Analysis

Uncertainty and climate policy in the Netherlands: measure and economic effects

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Measure and Economic Effects

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Summary

Uncertainty about how climate policy will evolve comes at a cost, making the transition towards climate neutrality more difficult and expensive for everyone involved. The Netherlands has committed to becoming climate neutral by 2050, with a key milestone of reducing greenhouse gas emissions by 55% compared to 1990 levels by 2030 (PBL, 2024). To reach these goals, the government is deploying a mix of policy instruments—such as subsidies, regulations, and carbon pricing. Achieving this transition will also require major investments and behavioral changes from businesses and households (Dijk et al, 2021). However, uncertainty about future climate policy can be disruptive and costly. It raises financing costs for new projects and erodes confidence in past investments. This kind of policy uncertainty increases the macroeconomic costs of the transition. Understanding and monitoring climate policy uncertainty is therefore also relevant for De Nederlandsche Bank (DNB), as it impacts the broader economy and financial institutions investing in the transition. Although difficult to quantify, we make a first attempt to measure climate policy uncertainty in the Netherlands, as part of a broader research effort focused on policy uncertainty.

Climate policy uncertainty (CPU) is rising, both in absolute terms and as a share of total uncertainty. This dynamic unfolds against a broader backdrop of elevated total uncertainty. In recent years, global developments such as the COVID-19 pandemic, the war in Ukraine, energy market shocks, and geopolitical tensions have contributed to a sustained rise in general policy-related uncertainty. Even though these broader shocks tend to produce stronger and more persistent macroeconomic effects, our analysis shows that CPU is following a similar path, and is increasingly contributing to the overall uncertainty burden facing Dutch households, firms, and financial markets.

Using a new media-based index of Dutch climate policy uncertainty, and monthly macroeconomic data, we show that increases in CPU are associated with measurable declines in key economic indicators, including business confidence, economic sentiment, private investment, and industrial production. These effects typically unfold within a two- to six-month window, suggesting that uncertainty in the climate domain can affect the economy on a similar time scale as broader shocks, even if the magnitude is smaller.

Investments are particularly sensitive to climate policy uncertainty. Firms operating in capital-intensive sectors such as energy, transport, and industry tend to delay or reduce investment in response to unclear or unstable policy signals. This pattern is consistent with precautionary behavior, especially when large-scale, long-horizon investments are at stake. Even modest increases in CPU can cause firms to delay investment decisions in areas like offshore wind or hydrogen infrastructure, where project timelines stretch over a decade and depend heavily on stable policy support. These delays

make financing more expensive and risk missing interim climate targets, pushing up the overall cost of the transition. This has implications not only for emissions targets but potentially also for macro-financial stability.

Our results also highlight that the timing and structure of policy processes influence how uncertainty develops. CPU tends to rise during early legislative stages, when proposals are introduced, debated, and amended, and gradually declines after formal approval and publication. Policies that are legally anchored and communicated with clarity tend to generate less uncertainty. In contrast, measures with unclear implementation plans, and/or shifting political support can generate prolonged public and market debate, as evidenced by the persistent attention surrounding the carbon levy.

While some level of uncertainty is inevitable, and in some cases necessary to allow for flexibility and innovation, reducing uncertainty is both possible and desirable from an economic perspective. CPU explains a significant share of uncertainty in the Dutch economy today, and its role is growing rapidly. Recognizing and addressing this dimension of uncertainty is essential for designing effective, investment-friendly climate policies and ensuring that economic and environmental objectives reinforce, rather than undermine, one another. International experience shows that when climate policies are made more predictable and transparent — through stable subsidy schemes, clear timelines, or cross-party agreements, investor confidence tends to increase. Making Dutch climate policy more credible and stable over time can reduce financing costs, and significantly enhance its effectiveness.

1. Background and Motivation

The Netherlands has committed to ambitious climate goals: a 55 percent reduction in greenhouse gas emissions by 2030 relative to 1990 levels, and climate neutrality by 2050. Achieving these targets will require sustained investment from the private sector, particularly in capital-intensive industries such as energy, transport, and manufacturing. Firms and investors view climate policy commitments as forward-looking signals about future regulation, market dynamics, and financial returns. When policy frameworks are clear and credible, they reduce uncertainty and support long-term planning. However, when policy direction appears unstable, delayed, or subject to reversal, it raises perceived risk, which can undermine investment in climate-aligned technologies.

This dynamic plays out within a broader economic context of elevated global uncertainty. Trade tensions, geopolitical instability, and recent global shocks — from the COVID-19 pandemic to the war in Ukraine — have all contributed to a surge in worldwide total uncertainty. In this DNB analysis we show that these shocks transmit quickly to the Dutch economy, depressing business sentiment, investment, and production. Although much of this uncertainty originates abroad, a growing share is homegrown. In particular, our analysis shows that climate policy uncertainty now accounts for an increasingly visible portion of total uncertainty in Dutch media coverage, especially since 2018. This suggests that, alongside global volatility, domestic policy uncertainty is becoming a relevant source of macroeconomic risk.

Climate policy uncertainty (CPU) arises from gaps between announced targets and policies, and actual policy action. CPU refers to the lack of clarity or predictability around the future direction, design, and implementation of climate-related measures (Campiglio et al., 2024). In the Dutch context, CPU stems from frequent policy shifts, delays in implementation, inconsistent communication, and evolving regulatory norms — for example, in energy taxation, the phase-out of heat pumps, or heat network regulation. This contributes to a policy environment where climate ambition may be high, but policies are often perceived as less credible and consistent. As the Netherlands Environmental Assessment Agency (PBL) notes, the likelihood of meeting 2030 climate targets under current policies is estimated at just 5 percent, lower compared to the year prior, reflecting a wider disconnect between long-term goals and near-term action.

