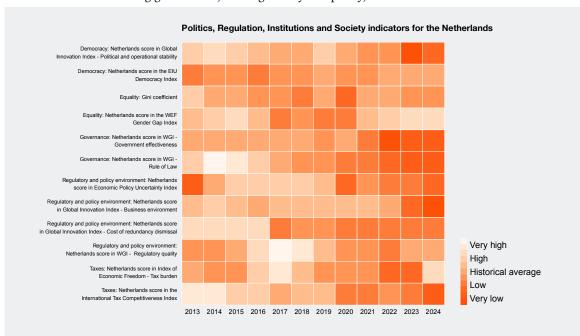


The spike in **Risk and disasters** coincided with the beginning of the Covid-19 pandemic in 2020 and, consequently, with the Dutch score in the World Pandemic Uncertainty Index in Figure 15. The FD coverage of Crime and safety reached its sample peak in 2022 and has since declined to pre-pandemic levels.



#### Politics, Regulation, Institutions and Society

This category consists of these subcategories - **Democracy**, **Equality**, **Governance**, **Regulatory and policy environment** and **Taxes**. Figure 17 gives an overview of the subcategories and indicators within **Politics**, **Regulation**, **Institutions and Society**. More information about the data for the indicators in this category is in the Appendix on pages 55-56.



**Figure 17** Concerns for the Netherlands in Politics, Regulation, Institutions and Society mainly come from worsening governance, and regulatory and policy, as well as the tax environment

The **Democracy** category measures the quality of democracy based on democratic rights and institutions and political and operational stability. First, the quality of Dutch democracy has consistently remained at high levels and has experienced little variation, with even slight improvement over the last three years compared to the historical average. However, political and operational stability worsened over the last three years, below the historical average.

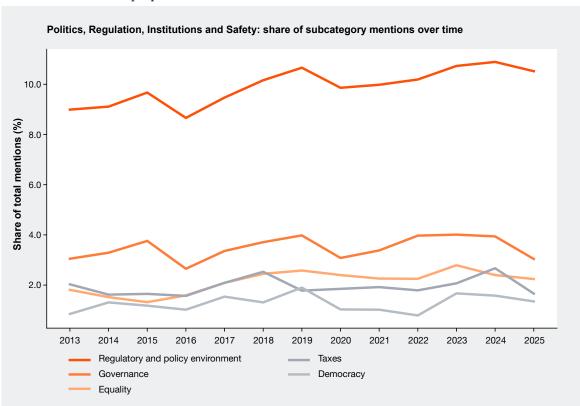
The **Equality** category looks at the level of income and gender inequality. Income inequality remained around the historical average levels. Similarly, the gender gap diminished slightly in the past few years.

Governance captures government effectiveness and the enforcement of the rule of law. While the Netherlands has historically performed very well in this area compared to other countries, recently the Dutch scores in terms of rule of law and government effectiveness indicators declined to historically low levels. The Netherlands still ranks quite high compared to other countries, but its score has declined over the past four years. The fact that the score remained high for a long time may indicate that Dutch businesses were less prepared for the recent decline in government effectiveness. As a result, the impact of this deterioration on the business climate could be greater than in countries with a similar level of government effectiveness, where businesses have already adapted to operating under those conditions.

Regulatory and Policy Environment indicators look at policy predictability, redundancy costs, business environment and quality of regulation. As stated in our recent Economic Policy Uncertainty Index publication, economic policy uncertainty has spiked in 2025. However, the Economic Policy Uncertainty Index in our data ends at 2024, therefore, it does not yet incorporate, for example, the economic uncertainty that the world has been experiencing in 2025, given US tariff measures. Nevertheless, economic policy uncertainty remained elevated, which is likely related to the deteriorating business environment and regulatory quality. In addition, the costs of redundancy dismissal have remained high over the past five years.

Lastly, the **Taxes** category measures tax competitiveness and effective tax rates. While the tax burden slightly improved from 2023 to 2024, the overall Dutch tax competitiveness declined significantly from 2023 to 2024. The likely reasons for this are the increase in capital gains and dividend tax rates, as well as the adoption of the OECD Pillar Two rules and the ongoing discussions related to the share buyback facility.

Figure 18 identifies the **Regulatory and policy environment** as the most covered subcategory in the **Politics, Regulation, Institutions and Society** category over the sample period covering 8 to 10% of all mentions.



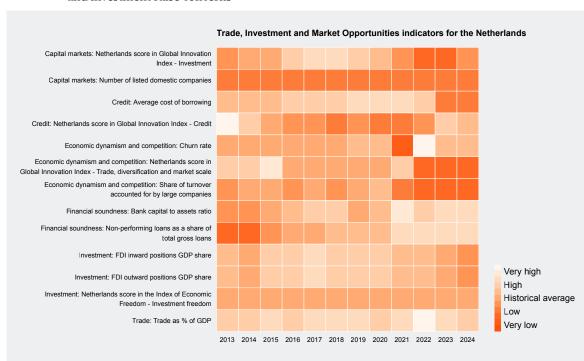
**Figure 18** The FD coverage of the Regulatory and policy environment has been increasingly dominant over the sample period

<sup>13</sup> This measure focuses more on economic policy uncertainty, while other uncertainty measures that we include, namely the World Uncertainty Index and the World Pandemic Uncertainty Index capture general and pandemic uncertainty, respectively.

The rest of the subcategories comprised between 0.5 and 4% of all mentions. Besides a steady increase in the subcategories **Regulatory and policy environment** and **Equality**, there is no clear trend in the subcategories visible. The increase in the **Equality** subcategory likely reflects the more dominant societal and political discourse about gender and income equality in the past decade.

#### Trade, Investment and Market Opportunities

This category consists of these subcategories - Capital markets, Credit, Economic dynamism and competition, Financial soundness, Investment and Trade. Figure 19 gives an overview of the subcategories and indicators within Trade, Investment and Market Opportunities. More information about the data for the indicators in this category is in the Appendix on pages 56-58.



**Figure 19** Within Trade, Investment and Market Opportunities, capital markets, economic dynamism and investment raise concerns

**Capital markets** captures the size of capital and venture capital markets in terms of total volume and the number of listed domestic companies. The performance of capital markets has worsened over the past four years, while the number of listed companies has constantly remained below the historical average since 2013.

**Credit** looks at the cost of borrowing and the ease of access to lending, and the volume of lending in the economy. Rising interest rates have made borrowing more expensive. The ease of lending and the loan share of GDP have slightly improved over the past three years.

**Economic dynamism and competition** measure the number of new firm entries and the degree of dominance of large firms, as measured by the rising share of turnover

accounted for by large companies, as well as weighted tariff rates, industry diversification and domestic market scale. New firm entries have boosted economic dynamism and competition, while the role of large companies has been increasing, negatively impacting competition. In addition, trade openness and market scale has decreased recently. The fact that our measure of economic dynamism currently includes only an indicator for firm entry, and none for the share of firms that exit or go bankrupt, presents an overly optimistic picture of the business climate. It is precisely in firm exits where the process of creative destruction in the Netherlands is faltering.

