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A "Common" European Interest? Explaining Variation in IPCEI State Aid Between EU Member States

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Abstract

The literature on the European Union's (EU) industrial policy turn has convincingly explained the origins of this paradigmatic shift. However, less is known about how these policies play out on the ground and how member states differ in using them. Existing research highlights significant cross-country variation in industrial policy subsidies within the Union. Scholars and policymakers attribute this to diverging fiscal capacities between member states, warning that pursuing industrial policy through nationally funded state aid risks fragmenting the bloc's single market. Yet, this puzzling variation cannot be explained through fiscal capacity alone. This article addresses these gaps by mapping and explaining variation between EU member states in their state aid for Important Projects of Common European Interest (IPCEIs), often labeled the "poster child" of the EU's industrial policy. The article asks: "Under which conditions do EU member states provide state aid for IPCEIs?" It first develops eight political-economic hypotheses from the literatures on industrial policy, geoeconomics, and state aid. These hypotheses are then tested through fuzzy-set qualitative comparative analysis (fsQCA), explaining the variation in the amount of state aid the 27 EU member states provided under the IPCEI framework. The results show that a country's IPCEI state aid is shaped by the size of its economy, fiscal stress, exposure to Chinese foreign direct investment, past state aid spending, and ideological preferences of its government. Through a nuanced analysis of the determinants of IPCEI participation, the article clarifies how EU industrial policy—in this case, IPCEIs—plays out on the ground.

Keywords

European Union; geoeconomics; industrial policy; IPCEIs; single market; state aid

1. Introduction

"It looks a bit like a game of the deepest pockets," then Belgian Prime Minister Alexander De Croo remarked when asked about the European Union's (EU) industrial policy (Gayet & Riffaud, 2022). Responding to the geoeconomization of the world economy, the EU is reshaping its neoliberal industrial policy after a new "Homeland Economics" paradigm, prioritizing competitiveness and strategic autonomy (Brockenhuus-Schack & Nedergaard, 2025; see also Bauerle Danzman & Meunier, 2024). To achieve these goals in the green and digital transitions, the Union subsidizes breakthrough technologies such as microelectronics, batteries, and hydrogen applications (Di Carlo & Schmitz, 2023, pp. 2078–2079; McNamara, 2023, pp. 2387–2380). However, these industrial policy subsidies are predominantly funded through national state aid (De La Cruz et al., 2026). Given the diverging fiscal capacities between member states, scholars and policymakers warn of an intra-European subsidy race that may distort the level playing field in the Union's single market (Di Carlo et al., 2024; Draghi, 2024, p. 12; Letta, 2024, pp. 11–12; McNamara, 2023, p. 2388).

Important Projects of Common European Interest (IPCEIs) are the "poster child" of the EU's state-aid funded industrial policy (Schmitz et al., 2025, p. 1). These cross-border projects develop breakthrough technologies and infrastructure for hydrogen, batteries, microelectronics, cloud and communication technologies, and health applications (European Commission, 2023b). Interestingly, research shows that member states differ significantly in their participation in IPCEIs (Di Carlo et al., 2024; Eisl, 2022; Lavery & Lopes-Valença, 2025; Lopes-Valença, 2024). As a consequence, firms in participating member states profit from the 37.6 billion EUR in IPCEI state aid, while their rivals in neighboring countries do not (European Commission, n.d.-a). While these divergences are well documented, we know less about what explains them. Previous research attributes this to the differing fiscal capacity of member states—yet, fiscal capacity alone does not explain the variation in IPCEI state aid. For instance, Slovakia expended 10 times as much as the neighboring Czech Republic, although the latter's economy is four times larger. France and Italy participate in all IPCEIs, despite facing high public debt ratios and borrowing rates. This raises the question as to what explains this variation in IPCEI state aid between EU member states. This article therefore asks: Under which conditions do EU member states provide state aid for IPCEIs?

Eight political-economic hypotheses as to what explains this variation are deduced from the literatures on industrial policy, geoeconomics, and state aid. These are then tested through fuzzy-set qualitative comparative analysis (fsQCA). The results point out that a country's IPCEI state aid is shaped by the size of the country's economy, its fiscal stress, exposure to Chinese foreign direct investment (FDI), past state aid spending, and ideological preferences of its government. While the article echoes previous research on this topic, it nuances the detrimental effect of fiscal constraints on member states' participation in IPCEIs (cf. Di Carlo et al., 2024; Eisl, 2022). Although IPCEIs do not manage to bridge the core–periphery divergences caused by differing fiscal capacities between member states, fiscal stress alone does not prevent countries from providing IPCEI state aid if the government wants to do so (cf. Lavery & Lopes-Valença, 2025; Lopes-Valença, 2024). Indeed, the results show that governments that prioritize economic growth participate in projects even when the country faces fiscal constraints.

This article contributes to the literature on EU industrial policy by providing a nuanced analysis of the determinants of EU member states' IPCEI state aid. The analysis refines previous research about the impact of fiscal capacity, showing that the sheer size of a country's economy—rather than fiscal stress—profoundly

shapes its participation in IPCEIs (cf. Di Carlo et al., 2024; Eisl, 2022). In line with the goal of this thematic issue, the article thus sheds light on how EU industrial policy—in this case, IPCEIs—plays out on the ground (Bora et al., 2026).

This article is further structured as follows. Section 2 positions IPCEIs in the EU's industrial policy and summarizes the state-of-the-art on these topics. Section 3 develops eight political-economic hypotheses as to why member states provide IPCEI state aid. To test them through fsQCA, Section 4 first develops a research design, justifying the methodological approach and case selection. Subsequently, the explanatory conditions are operationalized, after which the results are presented and interpreted. Section 5 concludes.

2. IPCEIs in the EU's Industrial Policy

IPCEIs are "large and ambitious cross-border projects by multiple Member States aimed at overcoming important market or systemic failures" (European Commission, 2023b, p. 1). These projects center around the research, development, and innovation (R&D&I), and first market deployment of breakthrough technologies in strategically important sectors (Strategic Forum for IPCEIs, 2019). As of late 2025, 11 IPCEIs have been approved for microelectronics, batteries, hydrogen, health appliances, and cloud and communication technologies (European Commission, n.d.-a). Under the IPCEI framework, EU member states are allowed to grant firms large amounts of state aid—which is normally stringently regulated by the Union's competition regulations. As countries can only participate in IPCEIs by providing IPCEI state aid, "IPCEI participation" and "providing IPCEI state aid" are used interchangeably throughout this article.