The economic consequences of CPU are real — and become clearer when compared with those of broader uncertainty. In our analysis, we examine both total uncertainty and climate policy uncertainty. Total economic uncertainty shocks — often driven by global events like trade tensions or geopolitical crises — tend to have larger and more persistent effects. However, CPU shocks, while smaller in magnitude, follow a similar pattern: they reduce investment, raise the cost of capital, and contribute to financial market volatility. In sectors with large upfront capital needs, such as energy and infrastructure, these effects are especially pronounced. For example, a one percentage point increase in the weighted average cost of capital (WACC) could result in €6 billion in additional costs in order to reach the climate targets by 2030, and €55 billion by 2050 (Bianchi et al, 2023). At the household level, unclear policy signals may delay green purchases, further slowing the transition. In this way, CPU operates as a distinct and measurable source of economic risk.

Our research shows that increases in uncertainty are associated with measurable economic impacts. Using Dutch monthly macroeconomic data, we show that both total uncertainty and CPU shocks lead to short-term declines in business confidence, economic sentiment, private investment, and industrial production. These effects typically appear within 2–6 months. While the impact of total uncertainty is generally larger, the shape and timing of the CPU responses are remarkably similar. This suggests that even domain-specific uncertainty, when focused on a key economic policy area like climate, can generate macroeconomic effects that mirror those of broader shocks. CPU may not dominate the overall uncertainty landscape, but its contribution is growing and increasingly relevant for short-term economic momentum.

Despite this, CPU is still not being actively monitored or addressed in most countries' policymaking processes. To fill this gap, we develop a Dutch-specific CPU index based on media attention and the timing of actual policy announcements. This allows us to track CPU separately from general uncertainty — and to quantify its economic effects in a more targeted way. The results underline the importance of managing not just global or external sources of risk, but also the uncertainty that arises from domestic policy processes.

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2. Climate Policy Uncertainty: Concept and Evidence

CPU reflects the lack of clarity or predictability surrounding if and how climate-related goals will be achieved, including the instruments used, the timeline followed, and the political conditions shaping implementation. In the Netherlands, CPU is amplified by frequent shifts in policy direction, delayed or inconsistent implementation, and evolving regulatory frameworks. These uncertainties influence firms' expectations about future costs and regulations, particularly in capital-intensive sectors like energy, manufacturing, and transport, where long planning horizons and stable policy signals are essential**.**

Empirical research shows that CPU has tangible economic effects. It raises the cost of capital and delays investment decisions, especially for clean technologies. While uncertainty affects both fossil and renewable investments, clean energy is often more exposed due to its reliance on stable policy support, in the form of subsidies, taxes and regulations. For instance, Batini et al. (2022) find that a one standard deviation increase in CPU reduces the probability of clean energy startups securing funding by 4% in the following quarter. Other studies confirm that uncertainty disproportionately impacts clean capital formation (Fried et al., 2021; Fuss et al., 2008; Noailly et al., 2022) and economic activity (Houari et al., 2025, Berestycki et al, 2022).

CPU affects not only businesses, but also households and the financial sector. Households may postpone certain purchases, such as electric vehicles or heat pumps, when faced with unclear incentives or energy prices. On financial markets, firms with significant green exposure experience increased price volatility when climate policy is uncertain. Financial institutions are also directly affected, both as financiers of the transition and as holders of climate-exposed assets. Evidence from both the U.S. and Europe links CPU to higher volatility in green stocks and lower returns on clean energy assets (Noailly et al., 2022; Tedeschi et al., 2024).

In the Dutch energy sector, CPU is a major driver of the weighted average cost of capital (WACC), which varies significantly across technologies. In 2023, for example, the WACC for solar photovoltaic was 2.2% in real terms, compared to 5.2% for geothermal. While the underlying drivers are not fully observable, this large spread between mature technologies suggests the presence of significant non-technological risk factors, which we hypothesize may include policy uncertainty, permitting complexity, and local political resistance. Invest-NL estimates that the capital required to decarbonize the Dutch energy system will increase by a factor of three to five by 2050, reaching annual investments of €25-30 billion. Keeping financing costs low is thus critical for ensuring a cost-efficient transition.

However, Dutch climate policy has been marked by notable shifts over the past decade. Renewable energy targets were first lowered in 2013, then raised again in 2018–2019, with the most recent "Hoofdlijnenakkoord" reversing or eliminating several policy measures. These shifts are reflected in concrete investment-relevant decisions — such as the approval and subsequent closure of coal plants, changing norms around heat pump adoption, and inconsistent subsidy frameworks for electric vehicles and biomass energy. While such fluctuations are not unique to the Netherlands, the domestic climate policy track record illustrates how political and procedural dynamics can fuel uncertainty. This reinforces the view that CPU is not just a theoretical concern, but a measurable reflection of real-world policy volatility — and an increasingly important driver of economic uncertainty in the Dutch context.