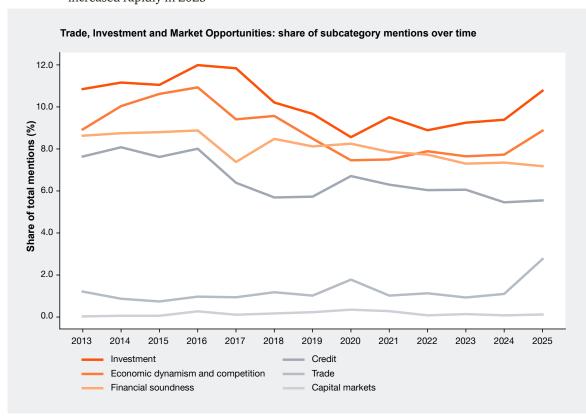
**Financial soundness** captures bank stability in terms of the level of equity and a healthy loan portfolio. Financial soundness has remained at good levels, with banks well-capitalised and the share of non-performing loans remaining low.

**Investment** includes total FDI inward and outward positions as the share of GDP and the ease of investing (for more context on these indicators see Appendix on page 58). FDI indicators have slightly worsened over the past three years. Investment freedom has remained at the same level since 2013.

**Trade** captures the importance of trade for the economy as a share of GDP. Since 2013, trade has played an increasing role in the Dutch economy compared to the historical average. However, the effects of increasing protectionism on this indicator are still uncertain.

Figure 20 shows the news coverage analysis for Trade, Investment and Market Opportunities.

**Figure 20** The FD coverage of Investment, Economic dynamism and competition, and Trade has increased rapidly in 2025



The most prevalent subcategories in the news coverage have been **Investment**, **Economic dynamism** and **competition**, **Financial soundness** and **Credit**. Each subcategory has covered from 6 to 12% of all mentions in the sample.

The business climate category **Trade**, **Investment**, **and Market Opportunities** has experienced the largest increase in media coverage of all categories in 2025. This is not surprising. Analyzing the development of its subcategories in Figure 20 reveals a clear link to recent US trade policy. Specifically, the subcategories **Investment**, **Economic dynamism and competition** and **Trade** – all directly affected by U.S. trade measures – received increasing media attention in 2025. This suggests that current debates on the Dutch business climate are shaped, at least in part, by shifts in US trade policy and their consequences for trade, investment and economic activity in the Netherlands.



Belaium

2024

# The international business climate heatmap

#### Comparison with nine countries over time

Multinationals base their location and investment decisions on a comparison of conditions in different countries. We therefore collected data for the same 65 indicators for nine other countries besides the Netherlands: Belgium, Denmark, France, Germany, Ireland, Luxembourg, Switzerland, the UK and the US, focusing on the 2013 to 2024 period. Compared to the previous edition of the Business Climate Heatmap, we have also included Ireland and the US and improved indicator data coverage for all countries this year.

Each indicator was compared to the minimum and maximum values from the combined data across ten countries, adjusting the indicators to a scale from 0 (sample minimum) to 1 (sample maximum). For more details, see the Appendix on page 49.

First, we compare in Figure 21 how the Dutch relative position over time has performed against that of the other countries in the sample. We adjust the relative scores for all countries so that the value for the Netherlands in 2013=100. Hence, we can measure how countries, including the Netherlands, have performed against each other, taking the Dutch score in 2013 as a benchmark.

Relative business climate score comparison 2013-2024

Switzerland

Switzerland

Luxembourg

Denmark

Ireland

Sample Average

UK

Germany

France

US

Figure 21 In 2024, the relative Dutch business climate score has worsened compared to 2023

Each line represents the average relative score of the business climate for each country. This score is based on country-specific indicators that we have made comparable to each other.

2019

Year

2020

2021

2022

2023

The Dutch value in 2013 is equal to 100

2014

2015

2016

2013

Back in 2013, the Dutch economy was still in the aftermath of the 2008 financial crisis, which impacted the economy much longer than elsewhere in Northwestern Europe. Although the Dutch economy is in better shape now, the decline of the business climate has continued from 2023 to 2024. We can see that the Netherlands, in relative terms, in 2024 is slightly below where it was in 2013. Table 3 summarises the relative changes for all countries in the 2013-2024 period.

**Table 3** Since 2013 only Ireland, Denmark and Switzerland have improved their relative business climate score

Country	Rank in 2013	Rank in 2024	Change in relative rank	Change in relative score
Switzerland	1	1	0	+0.8
Luxembourg	2	2	0	-0.3
Denmark	3	3	0	+2.2
Netherlands	4	5	-1	-5.9
Ireland	5	4	+1	+1.3
UK	6	6	0	-10.6
Germany	7	7	0	-7.7
Belgium	8	10	-2	-10.3
US	9	9	0	-8.0
France	10	8	+2	-2.8

There are two angles to compare the business climate of the different countries – by looking at the change in their relative rank and score.

From 2013 to 2024 the steepest declines in the relative business climate scores have happened in the UK (-10.6), Belgium (-10.3), Germany (-7.7), the US (-8.0), the Netherlands (-5.9), France (-2.8) and Luxembourg (-0.3). However, when looking at the ranks, Belgium declined in relative terms from eighth to tenth place (-2), France improved from tenth to eight (+2) and the Netherlands from fourth to fifth place. Other countries remained at the same position as in 2013. Among the countries that have improved their relative scores, even though Switzerland (+0.8) and Denmark (+2.2) increased their scores slightly, these countries kept the same position. Ireland improved its score (+1.3) and climbed from fifth to fourth place. Finally, while the US remained ninth and France climbed from tenth to eighth, both countries lost relative scores.

Note that the relative positions of Luxembourg and Denmark have changed slightly compared to last year's Business Climate Heatmap publication as we have updated the data, added five new indicators and improved data and indicator coverage for all countries.

These results largely depend on the choice of comparison countries, even though we have selected peers to the Netherlands in the business and investment climate. The business climate in many of the countries in our sample has been facing major country-specific issues – such as Brexit for the UK or the reliance on Russian gas for Germany.

Nevertheless, both the comparisons over time and internationally show that the business climate in the Netherlands has been on a downward trend since 2018. Other countries, such as Ireland, Denmark and Switzerland, have managed to improve their overall business climate.

## Dutch relative position by category over time

80 60 Last, we also look at how the Netherlands has compared against other countries in each category of our Business Climate Heatmap in Figure 22. We adjust the relative score by making an index with the value for the Netherlands in 2013=100 for each category.



Figure 22 In all categories, the Netherlands has remained among the top five countries, except for Human Capital

Compared to other countries in our sample, the Netherlands has stayed in the top five countries in all categories, except for **Human Capital**. In this category, the Netherlands has largely kept its low position, and since 2013, the Netherlands has managed to only exceed Belgium.

