THE POLITICAL IMPACT OF AI THREAT PERCEPTION: A STUDY OF EUROSCEPTICISM IN EUROPE

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Abstract: As the impacts of artificial intelligence (AI) and automation on labour markets and other economic domains become increasingly inevitable, so too do citizens' reactions to these rapid disruptions to the economic *status quo*. This paper examines whether perceiving AI as a future economic threat is associated with support for supranational institutions and international cooperation, using Eurosceptical attitudes as a proxy. The results reveal that the relationship between AI threat perception and Euroscepticism varies depending on how the AI threat is conceptualized and measured in the econometric models. Overall, forward-looking perceptions of AI's economic impact show significant impacts in the likelihood of holding latent Eurosceptical sentiments.

Keywords: Digital transformation, SBTC, RBTC, labour market, Euroscepticism, public choice

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1. Introduction

Innovation is a central mechanism of economic growth and a key contributor to long-term improvements in population well-being. However, it often comes associated with profound changes in the economic *status quo*. Artificial intelligence (AI) is major contributor to developments in the emerging sixth wave of technological change[19]. Although the discussion is not new, the public release of ChatGPT in 2022 has brought renewed attention to the potential impact of AI on the labour market. The fact is that, with the mass adoption of AI tools, many professions now face a heightened risk of job displacement due to automation[20].

Therefore, this shift in labour market dynamics is likely to influence individuals' perceptions of economic uncertainty, which may, in turn, affect their voting behaviour[21].

This article investigates whether perceived threats from AI to employment influence individuals' propensity to hold Eurosceptic views. In this context, Euroscepticism is interpreted as a proxy for a broader unwillingness to support international cooperation. The paper contributes to the literature on automation and political preferences by being, to the best of the author's knowledge, the first to examine the link between perceived prospective economic uncertainty, specifically related to AI-driven labour market changes, and support for transnational institutions such as the European Union.

By analysing this relationship, this study sheds light on how technological change may reshape perceptions about the economy and attitudes toward supranational governance. Understanding this connection is particularly relevant in the current context of rapid technological advancement and growing Eurosceptic populism[22] across Europe.

The paper is organized as follows: Section 2 reviews key findings from the literature on automation, job displacement, and the impact of perceived economic uncertainty on voting preferences for Eurosceptic parties. Section 3 outlines the data sources and describes the empirical model employed in the analysis. Section 4 presents the main findings, and Section 5 discusses their implications.

2. Literature review

Technological change has long been recognized as a major force shaping labour market outcomes, particularly regarding employment patterns and wage inequality. A substantial body of research has examined how advances in automation and information technologies influence the relative demand for labour across different groups.

The skill-biased technological change (SBTC) hypothesis argues that technological progress increases the relative demand for skilled workers[23], and that wage differentials among high and low-skilled workers depend on the supply and demand of said skills in the labour market: the so-called *race* between education and technological progress[24]. Empirical studies have provided strong support for this view, documenting rising returns to education and skills in the U.S.[25].

[19] Uctu, Ramazan; Tuluce, Nadide Sevil Halici; Aykac, Mustafa (2024). *Creative destruction and artificial intelligence: The transformation of industries during the sixth wave. In* Journal of Economy and Technology, vol. 2, pp. 301.

[20] Acemoglu, daron; Restrepo, pascual (2018). *Artificial Intelligence, Automation and Work.* Report from NBER, January, p. 3.

[21] Anelli, massimo; Colantone, Italo; Stanig, piero (2019). *We Were The Robots: Automation and Voting Behaviour in Western Europe*. Report from Centre of Research & Analysis of Migration, Discussion Paper 17/19, July, p. 7.

[22] Algan, yann; guriev, Sergei; papaioannou, elias; Passari, Evgenia (2017). *The European Trust Crisis and the Rise of Populism.* Report from Brookings Institution Press, pp. 325-326.

[23] Tingerben, jann (1974). *Substitution of graduate by other labour. In* Kyklos: international review for social sciences, p. 224.

[24] Goldin, claudia; Katz, lawrence f. (2007). *The Race Between Education and Technology: The Evolution of U.S. Educational Wage Differentials, 1890 to 2005.* Report from NBER, p. 26.

[25] Katz, Lawrence F.; Murphy, kevin M. (1992). *Changes in Relative Wages, 1963-1987: Supply and Demand Factors. In* The Quarterly Journal of Economics, vol. 107 no. 1, pp. 36-37.
Katz, Lawrence F.; Loveman, gary W.; Blanchflower, David G. (1995). *A Comparison of Changes in the Structure of Wages in Four OECD Countries*. Published in Differences and Changes in Wage Structures, University of Chicago Press, pp. 26-28.
Autor, David H.; Katz, Lawrence F.; Krueger, alan B. (1998). *Computing*

Comparable trends have also been observed in other advanced economies[26].