3. Results

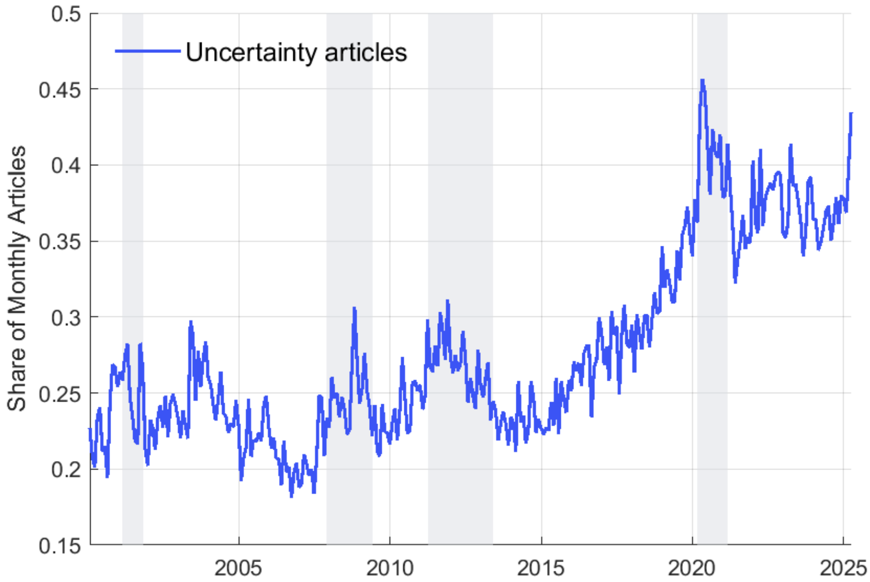
This section examines the evolving landscape related to uncertainty in the Netherlands and its economic implications. We begin by documenting trends in both general uncertainty and climate policy uncertainty (CPU), using a Dutch media-based index constructed from articles in *Het Financieele Dagblad*. This descriptive analysis highlights how CPU has grown as a distinct and increasingly persistent component of overall uncertainty, shaped by the legislative process, media attention, and policy content. In the second part, we quantify the macroeconomic effects of both total uncertainty and CPU using impulse response analysis. While the broader uncertainty shocks tend to generate larger and more persistent effects, CPU shocks follow a similar trajectory — indicatingFinanciuncertainty, though narrower in scope, has meaningful short-term impacts on sentiment, investment, and production.

3.1 Trends in Uncertainty: Levels, Sources, and Media Perception

Overall uncertainty is increasing. Understanding the role of CPU requires situating it within the broader context of rising macroeconomic and political uncertainty (total uncertainty henceforth). Over the past two decades, general policy-related uncertainty has grown steadily in the Netherlands. This trend reflects a combination of factors, including the global financial crisis, the eurozone debt crisis, the COVID-19 pandemic, and recent geopolitical tensions and energy price shocks. Figure 1 shows the share of uncertainty-related articles in Dutch media as a percentage of total articles, based on a comprehensive text analysis of *Het Financieele Dagblad*.[1] The index, which is solely based on articles in *Het Financieele Dagblad*, reveals a clear upward trend since the early 2000s, with notable peaks around 2009–2012, 2020, and the energy market turbulence of 2022–2023. This seems to suggest that general economic and political uncertainty has become a more prominent feature of the information environment for Dutch firms and households. This broader increase in background uncertainty creates a more challenging setting for long-term investment decisions.

[1] The climate policy uncertainty (CPU) index is built following the approach of Loughran & McDonald (2011) and Backer et al. (2016), and is based on articles containing at least one keyword from each of three categories: climate (e.g. “emissions”, “renewable s”), policy (e.g. “regulation”, “subsidies”), and uncertainty (e.g. “unclear”, “debate”). It is calculated as the share of uncertain articles among all clima te policy-related articles, normalized for overall media volume. A sentiment-weighted version captures whether coverage is framed positively, negatively, or neutrally.

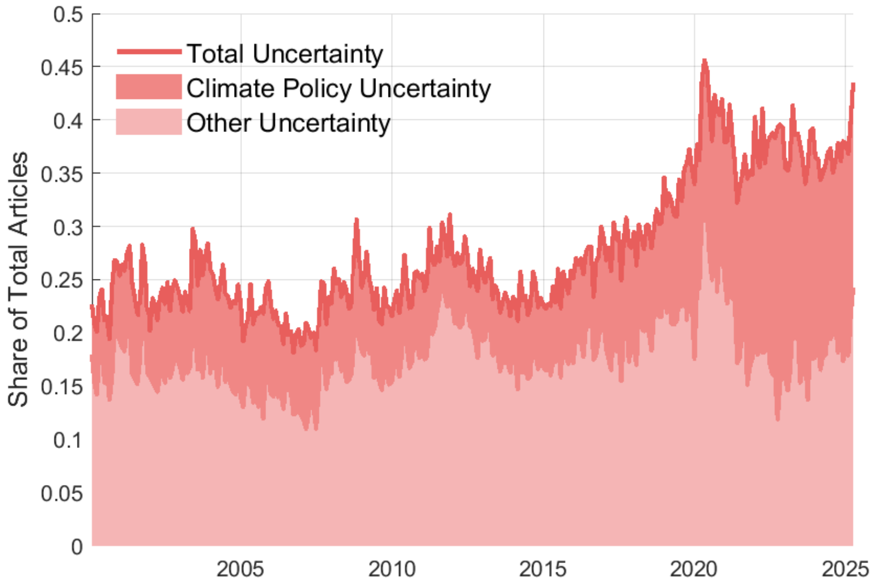
Figure 1. General Uncertainty in Dutch Media, 2000–2025



The share of uncertainty generated by climate policy is also increasing and is associated with negative sentiment. Figure 2 shows how CPU has evolved as a distinct component of the broader uncertainty landscape. While total uncertainty in public discourse has been rising over time, the share attributable to climate policy has grown especially rapidly since 2018. While individual peaks vary in timing, this increase coincides with a period of intensified climate policymaking in the Netherlands, including the adoption of the *Klimaatakkoord*[2], the introduction of the carbon levy, and contentious debates over policy implementation and sectoral targets. CPU has become a growing part of public and policy discourse in the Netherlands, particularly since 2019, and spikes around key climate announcements and crises. Importantly, the relative weight of CPU within total uncertainty has also increased, suggesting that climate policy is becoming a more prominent driver of economic expectations and perceived risk — not just one of many policy topics, but a recurring source of public and investor concern.

[2] The *Klimaatakkoord* (Climate Agreement) is the Netherlands' national climate policy framework, finalized in 2019.