In **Infrastructure and Physical Space**, the Netherlands was among the top three countries in 2014. However, since then, the Netherlands has dropped to the fourth place.

Within **Macroeconomics**, the Netherlands has remained in the fifth place, while briefly scoring first in 2023. This has been the most volatile category for all countries because of the Covid-19 shock.

The relative position of the Netherlands in Physical Safety and Security has remained stable at fourth place, one higher than where it was in 2013.

In Politics, Regulation, Institutions and Society, the Netherlands started fourth in 2013 and dropped to fifth in 2024, lagging behind Switzerland, Ireland, Denmark and Luxembourg.

Lastly, in the Trade, Investment and Market Opportunities category, the Netherlands was in the fifth position in 2013 and remained there in 2024.

## **Netherlands comparison with Singapore**

To extend the analysis, we separately compare the Netherlands business climate with Singapore as it has insufficient data coverage for a complete comparison. Therefore, we only compare Singapore and Netherlands with the available indicators for Singapore (see the Appendix on page 59 for the indicators used).

Although Singapore is not a part of the OECD, it is one of the most developed countries in the world and shares some crucial characteristics with the Netherlands - both have limited physical space and serve as global trade hubs, home to some of the world's busiest ports. Looking at the score in the business climate, Singapore has performed better every year and has more than tripled the gap with the Netherlands since 2013.

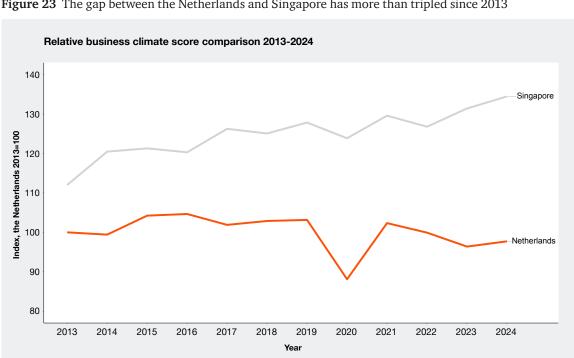


Figure 23 The gap between the Netherlands and Singapore has more than tripled since 2013

Each line represents the average relative score of the business climate for each country. This score is based on country-specific indicators that we have made comparable to each other. The Dutch value in 2013 is equal to 100.

Taking a closer look for 2024, Singapore scores better in all categories (Figure 24).

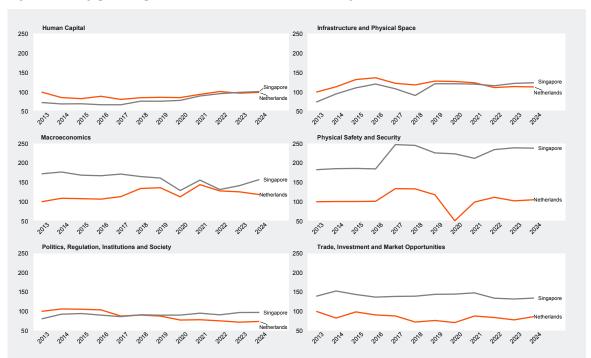


Figure 24 Singapore outperformed the Netherlands in all categories in 2024

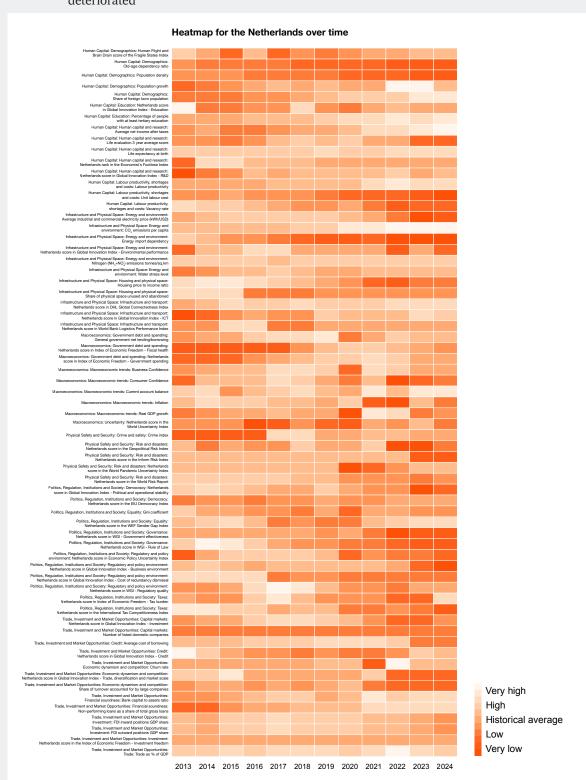
The **Physical Safety and Security** category shows the largest difference, with Singapore scoring significantly better in crime and disaster risk. As for other categories, the Netherlands had a historically higher score in **Human Capital, Infrastructure and Physical Space**, and **Politics, Regulation, Institutions and Society** until recently, as since then it has started trailing Singapore.

# **Appendix**

## **Extended results**

## Full Dutch business climate heatmap over time with 65 indicators

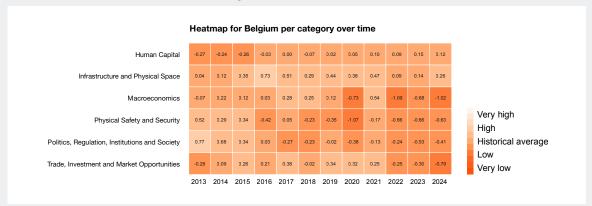
**Figure 25** After the peak in 2018, when the heatmap was most positive, many indicators have deteriorated



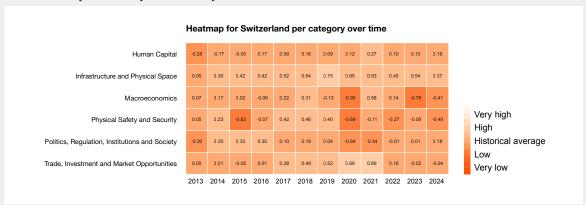
## Heatmaps over time for the ten countries in our sample

The figures here only compare the country to itself over time (like the Dutch business climate heatmap over time) and not against peers.