Member states are thus at the heart of the analysis. After all, previous research has demonstrated how intergovernmental coalitions (Bora & Schramm, 2025) and developments at the national level (E. Schneider, 2023) have shaped the emergence and design of EU industrial policy. Using member states as the units of analysis is also empirically motivated: Because the EU lacks the fiscal resources to provide industrial policy subsidies, IPCEI state aid is expended by the member states (De La Cruz et al., 2026; Schmitz et al., 2025). In other words, "IPCEI money is member states' money" (Seidl & Wuttke, 2026, p. 16).

Nevertheless, in line with the current "regulatory interventionist" nature of EU state aid, the Union does guide—and constrain—member states' subsidies through various governance levers (Bulfone et al., 2026, p. 2; see also Bulfone et al., 2025; Reither et al., 2025). The European Commission determines the objectives for which state aid may be expended, selectively directing national subsidies towards the green and digital transitions. This regulatory interventionism also plays out in IPCEIs, as subsidies under this framework are stringently regulated by the Commission (Seidl & Wuttke, 2026, p. 16; see also Seidl & Lopes-Valença, 2025, p. 17). For instance, the EU executive coordinates the Joint European Forum for IPCEIs that identifies strategic sectors for future projects. Although member states ultimately decide on the prioritization of IPCEI areas, they are "aware of the Commission's legal and political authority…and anticipate its preferences, which limits their degrees of freedom" (Seidl & Wuttke, 2026, p. 16). Furthermore, execution of an IPCEI project requires approval by the Commission's Directorate-General for Competition (Schmitz et al., 2025, pp. 10–11). In the future, the supranational grip on IPCEIs may even extend into their financing, as the European Commission's (2025c, p. 49) recently proposed European Competitiveness Fund would enable the Union to co-finance IPCEIs using its own resources. Schmitz et al. (2025, pp. 6–11) offer a more detailed account of the governance of IPCEIs.

IPCEIs contribute to the broader goal of the EU's industrial policy: boosting the competitiveness of sectors that are deemed strategic, by intervening in the economy (Arroyo, 2026; Seidl & Wuttke, 2026). In doing so, the EU reduces its dependence on other states in global value chains, strengthening the bloc's strategic autonomy (De Decker, 2023, p. 8; Gräf & Schmalz, 2023, p. 2; Jansen & Devroe, 2022). By now, the drivers of the EU's industrial policy turn are well understood (see e.g., Bora & Schramm, 2025; Di Carlo & Schmitz, 2023; Seidl & Schmitz, 2024). However, less is known about how these policies play out on the ground and how member states differ in using them (Bora et al., 2026). This article addresses this gap by analyzing under which conditions member states participate in IPCEIs, showing how they engage with the "poster child" of EU industrial policy (Schmitz et al., 2025, p. 1).

In recent years, scholars have studied the emergence and institutionalization of the IPCEI instrument (Eisl & Zurstrassen, 2025; Seidl & Lopes-Valença, 2025) and how it contributes to strategic identification in the EU (Seidl & Wuttke, 2026). Extant studies have also examined how IPCEIs contribute to the innovation and production of batteries (Gräf, 2024), microelectronics (Lavery & Lopes-Valença, 2025), and hydrogen (Machado et al., 2022, p. 83). More broadly, the literature has critically assessed the detrimental effects of this framework. In this regard, scholars demonstrate that IPCEIs exacerbate economic divergences between the Union's core and periphery (Lavery & Lopes-Valença, 2025; Lopes-Valença, 2024). The substantial administrative burden, originating from the strict conditionalities embedded in the IPCEI framework, has also been criticized (Schmitz et al., 2025). IPCEIs attract significant policy attention as well, evidenced by policy papers that map IPCEI state aid (Di Carlo et al., 2024; Eisl, 2022) and recommend improvements to the instrument (Eisl, 2022; Evroux, 2022; Poitiers & Weil, 2022).

As of late 2025, over 37 billion EUR in state aid has been approved for 11 projects, unlocking nearly 70 billion EUR in private investments (European Commission, n.d.-a). While previous accounts demonstrate that EU member states differ significantly in their participation in IPCEIs, we know less about what explains these large differences in potential market-distorting state aid (Di Carlo et al., 2024; Eisl, 2022). Lopes-Valença (2024) elaborates further on this issue by examining core–periphery divergences—yet, what explains this variation across *all* member states remains unclear. This article therefore poses the question: Under which conditions do EU member states provide state aid for IPCEIs? It contributes to the literature on EU industrial policy by providing a nuanced analysis of the determinants of EU member states' IPCEI state aid. As policymakers argue that IPCEIs should take up a bigger role in the EU's industrial policy, understanding the drivers of these subsidies is important (Draghi, 2024, pp. 13, 48, 54). In his report on the future of the Union's single market, Enrico Letta even suggests that "for many of the EU's industrial policy ambitions, the IPCEI model could serve as a blueprint" (Letta, 2024, p. 40).

Building on the literatures on industrial policy, geoeconomics, and state aid, the next section presents eight hypotheses as to how political-economic conditions impact the IPCEI subsidies of member states. In Section 4, these conditions and the outcome (IPCEI state aid or the lack thereof) are operationalized.

3. Hypotheses: Political-Economic Conditions Shaping IPCEI State Aid

Before the hypotheses are outlined, two caveats are in order. First, member states are treated as unitary actors. Scholarship on corporate geoeconomics and industrial policy has made great inroads into the interests, strategies, and impact of private actors on these policies (see e.g., Choer Moraes & Wigell, 2022; E. Schneider,

2023). This analysis does not explicitly address them, as member states are the units of analysis. Nevertheless, private actors do play an indirect role in some hypotheses. For example, countries with an export-led growth model (Hypothesis 4) might fund IPCEIs as exporters lobby the government to participate in projects because this strengthens their competitiveness. Second, hypotheses are not presented in a probabilistic way, but in set-theoretic terms. This is due to the nature of qualitative comparative analysis (QCA), a method that seeks to uncover the causally necessary and sufficient conditions of an outcome, rather than statistical inference (Mello, 2021, pp. 20–21, 48). Table 1 summarizes the eight political-economic conditions and the hypotheses about their impact on member states' IPCEI participation.

Table 1. Political-economic conditions and hypotheses.