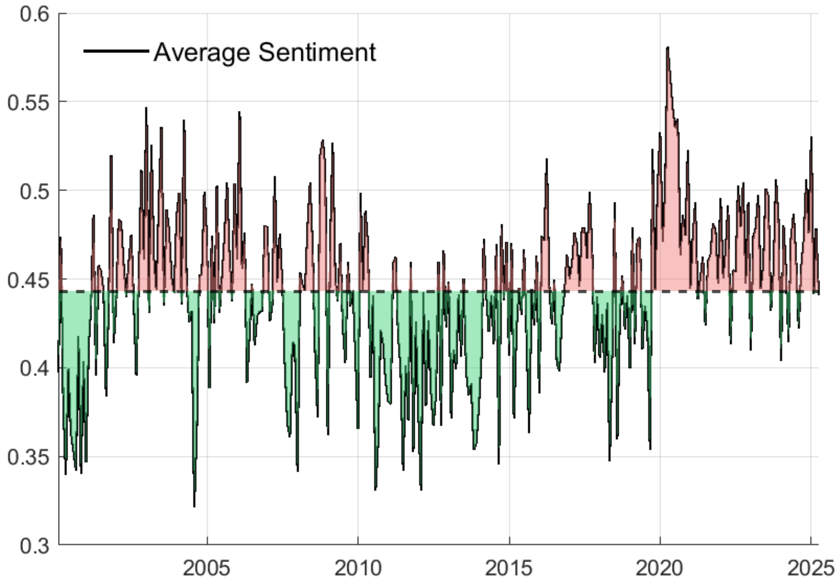
Figure 2. Climate Policy Uncertainty as a Share of Total Uncertainty



The tone of climate-related uncertainty coverage has become more and more negative over time, especially since 2015, suggesting that the debate on climate policy is increasingly framed in a context of risk rather than opportunity (Figure 3).[3] This trend is not only quantitative, but also qualitative. Beyond frequency, sentiment analysis reveals how CPU is perceived in the public discourse. Figure 3 shows the evolution of sentiment in articles classified as reflecting CPU. While sentiment fluctuates over time, it remains mostly neutral to negative, and turns consistently negative in the second half of the time sample considered (2015–2025). This suggests that climate policy discussions in the media are increasingly framed in terms of risk, political contention, or economic cost, rather than opportunity or innovation. This cautious tone likely shapes expectations among firms and investors, reinforcing the perception of climate policy as a source of downside risk. In turn, this may contribute to more conservative investment behaviour, especially in long-horizon, capital-intensive projects.

[3] The sentiment indicator ranges from 0 (positive) to 1 (negative).

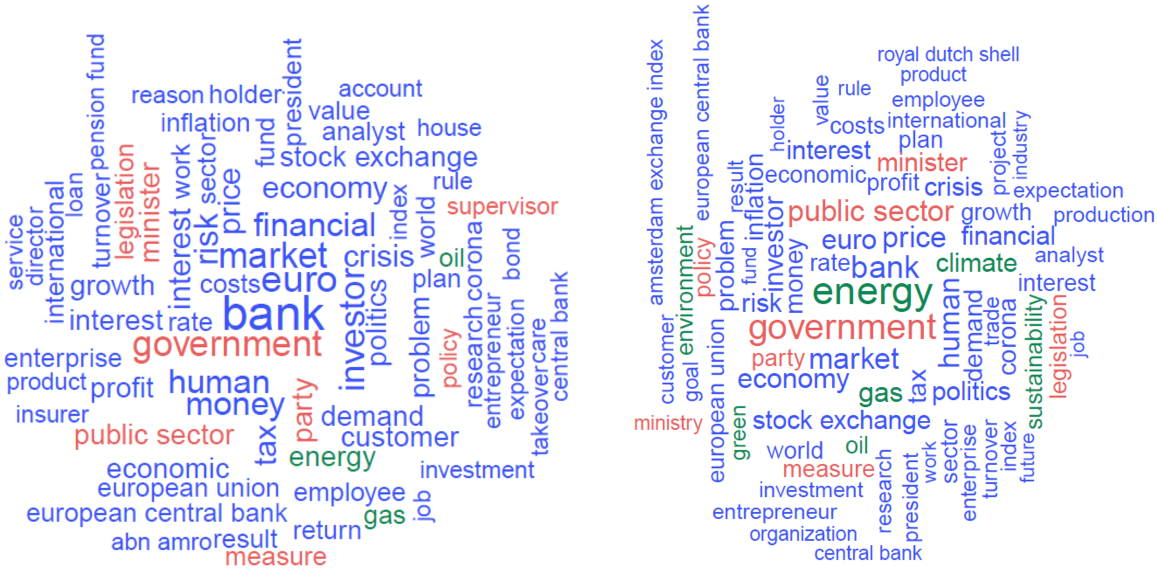
Figure 3. Sentiment in Climate Policy Uncertainty Coverage



While total and climate policy uncertainty focus on distinct themes, climate-related issues are becoming prominent across both. Figure 4 presents word clouds showing the most common nouns in news articles related to total uncertainty (left) and CPU (right), based on a comprehensive text analysis of *Het Financieele Dagblad*. Word size reflects the frequency of usage. Green words indicate climate-related terms, red words are policy-related, and blue words include all other frequently used nouns. In total uncertainty articles, on the one hand, dominant themes include banks, financial markets, government, investors, and the euro, which suggests a broad macro-financial focus. Climate-related words such as gas, oil, and energy appear primarily in the context of markets and economic stability. These terms have gained relevance over time, especially in response to geopolitical and energy price shocks. On the other hand, articles on CPU deal more explicitly with energy, alongside terms like climate, green, environment, and sustainability. These words reflect a policy-oriented framing, often linked to government initiatives or legislative debates. While mentions of nuclear energy and the environment were more common in earlier years, the debate has recently shifted toward more climate-specific risks, including nitrogen and transition policy.