**Figure 26** Only two out of six categories for Belgium were above the historical average in 2024



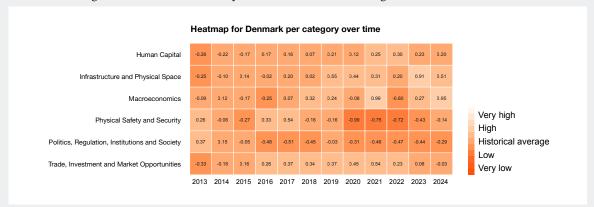
**Figure 27** For Switzerland, the biggest decreases have taken place in Macroeconomics, and Physical Safety and Security since 2018



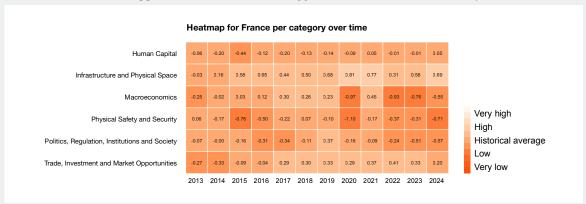
**Figure 28** For Germany, Macroeconomics, and Politics, Regulation, Institutions and Society are the two categories that negatively stand out over the past few years



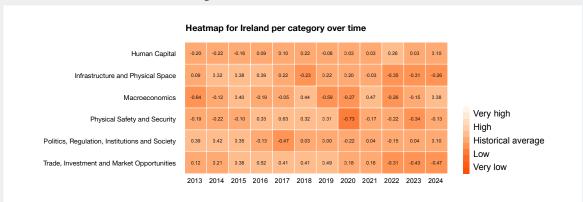
**Figure 29** For Denmark, Infrastructure and Physical Space and Macroeconomics are two categories that were noticeably above the historical average in 2024



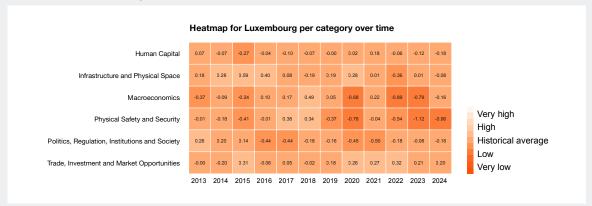
**Figure 30** For France, Macroeconomics, Physical Safety and Security, and Trade, Investment and Market Opportunities have seen the biggest decreases over the last few years



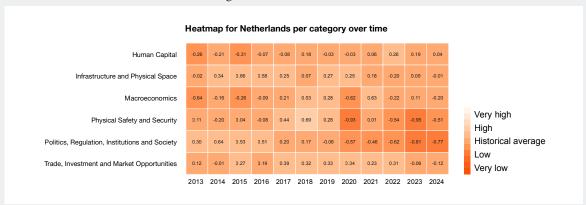
**Figure 31** For Ireland, three out six categories remain below the historical average in 2024



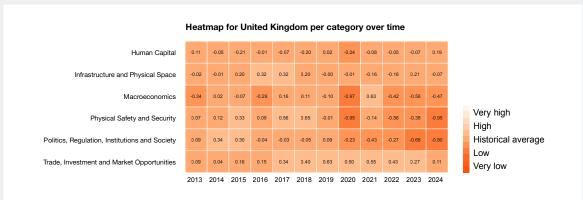
**Figure 32** For Luxembourg, Physical Safety and Security has noticeably deteriorated since 2018



**Figure 33** For the Netherlands, five out of six categories remain below historical average levels



**Figure 34** For the UK, the biggest decreases lately have taken place in Macroeconomics, Physical Safety and Security, and Politics, Regulation, Institutions and Society



**Figure 35** For the US, Human Capital, Macroeconomics, and Politics, Regulation, Institutions and Society remained below the historical average levels in 2024

	114		I I.		01-1-								
Heatmap for United States per category over time													
Human Capital	0.43	0.26	-0.04	-0.10	-0.22	-0.38	-0.37	-0.40	-0.61	-0.42	-0.49	-0.40	
Infrastructure and Physical Space	0.15	0.29	D.47	0.66	0.52	0.40	D.46	0.50	0.39	0.09	0.15	0.22	
Macroeconomics	0.08	0.36	D.31	0.23	0.54	0.62	0.03	-0.51	D.11	-0.59	-0.81	-0.69	
Physical Safety and Security	0.30	0.21	0.12	0.14	-0.17	-0.21	0.21	-0.61	0.45	-0.14	0.16	0.18	Very high High Historical average
Politics, Regulation, Institutions and Society	-0.15	-0.02	-0.19	-0.26	-0.17	-0.29	-0.11	-0.74	-0.39	-0.39	-0.81	-0.44	
Trade, Investment and Market Opportunities	0.18	0.10	0.03	0.23	0.37	0.17	0.32	0.16	0.32	0.15	0.10	0.02	Low Very low
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	



## Methodology

## The Dutch business climate heatmap over time

The 65 indicators in our heatmap come from diverse datasets, each with distinct value ranges that are not directly comparable (such as inflation versus population growth). To facilitate meaningful comparisons across these indicators, we apply standardisation using Z-scores. To compute the Z-scores for each indicator, we subtract from a given observation in a year (X) the historical average of the series, with as many years as there are available from 1990, and then divide this value by the historical standard deviation.

$$Z = \frac{X - \overline{X}}{S}$$

The Z-scores are aligned such that 0 is the historical average of the series, which we colour yellow. When an indicator is above (or below) its historical average, measured by 0.5 standard deviations, a colour tone changes to a progressively darker green (or red) colour. The colour grading goes from 3 (dark green) to -3 (dark red) standard deviations above or below the historical average, respectively. In addition, not all data for indicators was available for each year. When that was the case, we used the latest available year's value.

Moreover, for some indicators, an increase in the value would correspond to a negative impact on the business climate (for example, inflation). For those indicators, after standartisation, we adjusted their value by multiplying by -1, so that the direction of increase in an indicator always corresponds to a positive business climate impact.

Additionally, this year we slightly adjusted how we calculate the overall business climate heatmap score in Figure 3. We did not take the average of all 65 indicators, but we calculated the average score for each of the six categories and then took the average of those scores so that each category is equally weighted in the final score. However, with both methods, the results do not change substantially (Figure 36).

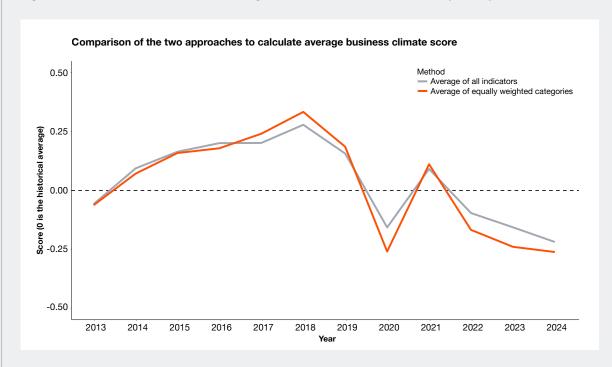


Figure 36 Both methods to calculate average business climate score match very closely

Last, when calculating changes in indicator scores from 2023 to 2024 in Tables 1 and 2 and Figure 8, we only show the ones where we had different data from 2023 to 2024. For some indicators (see the Appendix on pages 50-58), due to a lack of more recent data, we had to use data from 2023 or before for 2024.