Condition	Hypothesis: ...results in a higher amount of IPCEI state aid.
1. Size of the economy	A large economy...
2. Fiscal stress	Low fiscal stress...
3. Administrative capacity	High administrative capacity...
4. Export-led growth model	An export-led growth model...
5. Presence of national champions in IPCEI sectors	A strong presence of national champions in IPCEI sectors...
6. Government prioritization of economic growth versus environmental protection	Prioritization of environmental protection by the government...
7. Exposure to Chinese FDI	Low exposure to Chinese FDI...
8. Past state aid spending	A high level of past state aid spending...

There is scholarly consensus that high fiscal capacity enables a country to provide state aid (Crössmann & Mause, 2015; Di Carlo et al., 2024; Eisl, 2022; Gràcia et al., 2023). Here, fiscal capacity is differentiated into two concepts: the absolute size of a country's economy and the fiscal stress it is confronted with. The former refers to the sheer size of the economy (i.e., a country's GDP), whereas the latter pertains to a state's ability to allocate fiscal resources, given its fiscal constraints. Previous research has demonstrated that—in absolute terms—large economies grant significantly more industrial policy subsidies than small(er) ones (Di Carlo et al., 2024). This also plays out in IPCEIs through two mechanisms. First, IPCEI projects impose a notoriously heavy burden on national administrations and participating firms (Schmitz et al., 2025). This incentivizes member states to grant more subsidies to ensure that the substantial administrative effort is worthwhile. Second, although the IPCEI framework entails stronger conditionalities than other EU state aid instruments, it simultaneously allows for higher aid intensities, which further encourages the provision of larger amounts of subsidies (Schmitz et al., 2025). Heavy administrative burdens and more generous allowed aid intensities thus result in higher IPCEI aid amounts vis-à-vis other state aid instruments—amounts that are more easily mobilized and managed by large economies than by smaller ones. Hence, the size of a member state's economy strongly impacts its participation in IPCEIs:

Hypothesis 1: A large economy results in a higher amount of IPCEI state aid.

However, size is not all that matters. Policymakers often criticize the EU's industrial policy as "a game of the deepest pockets" (Gayet & Riffaud, 2022; see also Draghi, 2024, p. 12; Letta, 2024, pp. 11–12). Indeed, scholars have demonstrated that fiscal stress restrains a country's ability to provide state aid (Crössmann & Mause, 2015; Eisl, 2022; Gràcia et al., 2023). Fiscal constraints are not confined to a high debt ratio, as states can finance their investments through other means, for example by borrowing on financial markets or

leveraging off-balance-sheet instruments (Endrejat, 2026). Moreover, IPCEI state aid can also be expended using funds of NextGenerationEU's Recovery and Resilience Facility (RRF), helping out member states with budgetary constraints (Agnolucci, 2022). Nevertheless, previous research has confirmed the constraining impact of fiscal stress on IPCEI subsidies, as core–periphery divergences in participation have been attributed to differing fiscal capacities (Lavery & Lopes-Valença, 2025; Lopes-Valença, 2024; Schmitz et al., 2025):

Hypothesis 2: Low fiscal stress results in a higher amount of IPCEI state aid.

While "deep pockets" are needed to provide subsidies, Raudla et al. (2025) complement that these funds only lead to policy change if they are adequately managed. Indeed, the effectiveness of industrial policy is heavily influenced by domestic institutions (Medve-Bálint & Šćepanović, 2020). This holds especially true for IPCEIs, which are infamous for their "insane" notification processes and information requests (Schmitz et al., 2025, p. 16). Although the size of a member state's economy can enhance its administrative state capacity (see above), this is not necessarily the case. Conversely, a small economy does not preclude high administrative capacity. For instance, despite being the EU's sixth-largest economy, Poland exhibits significantly less regulatory quality than smaller economies, such as Estonia and Luxembourg (World Bank, 2025b). Administrative capacity is thus a key enabler in itself for member states' IPCEI subsidies:

Hypothesis 3: High administrative capacity results in a higher amount of IPCEI state aid.

The amount of IPCEI state aid member states expend depends not only on *supply* factors, such as size of the economy, fiscal stress, and administrative capacity; a country might also participate in a project to fulfill a certain policy goal, such as sustaining economic growth through exports, supporting domestic firms, increasing green investments, de-risking from China, or strengthening its grip on the economy through state aid. In other words, several *demand* factors may lead a state to participate in IPCEIs.

The EU's industrial policy is a response to the policy trilemma of simultaneously strengthening the Union's competitiveness, decarbonizing the economy, and fostering strategic autonomy (Tagliapietra & Veugelers, 2023, p. 19). However, Abels and Bieling (2024, p. 13) argue that the former prevails, as ecological and societal goals are subordinated to increasing economic competitiveness. This became evident during the Covid-19 pandemic, when member states mostly used the Temporary Framework on state aid to protect domestic manufacturers in difficulties, neglecting other policy goals, such as environmental protection (Agnolucci, 2022). Multiple scholars therefore conclude that industrial policy tools were primarily created to safeguard the Union's economic interests (De Ville & De La Cruz, in press; see also Bora & Schramm, 2025, p. 9; Meunier & Mickus, 2020). The importance of competitiveness—and the extent to which countries protect this through state aid—varies depending on the state's growth model (Baccaro & Pontusson, 2016; Éltető & Medve-Bálint, 2023; Győrffy, 2024). For the bloc's export-oriented economies, the EU's competitiveness is at the heart of their strategic interests (Baccaro & Höpner, 2022; Bora & Schramm, 2025). These countries aim to increase the competitiveness of their manufacturing sectors that "fell behind" to successfully export IPCEI technologies abroad, supporting economic growth (Seidl & Schmitz, 2024):

Hypothesis 4: An export-led growth model results in a higher amount of IPCEI state aid.

Although stimulating domestic manufacturing and exporting IPCEI technologies may support export-led growth, several scholars contend that this is not core to industrial policy. They argue that, throughout history, the main goal of industrial policies has been to create "national champions" (Bulfone, 2023, pp. 26–33; Warlouzet, 2019, p. 85). States fund and support their domestic firms, as their "success is believed to contribute to national power and prestige" (Bora, 2023, p. 1289). On the other hand, supporting large enterprises may also have a pragmatic reason. Smaller firms often lack the capacity to navigate the IPCEI process (Schmitz et al., 2025). Nevertheless, given the strong ties between states and their national champions, EU member states are expected to provide subsidies when "their" national champions are active in IPCEI sectors (Nicolini et al., 2016; Schito, 2021):

> Hypothesis 5: A strong presence of national champions in IPCEI sectors results in a higher amount of IPCEI state aid.