Figure 4. Word Clouds Total Uncertainty and Climate Policy Uncertainty, 2000-2025

Total Uncertainty | Climate Policy Uncertainty



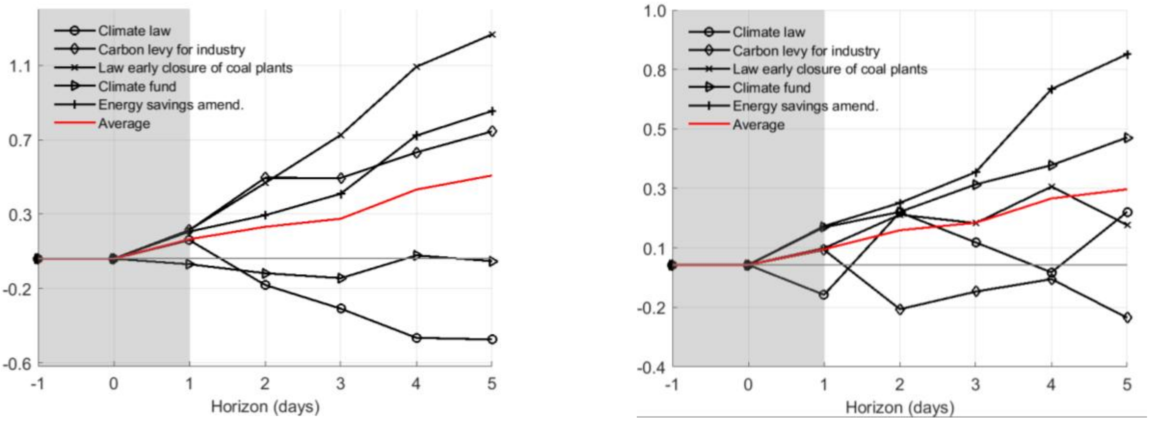
Notes: To construct the word clouds, we excluded all verbs, sentiment words, numbers, countries, cities, names, and stopwords (such as "the" and "and"). All nouns were stemmed, meaning words like "policy" and "policies" were reduced to their root form, "policy". For readability, we also excluded the words "firms" ("bedrijven") and "stocks" ("aandelen"), as their high frequency is expected given the financial newspaper's focus on companies and international stock markets. Including these terms would add little to the interpretability of the articles' content. The word clouds display the 75 most frequently occurring words.
Legend: Green words indicate climate-related terms, red words are policy-related, and blue words include all other frequently used words.

The effect on uncertainty depends on the policy types and on the legislative phase, and generally uncertainty decreases with publication of policies. The level of CPU is not constant throughout the policy cycle. Instead, it depends on the stage of the legislative process and the clarity and credibility of communication. Our analysis of several major Dutch climate policy proposals reveals that CPU tends to increase most strongly during the early legislative stages, particularly when policies are sent to parliament. This phase often coincides with public debate, media scrutiny, political negotiation, and uncertainty about the final form or timing of the law. In contrast, we observe a flattening or even decline in CPU following formal approval by either chamber of parliament, and a stabilization or reduction after the official publication of the law. This pattern is visible across multiple policies — including the Climate Law, the Carbon Levy for Industry, and the Climate Fund — and holds in the average response across cases.

These dynamics highlight the importance of institutional credibility: clear, predictable, and legally anchored policy signals reduce uncertainty, while vague or drawn-out legislative processes amplify it. From a policy design perspective, this suggests that uncertainty is not only about the content of climate measures, but also about the process by which they are developed and communicated. Accelerating clarity and minimizing ambiguity in early stages could significantly reduce CPU and its adverse economic effects.

Figure 5. Climate Policy Uncertainty Dynamics Across Initial Stages of the Legislative Process

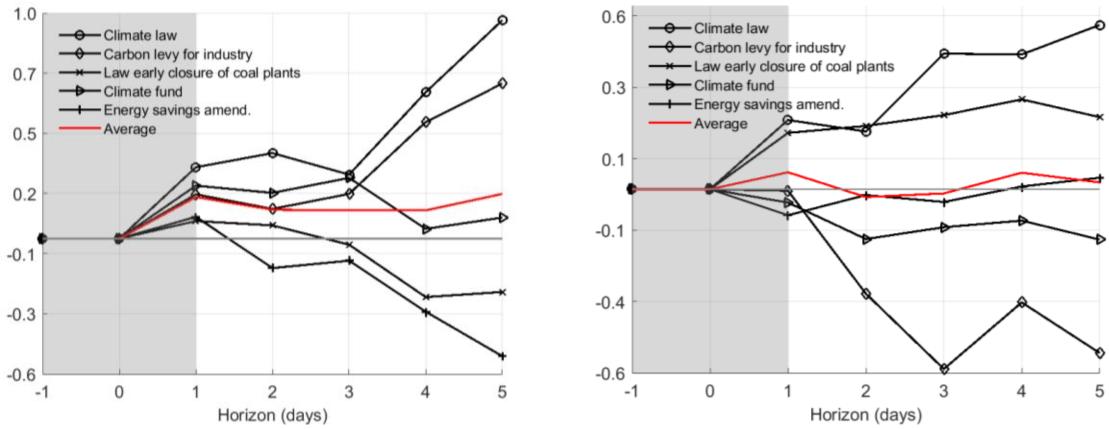
Sent to Parliament (Tweede Kamer) — Approved by the Tweede Kamer



Notes: Cumulative change in CPU around two legislative events: sent to Parliament (Tweede Kamer) and approved by the Tweede Kamer.