Despite its explanatory power, the SBTC framework struggles to fully account for the observed decline in middle-skill jobs and the varied effects of technology across occupations. To address these limitations, a task-based approach has emerged, shifting the focus from broad skill categories to the specific tasks that workers perform (routine-bias technological change, RBTC). RBTC distinguishes between routine and non-routine tasks, highlighting that technological progress tends to automate routine tasks more readily[27]. Building on this framework, authors argue that automation substitutes for routine, middle-skill jobs while complementing non-routine analytical and interpersonal tasks[28].

This task-oriented perspective has gained considerable support of empirical evidence from the UK[29], EU[30], and U.S.[31], documenting a pronounced polarization in the labour market: employment and wages are declining in routine-task-intensive occupations, while both high-skill, non-routine jobs and low-skill, manual service roles are expanding.

Inequality: Have Computers Changed The Labour Market? In The Quarterly Journal of Economics, vol. 113, no. 4, pp. 1202-1203.

[26] Fitzenberger, bernd; Kohn, Karsten (2006). *Skill Wage Premia, Employment, and Cohort Effects: Are Workers in Germany All of the Same Type?* IZA Discussion Paper No. 2185, p. 24.

[27] Autor, David H.; Levy, Frank; Murnane, Richard J. (2003). *The Skill Content of Recent Technological Change: An Empirical Exploration. In* Quarterly Journal of Economics, vol. 118, no. 4, p. 1322.

[28] Acemoglu, Daron; Autor, David (2011). *Skills, Tasks and Technologies: Implications for Employment and Earnings.* Published in Handbook of Labor Economics, volume 4b, Elsevier, p. 1077.

[29] Goos, Maarten; Manning, Alan (2007). *Lousy and Lovely Jobs: The Rising Polarization of Work in Britain. In* The Review of Economics and Statistics, vol. 89, no. 1, pp. 131-132.

[30] Goos, Maarten; Manning, Alan; Salomons, Anna (2009). *Job Polarization in Europe. In* American Economic Review, vol. 99, no. 2, p. 11.

[31] Acemoglu, Daron; Autor, David (2011). *Skills, Tasks and Technologies: Implications for Employment and Earnings.* Published in Handbook of Labor Economics, volume 4b, Elsevier, p. 1157.

These transformations in the labour markets resulting from automation has not only reshaped employment patterns but is also likely to influence citizens' political perceptions on economic prospects and, therefore, their political attitudes.

Individuals' political preferences are shaped by their expectations of future economic outcomes[32], which are often subjective and influenced by personal beliefs[33]. In fact, there is evidence that citizens negative prospects in relation to the future motivate discontent towards EU institutions[34] and European integration[35], suggesting that anticipated economic decline fosters resistance to international cooperation and supranational governance. The literature indicates that these effects are amplified in the presence of perceived structural threats, under which citizens are more inclined to support authoritarian and nationalist policies[36], frequently promoted by populist Eurosceptic parties[37].

[32] Kahneman, daniel; Tversky, Amos (1979). *Prospect Theory: An Analysis of Decision under Risk. In* Econometrica, vol. 47, no. 2, pp. 288-289.

[33] Gabel, Matthew; Whitten, Guy D. (1997). *Economic Conditions, Economic Perceptions, and Public Support for European Integration. In* Political Behavior, vol. 19, no. 1, p. 84.

[34] Días-Lanchas, Jorge; Sojka, Aleksandra; Di Pietro, Fillipo (2021). *Of loosers and laggards: the interplay of material conditions and individual perceptions in the shaping of EU discontent. In* Cambridge Journal of Regions, Economy and Society, vol. 14, pp. 410-411.

Steenvoorden, Eefje H.; Wright, Matthew (2019). *Political Shades of "we": sociotropic uncertainty and multiple political identifications in Europe. In* European Societies, vol. 21, no. 1, p. 21.

[35] Gabel, Matthew; Whitten, Guy D. (1997). *Economic Conditions, Economic Perceptions, and Public Support for European Integration. In* Political Behavior, vol. 19, no. 1, p. 92.

[36] Hetherington, Marc J.; Suhay, Elizabeth (2011). *Authoritarianism, Threat, and American's Support for the War on Terror. In* American Journal of Political Science, vol. 55, no. 3, p. 556.
Watson, Barry; Law, Stephen; Osberg, Lars (2022). *Are Populists Insecure About Themselves or About Their Country? Political Attitudes and Economic Perceptions. In* Social Indicators Research, vol. 159, p. 690.

[37] García-sanchéz, Efraín; Turner-Zwinkels, Felicity; Kesberg, Rebekka; Marot, Medhi; Rodríguez-Baílon, rosa; Willis, Guillermo B.; Kuppens, Toon (2024). *Economic Threats, Political and National Identi-*

As AI is provoking mediatic and structural changes not only in the labour market but in other sectors, it is likely to be perceived as a threat, which can increase Eurosceptic[38] views, reducing EU citizens' support for its institutions and European integration.