As stated above, several scholars argue that increasing competitiveness is the main goal of the EU's industrial policy, be it to establish a competitive export position or to support national champions. However, IPCEI state aid can be motivated by various ideological positions (Lindstrom, 2021; Schito, 2021). This debate on the ideological motivations underpinning (IPCEI) state aid is reflected in empirical indicators that assess this balance between motivations of economic growth and environmental protection, such as the Chapel Hill Expert Survey's (CHES) environment indicator (see below; Jolly et al., 2022a). Indeed, conservative governments may use subsidies to aid their business constituency—especially their national champions—or foster export-led growth (Crössmann & Mause, 2015; Nicolini et al., 2016). At the same time, green governments may leverage state aid to decarbonize the economy and protect the environment. IPCEIs are a major industrial policy tool through which the EU contributes to decarbonization (Draghi, 2024, p. 48; Letta, 2024, p. 39). Ninety-three percent of state aid provided under the IPCEI framework accelerates the green transition by boosting innovation in batteries, hydrogen, and microelectronics (own calculations based on European Commission, n.d.-a). The former two contribute directly to the energy transition through innovations in energy production and storage. The latter plays an indirect role: Chips are widely integrated in green and digital technologies. The hypothesis therefore assumes that member states participate in IPCEIs to decarbonize the economy, prioritizing environmental protection:

> Hypothesis 6: Prioritization of environmental protection by the government results in a higher amount of IPCEI state aid.

Others argue that the primary goal of IPCEIs is not to foster economic growth or to decarbonize the economy, but rather to strengthen the EU's security of supply (De Decker, 2023). Policymakers recognize these projects as a key instrument to increase the EU's strategic autonomy, especially in "strategically important sectors" (Draghi, 2024, p. 13; see also Letta, 2024, p. 40; Strategic Forum for IPCEIs, 2019, p. 4; Szczepański, 2020, p. 2). To avoid "malicious exploitations," the Union aims to reduce its dependence on other states, as disruption may harm its economic security (Eisl, 2022, p. 3; McNamara, 2023). In this regard, EU policymakers are especially wary of strategic dependence on Chinese technologies. Countries may participate in an IPCEI to support domestic production of clean technologies, as this decreases dependence on China. However, not all member states deem relying on China to be a problem: Openness to Chinese FDI is a point of contention within the EU (Chan & Meunier, 2021; Meunier, 2017). Central-European dependent market economies, most notably Hungary, have opened up their markets to Chinese FDI (Gáspár et al., 2023; Szunomár et al., 2017). These

states see the influx of Chinese FDI as a benefit, enabling them to build manufacturing capacity producing Chinese-designed technologies (Polyák, 2026, pp. 13–17). Providing IPCEI state aid thus depends on a strong will to de-risk from China, showcased by a low exposure to Chinese FDI:

Hypothesis 7: Low exposure to Chinese FDI results in a higher amount of IPCEI state aid.

Still others contend that the core change the EU's industrial policy turn brought about was its shift towards more "geo-dirigisme" (Seidl & Schmitz, 2024) and "market-making" (McNamara, 2023). However, European capitals do not agree on the desired level of government intervention in the economy. Some are more inclined to take the state route than others, who favor the market route. As such, countries with an interventionist tradition are more willing to provide state aid than their liberal-oriented peers, who prefer that firms seek funding through loans on financial markets (Lindstrom, 2021). For instance, France, given its history of dirigisme, is more open to subsidies than the Baltic countries, which are more reserved as they prioritize low sovereign debt levels. Countries with a dirigiste tradition, that have dispersed more state aid in the past, are therefore expected to embrace this "geo-dirigiste" turn more than their liberal peers:

Hypothesis 8: A high level of past state aid spending results in a higher amount of IPCEI state aid.

The differences in IPCEI funding across member states are characterized by multiple conjunctural causation—a complex interplay between these eight conditions (Mello, 2021, pp. 108–110; Ragin, 1987, p. 26). *Conjunctural causation* implies that the outcome (IPCEI state aid) is caused by combinations of conditions (explanatory factors). *Multiple causation* indicates that different combinations can produce the same outcome. For example, a strong presence of a country's national champions in IPCEI sectors may prompt a member state to participate in a project—but this might only materialize if the country has the administrative capacity needed to navigate the process (conjunctural causation). At the same time, there may be multiple causal pathways that explain participation (multiple causation). Besides the combination of a strong presence of national champions in IPCEI sectors with high administrative capacity, the combination of an export-led growth model and high state aid spending in the past may also explain participation.

QCA is well equipped to untangle this complex interplay between conditions. The following section therefore introduces a QCA-based research design to test these hypotheses. After justifying the methodological approach and case selection, the conditions and outcome are operationalized. Subsequently, the analysis presents the buildup of the truth table, out of which the parsimonious solution is derived. This QCA solution, detailing under which conditions EU member states participate in IPCEIs, is presented in the results section and then interpreted. The final section concludes.

4. Explaining Differences in IPCEI State Aid

4.1. Methodological Approach and Case Selection

As previous research has demonstrated, member states differ significantly in the amount of IPCEI state aid they provide (Di Carlo et al., 2024; Lopes-Valença, 2024). QCA is well suited to explain such a "divergence puzzle," where the outcome occurs in some cases but not in others (Haesebrouck, 2023, p. 212; see also Ragin, 1987, p. 26). This article therefore uses QCA to examine the participation of all 27 EU member states

in the IPCEI framework. The outcome under study is thus a country's state aid for IPCEIs. As of late 2025, the EU has approved 11 IPCEIs (European Commission, n.d.-a). The analysis studies IPCEI state aid granted between 2016 and 2024, covering all but one project: The second IPCEI in the health value chain (Tech4Cure) is excluded because it was approved after the start of the analysis. The participation of the UK and Norway is not studied because the article centers around the industrial policy of the EU. As the amount of subsidies in these three excluded cases accounts for only 1.4 percent of state aid provided under the IPCEI framework, the limitations of this approach are negligible.