Figure 6. Climate Policy Uncertainty Dynamics Across Final Stages of the Legislative Process

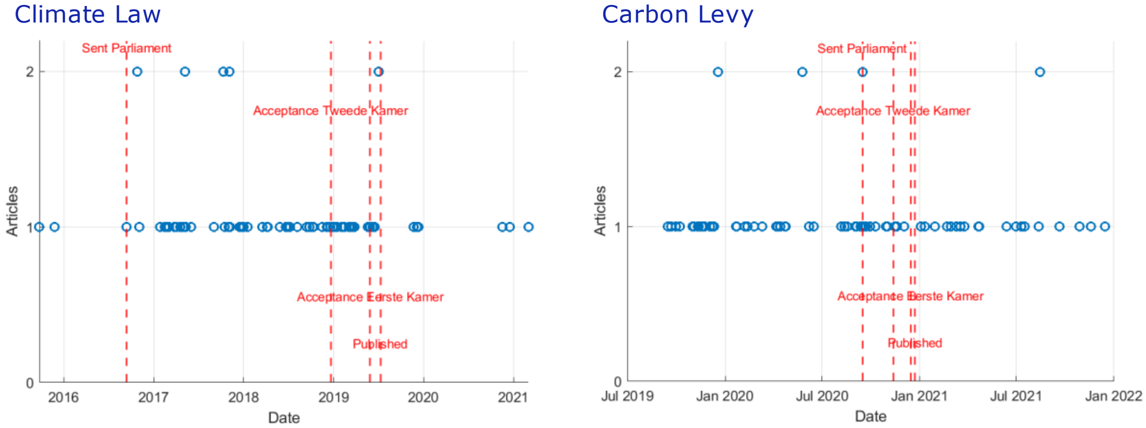
Approved by the Eerste Kamer — Publication



Notes: Cumulative change in CPU around two legislative events: approved by the Eerste Kamer and Publication in the Saatscourant.

Media attention to the carbon levy is more persistent, extending well before and after key legislative moments. Each dot in Figure 7 corresponds to an article in *Het Financieele Dagblad* that mentions either the climate law (left) or the carbon levy (right). Vertical red lines mark key legislative milestones: submission to parliament, approval in the Tweede Kamer and the Eerste Kamer, and final publication. In the case of the climate law, media attention intensified shortly after the proposal was sent to parliament in 2016 and was concentrated in the early stages of the legislative cycle. Despite the relatively long duration between submission and final approval (nearly three years), the number of articles diminished well before the law was passed, suggesting that public uncertainty around the measure may have peaked early and faded as the legislative process progressed. By contrast, the carbon levy shows a different pattern. Although the formal legislative timeline was shorter — with the law moving from proposal to publication in just a few months — the media debate was both earlier and more persistent. Articles began to appear well before the law was submitted and remained frequent long after it was passed. This sustained attention indicates that uncertainty around the carbon levy was not confined to official policy moments, but was likely shaped by political contention, economic implications, and stakeholder responses.

Figure 7. The Carbon Levy Debate Extended Far Beyond the Legislative Cycle



Notes: Each dot in the Figure represents an article mentioning the Climate Law (left) or Carbon Levy (right) one year before being sent to Parliament and one year after publication; red lines mark key legislative events, which have a fixed chronological order, i.e.: the date the law is sent to Parliament, acceptance in de Tweede Kamer, acceptance in de Eerste Kamer and the official publication of the law.

Overall, these two cases highlight that the debate around climate policy does not necessarily follow the institutional calendar. Some measures, particularly those involving cost, competitiveness, or equity concerns, may trigger longer and more intense public debate, even when the legislative path is relatively smooth. This has implications for how uncertainty is managed and communicated across the policy cycle. Importantly, around 50% of these articles explicitly reference CPU, meaning that much of the media attention surrounding these laws is not merely descriptive or procedural, but reflects concerns about the credibility, stability, or implications of the policy itself. This reinforces the interpretation of CPU as a media-detectable and policy-relevant phenomenon.

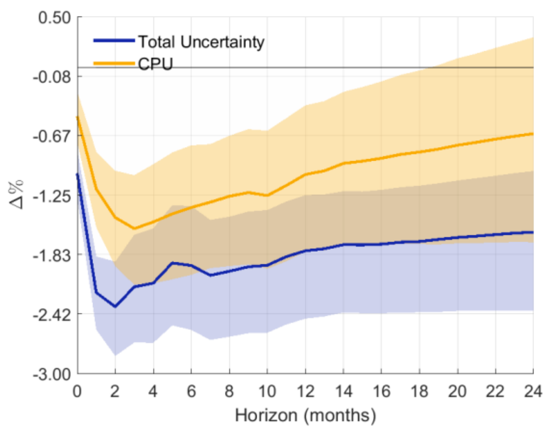
3.2 Macroeconomic Impact of Uncertainty: Comparing Total and Climate-Specific Shocks

Uncertainty affects economic expectations, as measured by forward-looking indicators like business confidence and economic sentiment. Figure 8 presents the impulse responses of these two indicators to a one standard deviation shock in our uncertainty measures, estimated using a Bayesian Vector Autoregression (BVAR) model with monthly Dutch data. We compare the effects of total uncertainty (TU) and CPU, in order to assess their relative impact on expectations.[4]