## The business climate news coverage analysis

#### **FD** article extraction

Factiva is the data source for the news articles. We only use Dutch articles from the Financieele Dagblad (FD) from 01.01.2013 until 22.07.2025. We use the following categories to limit the scope of articles:

- 1. Main Category: Company-related news (ccat)
- 2. Included Topics:
  - Corporate & Business: Ea Corporate Crime/Legal Action (C12), Regulation/ Government Policy (C13), Financial Performance (C15), Corporate Funding (C17), Research/Development (C23), Anti-Competition Issues (C34), Staff/Personnel (C42), Business Resilience/Continuity (CBREC), Corporate Financial Difficulty (CCFD), Corporate Due Diligence (CDUED), Emissions (CEMIS), Supply Chain (CSCM), Workplace Diversity (CWKDIV)
  - 2. Economics: Economic Performance/Indicators (E11), Consumer Sentiment Figures (E1105), Business/Economic Sentiment Data (E1117), Government Finance (E21), Trade/External Payments (E51), Capital Movements/Invisible Trade (E511)
  - 3. General News: Crime/Legal Action (GCRIM), Demographics (GDEMOG), Geological Disasters (GEARTH), Education (GEDU), Natural Environment (GENV), Housing Issues (GHOUSE), Human Rights/Civil Liberties (GHUM), Domestic Politics (GPOL), Transport (GTRANS)

4. Governance: Corporate regulation (rcogov)

3. Filters

1. Word count: Articles > 750 words

2. Exclusions: Headlines containing 'coronanieuws', 'live', 'damrak', 'aex', 'nieuws coronavirus', or 'boortoren'

#### News coverage analysis

To measure the news coverage of each business climate subcategory in the Netherlands over time, we employ a bottom-up methodology. In detail, we first define a list of keywords per subcategory that are mutually exclusive and completely exhaustive (MECE principle). Based on this keyword list, we use a large language model (LLM) – Chat.gpt.4o-mini – to flag each keyword each news article covers. As each keyword is linked to one subcategory and each subcategory to one category, we can trace the mentions of the subcategories and categories over time by tracking the keywords mentioned in each article. Due to the use of an LLM, we can track not only the keyword itself but also flag words that are synonymous with the keyword itself.

Moreover, each article can cover multiple keywords. This allows one article to cover (1) multiple subcategories and (2) each category multiple times by mentioning different subcategories of that category. In such cases, we count each subcategory as an additional mention for its category. This means that the category mentions per article theoretically range from 0 to 23, the sum of all subcategories.

The subcategory graphs, specifically Figures 7, 10, 12, 14, 16, 18 and 20, illustrate the total mentions of each subcategory as a share of total subcategory mentions that year. This is done by dividing the sum of each subcategory's annual mention by the total mentions per year.

In Figure 6, we compare the relative prevalence of the different categories over time. To account for differences in the count of subcategories per category, we normalise the share of mentions. The method is summarised below:

1. For each category C, we calculate the normalised mentions, adjusting the category-specific mentions by their respective number of subcategories accounting for the difference in potential category mentions per article:

Normalized mentions<sub>C, year</sub> = 
$$\frac{\text{Mentions}_{C, year}}{\text{Subcategory count}_{C}}$$

2. For each year, we calculate the sum of normalised mentions across all categories:

Total normalized mentions<sub>year</sub> = 
$$\sum_{\text{all categories}}$$
 Normalized mentions<sub>C, year</sub>

3. For each category, we calculate its annual share using the adjusted annual total:

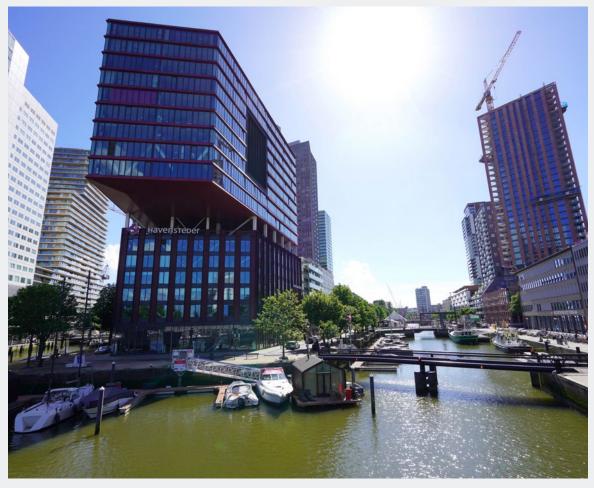
$$Category\ share_{C,\ year} = \ (\frac{Normalized\ mentions_{C,\ year}}{Total\ normalized\ mentions_{year}}) \times 100$$

## The international business climate heatmap

To compare the Netherlands to other countries, we did the following normalisation, in similiar manner as in a study by the OECD.<sup>14</sup> For each indicator, we pooled the data for all countries for this indicator to obtain the historical minimum and maximum in the sample for as long of a series as possible based on data availability in the 1990-2024 period. Then we normalised each indicator for each country according to this formula, obtaining a score between 0 and 1 for all observations.

$$x = \frac{(x - Min(x))}{(Max(x) - Min(x))}$$

For comparisons across countries, either on average or per category, we created a country-level score by calculating the average score per category and then using equal weights for each category, obtaining a total score as the average of category scores. From those scores, we created an index rescaling all the data so that the value for the Netherlands in 2013 would equal 100.



14 OECD (2019): Measuring and assessing talent attractiveness in OECD countries.

#### Data

For all indicators for all countries, we use the same set of 65 indicators, as there is data available to some degree from the 2013 to 2024 period. When there are data gaps, we fill in the missing year's data for a given indicator with the next available data point or the previous year's data.

### Indicator changes

In this year's edition we added seven and removed two indicators. For some indicators we also changed the data sources to have a better data and country coverage.

Indicators added (indicator (category: subcategory)):

- Human Flight and Brain Drain score of the Fragile States Index (Human Capital: Demographics)
- Share of foreign born population (Human Capital: Demographics)
- Life evaluation 3 year average score (Human Capital: Human capital and research)
- Netherlands rank in the Economist's Footlose Index (Human Capital: Human capital and research)
- Average industrial and commercial electricity price (kWh/USD) (Infrastructure and Physical Space: Energy and environment)
- Energy import dependency (Infrastructure and Physical Space: Energy and environment)
- Share of physical space unused and abandoned (Infrastructure and Physical Space: Housing and physical space)

#### Indicators removed (indicator (category: subcategory)):

- Market cap of domestic listed companies (Trade, Investment and Market Opportunities: Capital markets) was removed due to data coverage issues.
- Homicides per 100,000 inhabitants and thefts per 100,000 inhabitants (Physical Safety and Security: Crime and safety), both indicators were merged into one Crime index.

#### Data scope, sources and adjustments from last year

Here is an overview of the sources and data for each indicator and the data imputations that we performed if necessary.

#### 1. Human Capital

## - Demographics:

- Human Flight and Brain Drain score of the Fragile States Index (Fragile States Index, annual data, 2006-2023). Data for 2024 was unavailable and was replaced with 2023 data for all countries. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- Old-age dependency ratio (World Bank, annual data, 1990-2024). This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.