4.2. Operationalization and Calibration

The outcome and the eight conditions outlined above are not categorical, but vary on a continuous scale. For example, the amount of IPCEI state aid provided is not categorically absent or present, as it can technically vary from zero to an infinite amount. The fuzzy-set version of QCA reflects this continuous variation in the analysis by operationalizing the outcome and conditions into fuzzy membership scores. These vary from 0 to 1, depending on the extent to which the condition or outcome is present in a case. The qualitative status of a case depends on its position towards the 0.5-threshold, which indicates whether a condition or outcome is either more present (fuzzy score > 0.5) or more absent (fuzzy score < 0.5). In this section, the outcome and conditions are operationalized and calibrated into fuzzy membership scores using the direct calibration method. For each indicator, theoretically or empirically informed thresholds are formulated for the 0-, 0.5-, and 1-fuzzy membership scores against which the raw data for each case are calibrated. Robustness checks were performed to ensure that the sensitivity ranges of the calibration thresholds are sufficiently wide. Within these ranges, the QCA solution remains the same (Oana et al., 2021, p. 146). A wider range indicates a less sensitive—and therefore more robust—calibration. The calibration and analysis are carried out using the QCA and SetMethods software packages (Dusa, 2019; Oana & Schneider, 2018) in R (R Foundation, 2024).

IPCEI state aid (the outcome) is operationalized as the overall participation depth ratio of a country (Lopes-Valença, 2024, pp. 6–8). To this extent, each member state's (*i*) share of the total (*EU*) IPCEI state aid is compared to the member state's (*i*) share of the *EU* GDP during the 2016–2024 period:

$$\text{participation depth ratio}_i = \frac{\frac{\sum \text{IPCEI state aid}_i}{\sum \text{IPCEI state aid}_{EU}}}{\frac{\sum \text{GDP}_i}{\sum \text{GDP}_{EU}}}$$

Discounting the share of provided state aid to each member state's share of EU GDP shows to what extent a country's contribution to the IPCEI is substantial. If the participation depth ratio is lower than one, a country's share in total IPCEI state aid is lower than its share in EU GDP. Put differently, a ratio lower than one indicates that the member state is underrepresented. Conversely, a case is overrepresented if its share in total IPCEI state aid is higher than its share in EU GDP. This is reflected in a participation depth ratio higher than one. Using absolute state aid figures would disrupt the analysis as large economies have more means to grant IPCEI state aid (see above). Data on IPCEI state aid were obtained from the decision letters of the European Commission (2018b, 2019b, 2021b, 2022b, 2022c, 2023c, 2023d, 2024b, 2024c, 2024d). GDP data were obtained through Eurostat (2025). The calibration thresholds for the fuzzy membership scores of 0, 0.5, and 1 are set at 0, 0.1, and 1. If an EU member state does not participate, the participation depth ratio is thus 0, resulting in a fuzzy score of 0. A participation depth ratio of 0.1 indicates that the country provides state aid

for the IPCEI, as its participation depth ratio is above 0. This therefore results in a fuzzy score of 0.5. When a state grants as much IPCEI state aid as its share in EU GDP—i.e., the participation depth ratio equals 1—this indicates a strong participation, resulting in a fuzzy score of 1.

The size of the economy (condition 1) is operationalized as a member state's mean real GDP between 2016 and 2024. The mean was calculated using 2015 chain-linked volumes to avoid distortion due to inflation. Data were obtained through Eurostat (2025). The calibration thresholds for the fuzzy membership scores of 0, 0.5, and 1 are set at 0, 100 billion, and 1,000 billion EUR. The EU's smallest economies, such as Malta, Cyprus, and the Baltic states, therefore receive a fuzzy score lower than 0.5. Medium to large economies thus receive a fuzzy score between 0.5 and 1. A fuzzy score of 1 is attributed to the bloc's largest economies, namely Germany, France, Italy, and Spain.

Fiscal stress (condition 2) is operationalized using the S1 indicator of the European Commission's debt sustainability monitors (European Commission, 2017, 2018a, 2019a, 2020, 2021a, 2022a, 2023a, 2024a, 2025a). This indicator mostly ranges between −4 and 8, quantifying the fiscal effort needed to bring the debt-to-GDP ratio to 60 percent by 2070 (European Commission, 2025a, p. 60). This measure captures different aspects of fiscal capacity, as it factors in the structural primary balance, debt ratio, debt service costs, and future ageing costs. For each case, the mean S1 indicator was computed over the 2016–2024 period. The thresholds for fuzzy membership scores of 0, 0.5, and 1 are set at 0, 2, and 6, which reflect a low, medium, and high risk for debt sustainability.

Administrative capacity (condition 3) is proxied as the share of allocated 2014–2020 European Structural and Investment Funds that member states had spent by the end of 2020. Previous research has revealed a strong correlation between administrative capacity and absorption capacity of EU funds (Bachtrögler, 2024; Incaltarau et al., 2020; OECD, 2020). The latter is therefore used as a proxy for the former. Concretely, the fuzzy membership score thresholds are placed at 0, 50, and 100 percent. Data were obtained through the European Commission's (2025b) database.

The export-led growth model (condition 4) is measured by a member state's growth contribution of exports, expressed as a percentage of GDP (Baccaro & Hadziabdic, 2024). This indicator is based on data for the 2009–2018 period. The calibration thresholds for the fuzzy membership scores of 0, 0.5, and 1 are set at 0, 50, and 100. The midpoint was set at 50 percent, as this indicates the country being "strongly reliant" on exports (Baccaro & Hadziabdic, 2024, p. 1335).

The presence of national champions in IPCEI sectors (condition 5) is operationalized by leveraging the EU top-800 Industrial R&D Investment Scoreboard (European Commission, n.d.-d). By focusing on R&D rather than revenue, this approach captures both established and emerging industry leaders. For each case, the number of firms in the scoreboard that are based in the member state is counted. All nine scoreboards across the 2016–2024 period are analyzed; companies that have been part of the list for multiple years are only counted once. To align with the focus of the article, only firms active in IPCEI sectors are considered. The thresholds for fuzzy membership scores of 0, 0.5, and 1 are set at 0, 10, and 50 based on empirical knowledge: More than half of member states have zero, one, or two national champions active in IPCEI sectors and listed on the scoreboard. A second group has between 10 to 50 firms listed. Only Germany and France—the EU's biggest economies—have more than 50 national champions active in IPCEI sectors.

The first group is thus attributed a fuzzy score lower than 0.5, while the second group receives a fuzzy score higher than 0.5. Germany and France have a fuzzy score of 1.