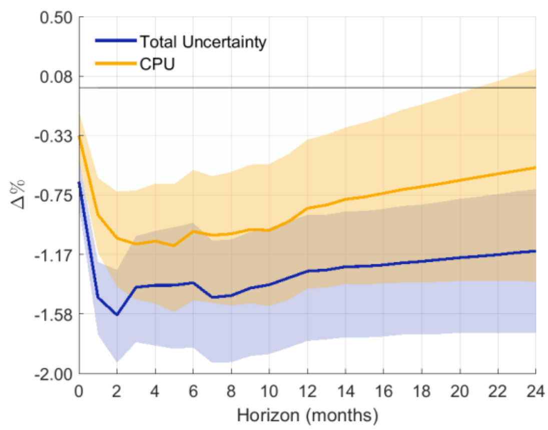
The response to TU shocks is larger in magnitude, consistent with their broader economic scope. However, CPU shocks follow a similar pattern. This means that even targeted, sector-specific uncertainty can have immediate macroeconomic consequences. Specifically, a CPU shock results in a 1.6% decline in economic sentiment and a 1.1% drop in industrial confidence within a few months, against a drop of around 2.3% and 1.6% respectively after a TU shock. These declines, while modest, can meaningfully influence short-term decisions around investment, hiring, and consumption. Overall, the results suggest that CPU operates through the expectations channel, acting as a short-term drag on economic momentum.

Figure 8. Total Uncertainty and Climate Policy Uncertainty Reduce Economic Expectations in the Short Term

Response of Economic Sentiment



Response of Industrial Confidence



Notes: Charts depict the response to a one-standard deviation increase in Total Uncertainty and CPU. Shaded areas represent 68% high posterior density sets.

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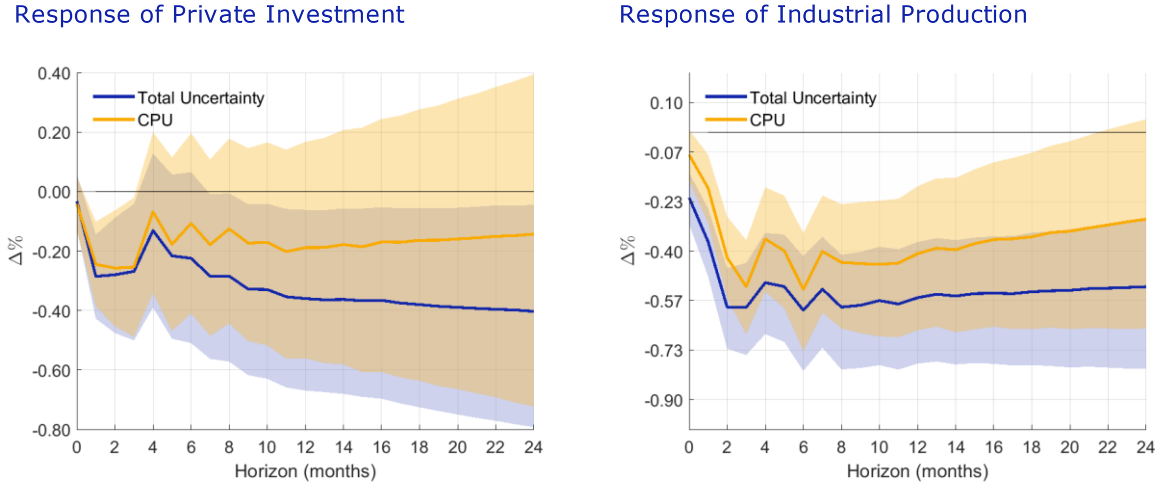
[4] To estimate the short-term economic effects of total uncertainty and CPU we employ a monthly BVAR model estimated in levels, using seven lags and a Minnesota prior to mitigate overfitting in a small-sample context. The model traces the dynamic responses of key Dutch macroeconomic indicators — including business confidence, economic sentiment, private investment, industrial production, and the AEX stock market index — to a standardized CPU shock. The analysis spans the period 2006M1 to 2024M12.

Uncertainty also affects real economic activity, particularly through its impact on investment and production. Figure 9 shows the impulse responses of gross fixed capital formation in tangible assets, (private) investment henceforth (left) and industrial production (right) to a one standard deviation CPU shock. Following such a shock, private investment declines by 0.3% and industrial production falls by 0.5%, with effects peaking between two and six months. These effects are statistically significant and economically relevant when compared to the long-term average annual growth rates of investment and industrial production, which are 2% and 1%, respectively. The declines are consistent with precautionary behaviour by firms, especially in capital-intensive sectors that rely on predictable policy frameworks for long-term planning. When the policy environment is perceived as volatile or politically unstable, firms tend to postpone or scale back capital expenditures, even in presence of financial incentives. The reduction in industrial production likely reflects broader spillovers from weakened sentiment and constrained private investment. While total uncertainty shocks produce larger declines, the response to CPU shocks follows a similar pattern. This result reinforces the view that sector-specific uncertainty can act as a supply-side drag, raising transition costs, lowering productive capacity, and slowing the deployment of clean technologies.[5]

Figure 9. Total Uncertainty and Climate Policy Uncertainty Depress Private Investment and Industrial Production



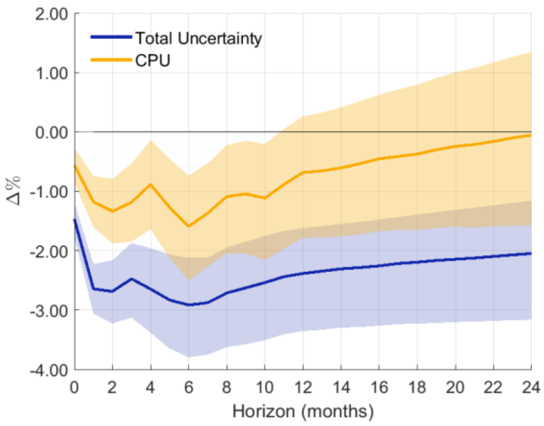
Notes: Charts depict the response to a one-standard deviation increase in Total Uncertainty and CPU. Shaded areas represent 68% high posterior density sets.