- Population density (Our World in Data, annual data, 1990-2024). This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- Population growth (OECD, annual data, 1990-2024).
- Share of foreign-born population (OECD, annual data, 1995-2023). Data for 2020, 2022, 2023 and 2024 was unavailable and was replaced with 2021 data for the US and the UK. Data for 2023 and 2024 was unavailable and was eplaced with 2022 data for Ireland. Data for 2024 was unavailable and was replaced with 2023 data for the other countries.

#### - Education:

- Global Innovation Index Education (Global Innovation Index, annual data, 2013-2024). This indicator includes expenditure on education, government expenditure on education, school life expectancy in years, pupil-teacher ratio and PISA scores in reading, maths and science.
- Percentage of adult population with at least tertiary education (OECD, annual data, 2000-2024). Data for 2022 and 2024 was unavailable, and it was replaced with 2023 data for the UK. Data for the US was taken from BMI (1990-2024).

#### - Human capital and research:

- Average net income after taxes (BMI, annual data). Data coverage: Netherlands
   2005-2024; Belgium and Ireland 2000-2024; France 2010-2024; Germany, the UK and
   Denmark 2000-2024; Luxembourg and Switzerland 2006-2024; and the US 1996-2024.
- Life evaluation 3-year average score (World Happiness Report, annual data, 2012-2024). Data for 2013 was unavailable, and it was replaced with 2014 data for all countries.
- Life expectancy at birth (United Nations, annual data, 1990-2024).
- The Economist's Footloose index (The Economist, annual data). Data coverage: based on the original source, data is only available for the top 30 countries in selected years from 2011 to 2024. If a country is outside of the top 30, we assign it rank 31. We performed this modification for Belgium (2010-2015) and Luxembourg (2010-2024). The same rank is used for 2011-2013; 2014-15; 2016-2018; and 2022-2024. Data for 2019-2021 unavailable and replaced with 2022-2024 rank. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- Global Innovation Index R&D (Global Innovation Index, annual data, 2013-2024). This indicator includes researchers/FTE per million inhabitants, gross expenditure on R&D, the top three firms' average R&D expenditure, and the QS University average ranking of the top three universities.

#### - Labour productivity, shortages and costs:

- Labour productivity (International Labour Organization (ILO), annual data, 2005-2024). ILO modelled estimates of output per hour worked in constant 2021 international \$ at PPP.
- Unit labour costs (OECD, quarterly data, 1996-2024). This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- Vacancy rate (Eurostat, annual data). Defined as number of job vacancies / (number of occupied posts + number of job vacancies) \* 100 for industries B-S (B-N for Denmark

due to data gaps). Data coverage: Germany, Ireland, Luxembourg, Netherlands, Switzerland 2008-2024; Belgium, Denmark 2010-2024; France 2012-2024. Data for the UK was taken from ONS national statistics as bimonthly data of vacancies per 100 employee jobs (B-S industries) from April 2001 to January 2025. For the US vacancy rate calculated with the same formula as in the Eurostat data using OECD data of unfilled vacancies and FRED data of all employees of annual data from 2001 to 2024.

## 2. Infrastructure and Physical Space

#### - Energy and environment:

- Average industrial and commercial electricity price (kWh/USD) (BMI, annual data). Data coverage: Luxembourg, the Netherlands, the UK 2007-2024; Belgium, Denmark, France, Germany and Ireland 2008-2024; and the US 2001-2024. Data for Switzerland until 2019 was taken from the World Bank (Price of electricity (US cents per kWh), annual data, 2014-2019). Data for 2013 was unavailable and was replaced with 2014 and data for 2020 and 2021 was unavailable and was replaced with 2022 data for Switzerland. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- CO<sub>2</sub> emissions per capita (Our World in Data, annual data, 1991-2023). Data for 2024 was unavailable and was replaced with 2023 data.
- Energy import dependency (World Bank, annual data, 1990-2023). Energy imports, net (% of energy use).
- Global Innovation Index Environmental performance (Global Innovation Index, annual data, 2013-2023). This indicator ranks countries on different categories covering environmental health and ecosystem vitality. Yale University Environmental Performance Index, on which the Global Innovation Index - Environmental performance data is based, was used for data for 2024.
- Nitrogen (NH<sub>3</sub>+NO<sub>x</sub>) emissions tonnes/sq. km. Annual nitrogen emissions data (for both NH<sub>3</sub> and NO<sub>x</sub>) taken from the OECD from 2000 to 2021 for all countries, except for Ireland from 2008 to 2021. For all countries, 2021 data was used for 2022, 2023 and 2024 values. The surface area data was taken from the World Bank for the respective period. Compared to last year's edition, this year we added data not only on NOx but also NH<sub>3</sub> emissions.
- Water stress level (FAO, level of water stress: freshwater withdrawal as a proportion of available freshwater resources, annual data, 2000-2021). Data for 2022, 2023 and 2024 was unavailable and was replaced with 2021 data for all countries. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.

#### - Housing and physical space:

- Compared to last year's edition, this year this category is called 'Housing and physical space' instead of 'Housing'.
- Housing price to income ratio (OECD, annual data, index 2015=100). Data coverage: 2003-2024 data for all countries, except for Luxembourg 2007-2024 data. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.

• Share of physical space unused and abandoned (Eurostat Land Use and Land Cover Survey (LUCAS)). The indicator measures unused and abandoned areas as a share of total area. Data coverage: LUCAS survey data was available only for 2012, 2015, 2018 and 2022 for all countries, except for Switzerland and the US. For the UK, LUCAS data was available for 2012, 2015 and 2018. For Switzerland, only the 2018 value was available and was used for all years from the Swiss Federal Statistical Office, measuring the share of unproductive areas. For the US data available for 2012 and 2017 and taken from the USDA survey, which estimates miscellaneous or other areas as a share of total area. The 2012 value was used for the period up to 2016, and the 2017 value was used for all subsequent years. For the UK and all other countries with LUCAS data, the value from the most recent survey year was carried forward to fill the gaps.

#### - Infrastructure and transport:

- DHL Global Connectedness Index (DHL, annual data, 2001-2022). 2022 data was used for 2023 and 2024 values.
- Global Innovation Index ICT (Global Innovation Index, annual data, 2013-2024). It measures ICT access, use, government's online services and e-participation.
- World Bank Logistics Performance Index (World Bank, annual data). The indicator was available for 2007, 2010, 2012, 2014, 2016, 2018 and 2023. Data for 2013 was unavailable and was replaced with 2014 data for all countries. Data for 2015 was unavailable and was replaced with 2016 data for all countries. Data for 2017-2022 was unavailable and was replaced with 2018 data for all countries. Data for 2019-2022 was unavailable and was replaced with 2023 data for all countries. Data for 2024 was unavailable and was replaced with 2023 data for all countries.