The government prioritization of economic growth versus environmental protection (condition 6) is calculated as the weighted ideological position of the government coalition, by summing the ideological position (ip) of each political party (i, for all n parties), weighted by its share in seats (s) of the total government seats (gs):

$$\text{weighted coalition ideology} = \sum_{i=1}^{n} \frac{s_i \, ip_i}{gs}$$

For governments with multiple coalitions over the 2016–2024 period, this formula is applied separately to each coalition, after which the resulting ideology scores are weighted by the number of years in office and averaged across the nine-year period. Data on the government composition and seat distribution in parliament were obtained through the ParlGov database (Döring & Manow, 2024). A party's ideological position is operationalized through the environment indicator of CHES, which varies between 0 and 10 (Jolly et al., 2022b, p. 28). On this scale, CHES distinguishes a preference for environmental protection over economic growth (0–5) versus a preference for economic growth over environmental protection (5–10). By leveraging this scale, the analysis clarifies the government's motivation behind IPCEI state aid. A lower score indicates a motivation to fund IPCEIs for reasons of environmental protection, while a higher score points to motivations of economic growth. The thresholds for fuzzy membership scores of 0 and 1 are set at 0 and 10. The 0.5-midpoint is set at 5, which signifies a neutral stance on the 0–10 scale.

Exposure to Chinese FDI (condition 7) is operationalized as the share of incoming Chinese FDI of a country's GDP during the 2016–2024 period. FDI flows were only included if they targeted sectors relevant to IPCEIs. For each member state, the amounts of Chinese FDI of each year (i) over the 2016–2024 period are deflated to 2015 USD and summed, after which the amount is divided by the sum of GDP over the same period (in 2015 USD):

$$\text{share}_{\frac{\text{FDI}}{\text{GDP}}} = \frac{\sum \frac{\text{FDI}_i \times \text{deflator}_{2015}}{\text{deflator}_i}}{\sum \text{GDP}_{i,\ 2015\ \text{USD}}}$$

FDI data were obtained through the database of Rhodium Group (2025), GDP and deflator data through the World Bank (2025a). The thresholds for the fuzzy membership scores are set at 0, 0.1, and 0.3 percent. These thresholds are empirically motivated: Hungary's industrial policy is strongly based on attracting Chinese FDI, approaching an FDI-to-GDP share of 0.3 percent (Gáspár et al., 2023). This is therefore set as the upper threshold. Member states with an FDI-to-GDP share below 0.1 percent are attributed a low exposure to Chinese FDI (fuzzy score < 0.5). Conversely, countries with a share above 0.1 percent are attributed a fuzzy score higher than 0.5.

Past state aid spending (condition 8) reflects state aid dispersed between 2000 and 2016, expressed as a share of GDP. To this extent, the sum of the country's state aid between 2000 (i) and 2016 (in 2020 constant prices) is divided by the sum of the yearly GDP of that country between 2000 (i) and 2016 (in 2020 constant prices):

$$\text{past state aid spending} = \frac{\sum_{i=2000}^{2016} \text{state aid}_i}{\sum_{i=2000}^{2016} \text{GDP}_i}$$

State aid data were obtained through the European Commission's (2025d) State Aid Scoreboard, excluding subsidies for agriculture and fisheries. GDP data were obtained through Eurostat (2025). The thresholds for fuzzy membership scores of 0, 0.5, and 1 are set at 0, 0.6, and 2 percent. After all, the upper-level threshold has in previous research been deemed crisis-level state aid (Julien-Vauzelle & Négrin, 2025, pp. 1–2). The 0.5-threshold is empirically motivated: Industrial policy literature frequently highlights France as the prime example of dirigisme, exemplified in strong government intervention in the economy through subsidies (see e.g., Bora, 2024; Seidl & Schmitz, 2024). By setting this threshold at 0.6 percent, it is ensured that France is attributed a strong past of state aid spending.

Table 2 summarizes the operationalization of the outcome and the hypotheses.

Table 2. Operationalization of hypotheses and outcome.

Outcome	Operationalization
IPCEI state aid	Participation depth ratio > 0.1
Hypothesis: ...results in a higher amount of IPCEI state aid.	
1. A large economy...	GDP > 100 billion EUR
2. Low fiscal stress...	Low fiscal effort needed for debt sustainability over medium term (S1 indicator < 2)
3. High administrative capacity...	ESIF absorption > 50%
4. An export-led growth model...	Growth contribution of exports to GDP > 50%
5. A strong presence of national champions in IPCEI sectors...	> 10 firms based in country in EU top-800 R&D Investment Scoreboard in IPCEI sectors
6. Prioritization of environmental protection by the government...	Government preference for environmental protection (ideological score < 5 on a 0–10 scale)
7. Low exposure to Chinese FDI...	Share of incoming Chinese FDI in GDP in IPCEI sectors < 0.1%
8. A high level of past state aid spending...	State aid as share of GDP > 0.6% between 2000–2016

Notes: ESIF = European Structural and Investment Funds; data sources are cited in the main text.

The following section describes the results of the fsQCA analysis. First, the composition of the truth table is described, out of which the parsimonious solution is derived. This QCA solution, detailing under which conditions EU member states participate in IPCEIs, is then interpreted.

4.3. Analysis and Results

As the article aims to explain under which conditions EU countries provide state aid for IPCEIs, the following sections only discuss the truth table and solution for the presence of the outcome. The truth table (available in the Supplementary Material) groups the 27 cases based on their scores on the eight conditions and the outcome. The presence or absence of the outcome is determined by the consistency scores of the rows in the truth table. The consistency measure "indicates the extent to which a combination of conditions consistently leads to" the outcome (Haesebrouck & van Immerseel, 2020, p. 12). C. Q. Schneider and Wagemann (2012, p. 279) advise to only consider the outcome present in rows with a consistency higher than 0.75. In addition,

rows that contain cases in which the outcome is absent (indicated by 0) should not be coded as having the outcome present (1). In line with these standards of good practice, the consistency cut-off point is therefore placed at 0.87.

Assigning a row's outcome based on its consistency score implies that this may not always match the outcome score of each case in the row. In those cases, a row is attributed an outcome score of 0, while the participation depth ratio of some of the cases in it is above the threshold for IPCEI state aid, indicating that the outcome is *present* in this case—which contradicts the outcome score of the row (*absent*). The truth table contains three such contradictory cases, that are not explained by the analysis: Croatia, Estonia, and Malta. The explanation for their IPCEI participation is discussed in greater detail when interpreting the results (see below). Along with its consistency, the truth table also reports the proportional reduction in inconsistency (PRI) for each row. This measure indicates to what extent the combination of conditions listed is "both a subset of the outcome and a subset of [the absence of] the outcome" (Mello, 2021, pp. 183–189). In practical terms, it provides guidance when interpreting which combinations of conditions are sufficient for the outcome—the consistency and PRI scores of these combinations should not substantially differ from each other.