Uncertainty also affects financial markets, with investors' expectations adjusting quickly in response to climate policy signals. Following a CPU shock, the Dutch AEX stock market index declines by around 1.6% within six months — a statistically significant drop. This reflects a repricing

[5] Results are robust to alternative specifications, including the use of broader uncertainty measures, oil and gas price controls, COVID-period adjustments, and different sentiment proxies. The estimated effects of CPU shocks remain consistent across these variations.

of climate-related risk in equity markets, as investors associate rising CPU with higher transition costs, policy volatility, and regulatory uncertainty. The decline in stock prices highlights that CPU affects not only sentiment and real economic activity, but also financial variables such as asset valuations and risk premia. These changes can alter financing conditions and shift capital allocation, potentially reinforcing uncertainty-driven slowdowns. While broader uncertainty shocks have an even stronger effect on equity markets, CPU remains an important and measurable driver of financial volatility in the Dutch context.

Figure 10. Response of the AEX Stock Index to a Climate Policy Uncertainty Shock



Notes: Charts depict the response to a one-standard deviation increase in Total Uncertainty and CPU. Shaded areas represent 68% high posterior density sets.

4. Conclusion

This report provides new empirical evidence that CPU is both measurable and economically meaningful in the Dutch context. It shows that the share of public and media attention devoted to CPU has increased substantially in recent years, and that this uncertainty carries short-term macroeconomic consequences. Specifically, CPU affects forward-looking indicators such as business confidence and economic sentiment, and also has immediate economic effects — including lower private investment, reduced industrial production, and equity market repricing.

While these effects are smaller than those associated with broader economic or geopolitical shocks, they are statistically significant and have a sizable negative impact on the economy. Importantly, they unfold within a relatively short time window (2–6 months), underscoring how quickly climate-related uncertainty can affect the economic outlook.

The evidence also highlights that CPU is not uniform across policies. Some measures, such as the carbon levy, generate extended public debate and uncertainty well beyond formal legislative milestones. Others, such as the climate law, follow a more traditional uncertainty curve — with attention peaking early and fading once legal clarity is achieved. This suggests that the structure and content of climate policies, as well as their political context, shape their economic effects.

Policies with more visible cost implications or distributional trade-offs — like carbon pricing — may trigger more persistent and intense public debate. This can sustain uncertainty even when the legislative timeline is relatively fast. In contrast, broader framework laws may elicit early discussion but see uncertainty diminish once their passage becomes likely. Understanding these differences is key for managing CPU more effectively.

In this sense, CPU is both a macroeconomic signal and a policy design challenge. Its impact is not limited to communication missteps or political sentiment. It stems from real concerns about the credibility, stability, and enforceability of climate commitments. As such, managing CPU should be part of any strategy to mobilize private investment in the energy transition.

The results also emphasize that institutional processes matter. Uncertainty tends to decline after policies are finalized and published, indicating that transparency and timely communication can mitigate risk perceptions. However, the debate surrounding the carbon levy also illustrates that policy uncertainty can persist despite formal progress, particularly when stakeholders perceive lingering questions around implementation, fairness, or long-term consistency.

Some degree of uncertainty is both inevitable and essential. These findings do not imply that uncertainty around climate policy can — or should — be eliminated entirely. Climate policy requires a certain level of flexibility and adaptation over time. For instance, after Fukushima, Germany shifted its energy policy to phase out nuclear power. While boosting renewables, the sudden shift created policy ambiguity around energy security, grid investment, and coal phase-out times. Despite some reliance on coal in the interim, long-term renewable capacity and energy efficiency grew significantly. Another example is the status of the United Kingdom (UK) in the EU Emission Trading Scheme (ETS) after Brexit. A period of ambiguity and increased uncertainty pushed the UK to design a more tailored and ambitious domestic carbon pricing system (UK ETS). The challenge is therefore not to remove uncertainty, but to strike a balance: ensuring that the policy framework is credible, transparent, and stable enough to anchor long-term decisions, while retaining the ability to adjust course when circumstances change.

5. Policy Implications

Our findings show that increases in climate policy uncertainty have short-term, measurable effects on the Dutch economy. Specifically, we observe that a rise in CPU is associated with declines in business confidence, economic sentiment, investment, and industrial production — typically within a 6 month window. While the size of these effects is smaller than those of broader economic uncertainty, they are statistically significant and recessionary in direction. This underscores the importance of treating CPU not just as a communications issue, but as a source of macroeconomic volatility with real consequences for the energy transition.

Dutch energy and climate policies have not been stable over time, despite commitments made in international agreements like the Paris Accord and domestic frameworks that require governments to adjust policies if targets are missed. Long-term subsidy schemes — in some cases offering 20-year stability — help reduce some of this risk, especially for large projects. However, instability persists, particularly around renewable energy targets and the status of climate agreements under changing governments.

Our analysis confirms that CPU is not the largest driver of uncertainty in the Dutch economy — but it is growing rapidly, especially during key legislative events and policy announcements. This pattern is visible in both public discourse and macroeconomic data, signalling that climate uncertainty is becoming a more prominent concern among businesses, consumers, and investors.

The rise in CPU can hamper policy goals like investment in clean energy, delay low-carbon innovation, and raise the cost of capital for essential technologies. This creates a drag on the transition and increases long-term costs. At the same time, some level of policy flexibility is necessary. As technologies, public preferences, and global market dynamics evolve, governments need room to adapt. The goal, therefore, is not to eliminate uncertainty, but to manage it better.

Moving forward, it will be important to analyze these dynamics in more detail — especially the ways in which policy credibility affects risk premia, financing conditions, and the willingness of firms to invest in green infrastructure. By integrating CPU into economic assessments and policy design, Dutch authorities can help create a more stable and investable environment for the energy transition – the lessons of which may be applicable across the full spectre of government policy

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