## 3. Macroeconomics

#### - Government debt and spending:

- General government net lending/borrowing (International Monetary Fund, annual data). Data coverage: 1990-2024 for all countries, except for Ireland, Luxembourg and the US. For Ireland and Luxembourg, the data was available from 1995 to 2024, and for the US, from 2001 to 2024.
- Index of Economic Freedom Fiscal health (The Heritage Foundation, annual data, 2017-2024). The score for the fiscal health component is based on two sub-factors, which are weighted as follows in calculating the overall component score: average deficits as a percentage of GDP for the most recent three years (80% of score) and debt as a percentage of GDP (20% of score). Data for 2013, 2014, 2015 and 2016 was unavailable and was replaced with 2017 data for all countries.
- Index of Economic Freedom Government spending (The Heritage Foundation, annual data, 2013-2024). The government spending component captures the burden imposed by government expenditures, which includes consumption by the state and all transfer payments related to various entitlement programs. The Index does not identify an optimal level of government spending. The ideal level will vary from country to country, depending on factors that range from culture to geography to level of economic development.

#### - Macroeconomic trends:

- Business confidence (OECD, annual data, 1990-2024). This indicator replaces last year's measure, 'Economic sentiment', which was obtained from the European Commission's survey data.
- Consumer confidence (OECD, annual data, 1990-2024). This indicator replaces last year's measure, 'consumer sentiment', which was obtained from the European Commission's survey data.
- Inflation (OECD, annual data). Data coverage: 1990-2024 for all countries, except for Germany (1992-2024) and Ireland (1996-2024). This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- Real GDP growth (International Monetary Fund, annual data, 1990-2024).

#### - Uncertainty:

World Uncertainty Index (World Uncertainty Index, quarterly data 1990-2024). Data
was missing for Luxembourg, so an average of the World Uncertainty Index scores of
the nearby countries – Belgium, France, Germany and the Netherlands – was used. This
indicator was multiplied by -1 so that an increase would mean a positive business climate
impact.

## 4. Physical Safety and Security

#### - Crime and safety:

• Crime vulnerability index (BMI, annual data, 2015-2024). Assesses the threat of crime against indviduals and the qualities of the national police force. Data for all countries for 2013 and 2014 imputed with 2015 value. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.

#### - Risk and disasters:

- Geopolitical Risk Index (Federal Reserve Bank of New York, monthly data, January 1990 to December 2024). Measures adverse geopolitical events and associated risks based on a tally of newspaper articles covering geopolitical tensions and examines their evolution and economic effects since 1900. Data was missing for Luxembourg, so an average of the Geopolitical Risk Index scores of the nearby countries Belgium, France, Germany and the Netherlands was used. Data was missing for Ireland, so it was replaced with data from the UK for the full sample period. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- Inform Risk Index (INFORM, annual data, 2015-2023). The INFORM risk index identifies countries at risk from humanitarian crises and disasters that could overwhelm national response capacity. It is made up of three dimensions hazards and exposure, vulnerability and lack of coping capacity. Data for 2013-2015 unavailable and replaced with 2016 data for all countries. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- World Pandemic Uncertainty Index (World Uncertainty Index Pandemic Uncertainty, monthly data, January 1996 to December 2024). The World Pandemic Uncertainty

Index is constructed by counting the number of times uncertainty is mentioned within a proximity to a word related to pandemics in the Economist Intelligence Unit (EIU) country reports. Data was missing for Luxembourg, so an average of the World Pandemic Uncertainty Index scores of the nearby countries – Belgium, France, Germany and the Netherlands – was used. For the Netherlands, data adjusted so that the score for 2023 and 2024 is 0 to be aligned with trends in other countries. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.

• World Risk Report (World Risk Report, annual data, 2000-2024). The World Risk Report indicates the disaster risk from extreme natural events and negative climate change impacts. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.

## 5. Politics, Regulation, Institutions and Society

#### - Democracy:

- EIU Democracy Index (Economist Intelligence Unit, annual data, 2006-2024).
- Global Innovation Index Political and Operational Stability (Global Innovation Index, annual data, 2013-2024). Index that measures the likelihood and severity of political, legal, operational or security risks affecting business operations. In 2023 and 2024 versions of the Global Innovation Index it is renamed 'Operational stability for businesses'.

#### - Equality:

- Gini coefficient (BMI, annual data). Data coverage: 1995-2024 for all countries, except for Denmark, Switzerland and the US. Data for Denmark 2003-2024, Switzerland 2007-2024 and the US 1990-2024. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- WEF Global Gender Gap Index (World Economic Forum, annual data, 2006-2024). Data for 2019 unavailable and replaced with 2020 data for all countries.

#### - Governance:

- WGI Government effectiveness (World Bank, annual data, 1996-2023). Data missing for 1997, 1999, 2001 and 2024 for all countries and replaced with the latest value.
- WGI Rule of Law (World Bank, annual data, 1996-2023). Data missing for 1997, 1999, 2001 and 2024 for all countries and replaced with the latest value. This indicator replaces last year's 'WJP Rule of Law Index'.

#### - Regulatory and policy environment:

• Economic Policy Uncertainty Index (Economic Policy Uncertainty Index, monthly data). Data coverage: France, Switzerland and the US 1990-2024, Belgium 2000-2024, Germany 1993-2024 and the UK 1997-2024. Denmark 1991-2021, data Sweden's data was used to impute gaps from 2022 to 2024, adjusted by the ratio of differences in 2021 value in Denmark's vs. Sweden's EPU scores to bring the indices to the same level. Dutch data was available for the 2003-2020 period. From 2021 the data from PwC's Economic Policy Uncertainty Index publication was used with similar modification as

- for Denmark. Data was missing for Luxembourg, so an average of the Economic Policy Uncertainty Index scores of the nearby countries Belgium, France, Germany and the Netherlands was used. For international comparisons, all indices where standardised at the individual country level. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- Global Innovation Index Business environment (Global Innovation Index, annual data, 2013-2024). It uses a survey measure of the extent to which governments ensure a stable policy environment for doing business and average perception scores (five-year average) of experts on entrepreneurial policies and entrepreneurial culture. We renamed last year's indicator 'Global Innovation Index Regulatory burden' to 'Global Innovation Index Business environment' this year, as it was the same indicator, to better conceptually capture the underlying data.
- Global Innovation Index Cost of redundancy dismissal (Global Innovation Index, annual data, 2013-2022). Data for 2023 and 2024 was unavailable and was replaced with 2022 data for all countries.
- WGI Regulatory quality (World Bank, annual data, 1996-2023). Data missing for 1997, 1999, 2001 and 2024 for all countries and replaced with the latest value. This indicator replaces last year's 'WJP Rule of Law Index'.

#### - Taxes:

- Index of Economic Freedom Tax burden (The Heritage Foundation, annual data, 2013-2024) The score is derived from three equally weighted quantitative sub-factors: The top marginal tax rate on individual income, the top marginal tax rate on corporate income, and the total tax burden as a percentage of GDP.
- International Tax Competitiveness Index (Tax Foundation, annual data, 2014-2024). Data for 2013 not available and replaced with 2014 data for all countries.