The next step is the minimization of the truth table by applying Boolean algebra. This produces solutions that explain under which combination of conditions EU countries grant IPCEI state aid. Here, the parsimonious solution is presented, as this is the only solution that only includes conditions which have proven to be causally relevant in producing the outcome (Baumgartner, 2015, p. 854). The parsimonious solution is presented in Table 3.

Table 3. Parsimonious solution.

Combination of conditions		Consistency	PRI	Coverage		Cases
				Raw	Unique	
1.	gdp*~fdi	0.92	0.89	0.61	0.04	DE, FR, IT, ES, PL, FI, PT, RO, CZ, NL, AT, BE, DK
2.	gdp*aid	0.92	0.87	0.52	0.00	FR, FI, SE, PT, RO, CZ, PL, DK, DE, HU
3.	growenv*fiscstress	0.92	0.88	0.31	0.00	IT, FR, BE, SK, EL, RO
	Solution	0.90	0.87	0.70		

Notes: gdp = size of the economy; fdi = exposure to Chinese FDI; aid = past state aid spending; growenv = government prioritization of economic growth versus environmental protection; fiscstress = fiscal stress; ~ signifies the absence of the condition; contradictory cases are HR, EE, and MT (not shown); due to the way fuzzy membership scores of cases are calculated, one case can simultaneously be part of several rows.

The parsimonious solution consists of three configurations, which together explain under which conditions EU member states participate in IPCEIs. A member state provides state aid for these projects if:

1. Its economy is large and its exposure to Chinese FDI is low;
2. Its economy is large and its level of past state aid spending is high;
3. Its government prioritizes economic growth and it is under high fiscal stress.

These explanations are trustworthy as their consistency (0.92) and PRI scores (≥ 0.87) are high, with little difference between them (Mello, 2021, p. 189). Moreover, the overall solution also exhibits high consistency

(0.90) and PRI (0.87) scores. The QCA analysis explains 70 percent of the variation in IPCEI state aid across countries, offering a thorough insight into the conditions that impact their IPCEI participation (solution coverage = 0.70). In only three cases could it not be explained why these member states funded projects (Croatia, Estonia, and Malta).

4.4. Interpretation

The analysis offers three explanations as to what drives EU member states to provide state aid for IPCEIs (see Table 3). First, a sufficiently large economy and low exposure to Chinese FDI lead to IPCEI state aid (Germany, France, Italy, Spain, Poland, Finland, Portugal, Romania, Czechia, the Netherlands, Austria, Belgium, and Denmark). Second, a sufficiently large economy combined with a high level of past state aid spending also leads to IPCEI participation (France, Finland, Sweden, Portugal, Romania, Czechia, Poland, Denmark, Germany, and Hungary). These explanations echo previous research, confirming that the size of a country's economy matters for successful IPCEI participation (Di Carlo et al., 2024; Eisl, 2022). The results also demonstrate that IPCEIs attract member states that view Chinese investments with suspicion and are keen on de-risking (De Decker, 2023; Schmitz & Seidl, 2023). Countries with low exposure to Chinese FDI engage in these projects, but only if their economy is sufficiently large to sustain participation (configuration 1). Furthermore, by highlighting the importance of a country's past state aid spending, configuration 2 confirms that the EU—and some of its member states—are embracing market-making and geo-dirigiste practices (Bulfone et al., 2026; McNamara, 2023; Seidl & Schmitz, 2024). Again, this only leads to IPCEI participation if the state's economy is sufficiently large.

The results highlight the importance of a sufficiently large economy, low exposure to Chinese FDI, and a high level of past state aid spending. However, QCA cannot explain how these causal factors play into each other. Building on the literatures on EU industrial policy, geoeconomics, and state aid, one would expect that countries that cast a wary eye on Chinese investments or have dirigiste traditions want to participate in an IPCEI (Chan & Meunier, 2021; Di Carlo et al., 2024; Eisl, 2022; McNamara, 2023; Seidl & Schmitz, 2024). Low exposure to Chinese FDI and a tradition of state aid thus form the primary motivation to grant IPCEI state aid. However, these ambitions can only materialize if the country's economy can sustain participation. In causal terms, the size of the country's economy may mediate the impact of exposure to Chinese FDI and state aid tradition on IPCEI participation. Future research could examine these mechanisms in detail by process-tracing these cases.

A third explanation for IPCEI participation posits that government prioritization of economic growth and high fiscal stress lead to IPCEI participation (Italy, France, Belgium, Slovakia, Greece, and Romania). Contrary to the theoretical expectation formulated in the hypothesis, a member state grants IPCEI state aid if its government prioritizes growth over environmental protection. Similarly, fiscal stress contributes to—rather than inhibits—IPCEI participation. Although this explanation contradicts theoretical expectations, this combination of conditions provides a useful explanation for both technical and theoretical reasons. Technically, on the 0–10 scale that maps each country's government priority, five out of the six cases score between 5 and 6 (see Supplementary Material). Slovakia forms a sole exception here (growenv = 6.45). Given that the midpoint of 5 indicates a neutral position, these scores reflect only a weak prioritization of economic growth over environmental protection. In other words, governments in these cases do not strongly oppose green investment through IPCEIs.

Theoretically, the combination of prioritizing economic growth and high fiscal stress also constitutes a plausible explanation for IPCEI participation. For governments that value economic growth, fiscal stress might function as an impetus to invest in IPCEIs, as this public investment stimulates economic growth—which decreases the public debt ratio. Moreover, member states can finance IPCEI state aid through the RRF, mitigating the impact of budgetary constraints. Out of the six cases covered by this configuration, four are amongst the top NextGenerationEU beneficiaries. Slovakia, Greece, Romania, and Italy each received over 6.7 percent of their GDP in RRF loans and grants, whereas the EU's average is 3.6 percent (European Parliamentary Research Service, n.d.). Again, future research could examine these causal processes in detail to clarify how government preferences and fiscal stress play into each other.

The QCA analysis explains 70 percent of state aid provided under the IPCEI framework. Only in the cases of Croatia, Estonia, and Malta could IPCEI participation not be explained. In line with standards of good practice, these cases are discussed in greater detail. The three cases share two characteristics that explain their IPCEI state aid: All three small economies chose to prioritize one value chain, funding a national champion or an industry leader for strategic or economic reasons. First, the three deviant cases are small economies that invested in only one or two IPCEI projects within the same value chain. As the largest among the three, Croatia's economy was still the seventh smallest economy in the Union. As smaller economies are less diversified, they are forced to make strategic choices and lay all their eggs in one basket—explaining why all three countries funded no more than two projects in one value chain (di Giovanni & Levchenko, 2012). This is confirmed by the participation depth ratios for their individual projects, which reflect whether a country's share in IPCEI state aid is higher (> 1) or lower (< 1) than its share in EU GDP (see above; Lopes-Valença, 2024). These ratios exceeded 4 in every IPCEI Croatia, Estonia, and Malta subsidized, indicating a strong overrepresentation vis-à-vis the size of their small economies (see Supplementary Material).

Second, in all three cases, governments leveraged the IPCEI framework to support national champions or industry leaders for strategic or economic reasons. Estonia provided state aid to Elcogen, Skeleton Technologies, and Stargate Hydrogen Solutions. These three Estonian national champions manufacture electrolyzers and hydrogen fuel cells, which have become a strategic priority after Russia's full-scale invasion of Ukraine (European Commission, 2022c, 2024d; Ministry of Economic Affairs and Communications, 2023, p. 7). The combination of full dependence on Russian gas and lack of energy storage space has compelled Estonia to support the Hy2Tech and Hy2Move IPCEIs that develop hydrogen energy storage (European Commission, n.d.-c; International Energy Agency, 2023). Malta supported STMicroelectronics, an industry leader in the semiconductor industry (European Commission, 2023c). The industry carries huge economic importance for the country: It provides over 4,000 jobs and accounts for a third of all Maltese goods exports ("STMicroelectronics Malta facility officially recognised," 2025). Croatia subsidized Rimac Automobili, the Croatian automotive manufacturer and national champion, under the EuBatIn IPCEI (European Commission, 2021b, p. 17). Similarly to Malta, the economic performance of Rimac Automobili is of profound importance to Croatia's economy. By subsidizing the national champion through the EuBatIn project, the Croatian government created 10,000 jobs ("Croatia as part," 2021; European Commission, n.d.-b).

Concluding, the results highlight the importance of the size of the country's economy, its exposure to Chinese FDI, and past state aid spending for member states' IPCEI participation. Interestingly, fiscal stress does not prevent countries from providing IPCEI state aid if the government prioritizes economic growth. The final

section discusses the implications of these findings for the literatures on IPCEIs and EU industrial policy, and suggests avenues for future research.

5. Conclusion

The EU has embraced an "assertive industrial policy" to spur its competitiveness, reduce technological dependencies, and decarbonize the economy (Breton, 2022; see also Tagliapietra & Veugelers, 2023, p. 13). IPCEIs are the "poster child" of this industrial policy (Schmitz et al., 2025, p. 1). Previous research has repeatedly highlighted that member states differ significantly in their participation in IPCEIs and the state aid they provide under this framework (Di Carlo et al., 2024; Eisl, 2022; Lopes-Valença, 2024). While extant studies attribute these divergences to differing fiscal capacity among member states, this alone does not explain the puzzling variation in IPCEI state aid. The present article therefore examined under which conditions EU member states provide state aid for IPCEIs.

An fsQCA tested eight hypotheses derived from the literatures on industrial policy, geoeconomics, and state aid. The findings show that an EU member state participates in IPCEIs if (a) its economy is large and its exposure to Chinese FDI is low, (b) its economy is large and its level of past state aid spending is high, or (c) its government values economic growth and is under high fiscal stress. The results echo previous research on state aid for IPCEIs and industrial policy, demonstrating the importance of the size of the country's economy (Di Carlo et al., 2024; Eisl, 2022), exposure to Chinese FDI (De Decker, 2023; Schmitz & Seidl, 2023), and state aid tradition (McNamara, 2023; Seidl & Schmitz, 2024). On the other hand, the article nuances the detrimental effect of fiscal stress. Although IPCEIs do not manage to bridge the core–periphery divergences caused by differing fiscal capacities between member states (Lavery & Lopes-Valença, 2025; Lopes-Valença, 2024), fiscal stress alone does not prevent countries from providing IPCEI state aid if the government prioritizes economic growth. Instead, the sheer size of a country's economy often functions as a key enabler of IPCEI state aid. This suggests that economic size—rather than fiscal stress—plays a key role in shaping IPCEI participation.

This article contributes to the expanding literature on the EU's IPCEIs with a nuanced analysis of member states' state aid for these projects (Di Carlo et al., 2024; Gräf, 2024; Lavery & Lopes-Valença, 2025; Lopes-Valença, 2024; Schmitz et al., 2025; Seidl & Lopes-Valença, 2025; Seidl & Wuttke, 2026). It adds to previous research that mainly highlighted fiscal constraints by also pointing to the importance of the size of the country's economy, its exposure to Chinese FDI, past state aid spending, and the ideological orientation of its government. The analysis nuances the impact of fiscal capacity, showing that the sheer size of a country's economy—rather than fiscal stress—profoundly shapes its participation in IPCEIs (cf. Di Carlo et al., 2024; Eisl, 2022). This reinforces concerns about the detrimental effects of the EU's industrial policy on the integrity of the single market (De La Cruz et al., 2026; Di Carlo et al., 2024; Di Carlo & Schmitz, 2023; Eisl, 2022; Lavery & Lopes-Valença, 2025; Lopes-Valença, 2024; Wigger, 2023). In line with the goal of this thematic issue, the article thus sheds light on how EU industrial policy—in this case, IPCEIs—plays out on the ground (Bora et al., 2026).

The findings of this study provide enticing avenues for future research. The QCA points to the importance of the size of the country's economy, its fiscal stress, exposure to Chinese FDI, past state aid spending, and ideological preferences of its government. Methodologically, it can however not detail how these conditions are sequenced. Future research could therefore examine these causal processes more in depth, studying

how these factors interact with each other. In addition, scholars of industrial policy could build on this state-centric analysis by studying how private actors shape member states' industrial policy preferences. Future accounts could thus strengthen our understanding of these drivers by "bringing private actors back in" (cf. Evans et al., 1985).

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The author declares no conflict of interests.

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Microsoft 365 Copilot was consulted while programming in R to generate code snippets and refine the script. Each line of code has been checked by the author.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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