#### 6. Trade, Investment and Market Opportunities

#### - Capital markets:

- Global Innovation Index Investment: (Global Innovation Index, annual data, 2013-2024). This index measures the market cap of listed domestic companies as a percentage of GDP and venture capital activity.
- Number of listed domestic companies (annual data). Data coverage: World Bank data for Germany, Luxembourg, Switzerland and the US, 1990-2024. For France and the Netherlands, World Bank data for 1990-2018 and Euronext yearbook data for 2019-2023. For Ireland, World Bank data for 1995-2018 and Euronext yearbook data for 2019-2023. For Belgium, World Bank data for 1990-2015 and Euronext yearbook data for 2016-2023. Additionally, due to a lack of data, it is assumed that Belgium had no delistings in 2016. Euronext data was calculated by taking the number of listed companies in a given year and adding new listings and subtracting delistings. For Denmark, 2004-2024 data was taken from the Nasdaq Nordic Surveillance Annual Reports. For the UK, World Bank data from 1990 to 2014, then the World Federation of Exchanges data for 2017, 2018, 2019 and 2020. Data for 2015 and 2016 was unavailable and was replaced with 2017 data for the UK. Data

for 2023 and 2024 was unavailable and was replaced with 2022 data for the UK. Data for 2024 was unavailable and was replaced with 2023 data for Belgium, France, Ireland and the Netherlands.

#### - Credit:

- Composite cost of borrowing for non-financial corporations. Data coverage: ECB monthly data 2003-2024 for Belgium, France, Germany, Ireland, Luxembourg and the Netherlands. Data for Denmark was taken from Danmarks Nationalbank interest rate on outstanding domestic loans from banks, monthly data, 2003-2024. For Switzerland, data was taken from the Swiss National Bank interest rates on new loan agreements, monthly data, 2009-2024. Data for the US and the UK was taken from LSEG prime lending rates, monthly data, 1990-2024. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.
- Global Innovation Index Credit (Global Innovation Index, annual data, 2013-2024). This index includes the ease of getting credit, domestic credit to private sector as a percentage of GDP and microfinance gross loans as a percentage of GDP.

## - Economic dynamism and competition:

- Churn rate (annual data). Churn rate was calculated as the sum of firm (all limited liability companies) entries and exits per 1000 people. Data coverage: OECD data for Belgium and the Netherlands 2007-2023; the US 1994-2023. World Bank data for Denmark, Germany and Ireland 2006-2022; France 2016-2020; Switzerland 2012-2019 and the UK 2010-2022. Luxembourg data from Luxembourg Statistics 2004-2022. Data for 2013-2015 was unavailable and was replaced with 2016 data for France. Data for 2020-2024 was unavailable and was replaced with 2019 data for Switzerland. Data for 2021-2024 was unavailable and was replaced with 2020 data for France. Data for 2023 and 2024 was unavailable and was replaced with 2022 data for Denmark, Germany, Ireland, Luxembourg and the UK. Data for 2024 was unavailable and was replaced with 2023 data for Belgium, the Netherlands and the US.
- Global Innovation Index Trade, diversification and market scale (Global Innovation Index, annual data 2013-2024). This measure includes the weighted mean applied tariff rate, the intensity of local competition and domestic market scale.
- Share of turnover accounted for by large companies (annual data). Data coverage: OECD data for Ireland, Luxembourg and the Netherlands 2005-2022; Denmark and Germany 2005-2023; France 2008-2023; Belgium 2008-2022; the UK 2009-2023 and Switzerland 2009-2022. For the US, census data was only available for 2012, 2017 and 2022. Missing data gaps were replaced with the latest available year. Data for 2021, 2023 and 2024 was unavailable and was replaced with 2022 data for Switzerland. Data for 2023 and 2024 was unavailable and was replaced with 2022 data for Belgium, Ireland, Luxembourg and the Netherlands. Data for 2024 was unavailable and was replaced with 2023 data for Denmark, France, Germany and the UK. This indicator was multiplied by -1 so that an increase would mean a positive business climate impact.

#### - Financial soundness:

- Bank capital to assets ratio (annual data, obtained jointly from BMI and the World Bank). Data coverage: Belgium, Ireland and Switzerland 2005-2023; Germany and the Netherlands 2008-2023; Luxembourg and the US 2009-2023; the UK 2005 and 2008-2023; France 2008-2024; Denmark 2010-2023. Data was unavailable for 2024 for all countries, except for France, and replaced with the 2023 value.
- Non-performing loans to total gross loans (annual data, obtained jointly from BMI and the World Bank). Data coverage: the US 1990-2024; Switzerland 2004-2023; Belgium 2006-2023; Ireland 2005-2024; France 2007-2024; Germany, Luxembourg, the Netherlands and the UK 2008-2023; Denmark 2010-2024. Data for 2014 and 2015 was unavailable and was replaced with 2016 data for Luxembourg. Data for 2024 was unavailable and was replaced by 2023 data for Belgium, Denmark, Germany, Luxembourg, the Netherlands, Switzerland and the UK.

#### - Investment:

- FDI inward positions GDP share (OECD, annual data). This indicator replaces last year's indicator, 'FDI inflows'. Data coverage: Denmark, France, Germany, Ireland, the Netherlands, the UK and the US 2005-2024; Luxembourg 2012-2024; and Switzerland 2014-2024.
- FDI outward positions GDP share (OECD, annual data). This indicator replaces last year's indicator, 'FDI outflows'. Data coverage: Denmark, France, Germany, Ireland, the Netherlands, the UK and the US 2005-2024; Luxembourg 2012-2024; and Switzerland 2014-2024.
- Index of Economic Freedom Investment Freedom (The Heritage Foundation, annual data, 2013-2024). The Index evaluates a variety of regulatory restrictions that typically are imposed on investment.

#### - Trade:

• Trade as % of GDP (OECD, quarterly data, 1990-2024).

#### Netherlands and Singapore comparison data scope

To compare the Netherlands and Singapore, we use the same set of 45 indicators.

## Missing indicators:

## **Human Capital:**

- Vacancy rate
- Population growth
- Unit labor costs
- Share of foreign-born population

## Infrastructure and Physical Space:

- Share of turnover accounted for by large companies
- Nitrogen (NH<sub>3</sub>+NO<sub>y</sub>) emissions tonnes/sq. Km
- Housing price to income ratio
- Share of physical space unused and abandoned

#### **Macroeconomics:**

- Business Confidence
- Consumer Confidence

## **Physical Safety and Security:**

• Geopolitical risk index

#### Politics, Regulation, Institutions and Society

• Score in ITF International Tax Competitiveness Index

## Modified indicators (for both Singapore and the Netherlands):

- Average cost of borrowing replaced by lending rate (BMI, annual data, 1990-2024)
- FDI inward positions GDP share replaced by Foreign direct investment, net inflows (% of GDP) (World Bank, annual data, 1970 2024)
- FDI outward positions GDP share replaced by Foreign direct investment, net outflows (% of GDP) (World Bank, annual data, 1970 2024)



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