Therefore, the hypothesis this study aims to test is the following:

> ***H1:*** *Individuals who hold negative perceptions of AI's future impact on economic outcomes are more likely to exhibit Eurosceptical attitudes.*

3. Data and Method

This study uses Eurobarometer 101.4 (2024) and 95.2 (2021) surveys, that among other topics, included questions regarding opinions on the future of AI. The data enabled the construction of a pseudo-panel comprising a total of 63,494 observations.

In both surveys, respondents were asked whether they believed that "AI and automation will create more jobs than they will eliminate." Additionally, Eurobarometer 95.2 asked respondents whether they thought "AI will impact our lives positively, negatively, or have no impact in 20 years". These two items were used to construct the dependent variables for the analysis.

The primary explanatory variable is a dummy coded as 1 if the respondent believes AI will eliminate more jobs than it will create. This variable serves as a proxy for perceiving AI as a future economic threat and is used in the main model. The second explanatory variable, used for robustness checks, is also a dummy coded as 1 if the respondent expects AI to have a negative impact on society's way of life. This robustness model tests whether the results of the main regression are sensitive to the operationalization of perceived AI-related threats.

The dependent variable for Euroscepticism was constructed based on respondents' answers to whether they have a "very positive, positive, negative, or very negative" image of the EU. A dummy variable was created, coded as 1 if the respondent expressed a negative or very negative perception, serving as a proxy for latent Euroscepticism.

The models use sociodemographic variables and economic indicators as controls.

For sociodemographic variables, the models include gender[39], age[40], education[41], political views[42], the type of professional activity[43],income, size of the respondents' cities, satisfaction with their life and the way the current state of things is in the respondents' country[44].

Data for the economic indicators was obtained in Eurostat and World Bank databases and were used as controls as objective economic outcomes are also likely to shape opinions towards the EU.

fication Predict Affective Polarization: Longitudinal Evidence from Spain. In International Review of Social Psychology, vol. 37, no. 1, pp. 10-14.

Gozgor, Giray (2022). *The role of economic uncertainty in the rise of EU populism. In* Public Choice, vol. 190, p. 242.

[38] The definition of Euroscepticism encompasses varying degrees of opposition to the EU, ranging from outright rejection of its institutions to conditional or limited support driven by dissatisfaction with its current political trajectory. Vasilopoulou; Sofia (2017). *Theory, concepts and research design in the study of Euroscepticism.* Published in The Routledge Handbook of Euroscepticism, pp. 3-4.

[39] Women might be less likely to support anti-establishment ideologies due to the nature of their political socialization, pushing them to be more tolerant and consensus-seeking.

Spierings, niels; Zaslove, Andrej (2017). *Gender, populist attitudes, and voting: explaining the gender gap in voting for populist radical right and populist radical left parties. In* West European Politics, vol. 40, no. 4, p. 826.

[40] Younger individuals are found to be more likely to be favourable to European integration due to their contact with the European institutions and positive economic outcomes of integration in formative years.

Fox, Stuart; Pearce, Sioned (2017). *The generational decay of Euroscepticism in the UK and the EU referendum. In* Journal of Elections, Public Opinions and Parties, vol. 28, no. 1, p. 32.

[41] Despite the mixed evidence in the literature, education is found to reduce the propensity of one holding Eurosceptic views due to socialization, assimilation of cosmopolitan values, among other factors.

Kunst, Sander; Kuhn, theresa; Van der Werfhorst, Herman G. (2020). *Does education decrease Euroscepticism? A regression discontinuity design using compulsory schooling reforms in four European countries. In* European Union Politics, vol. 21, no. 1, p. 36.

[42] It is expected that individuals supporting far-right and left countries align with Eurosceptic views, as these parties often push anti-EU agendas.

[43] To control for real risk of individuals' professions' automation.

[44] Individuals from bigger cities, that concentrate economic resources and labour opportunities, with more disposable income, and more satisfied with their life and national politics are less likely to perceive future economic threats, and, therefore, might be less likely to hold Eurosceptic views.

The models include GDP growth[45], inflation rate[46], unemployment[47] and house price index, and income inequalities measured by the Gini coefficient[48].

The models were estimated using the logistic regression method. The baseline model equation is provided below.

$$(1) Eurosc_{it} = \beta_0 + \beta_1 AI^{it} + \beta_2 X_{it} + \beta_3 Y_{it} + \varepsilon_{it}, i = 63.494; t = 2021,2024$$

Where represents the probability of individual i in year t having a positive opinion on EU institutions; the dummy for having a negative view regarding AI's impact on the labour market and the associated coefficient; represents the vector of sociodemographic controls and the correspondent vector of coefficients, that includes dummies that take the value 1 if individual i is a woman, supports the far-right or left, if his/her profession is vulnerable to displacement due to automation, has a positive opinion on the way democracy works in their country, if he/she is satisfied with his/her life, and if reporting not having troubles in paying his/her bills. It also includes categorical values for age[49], education[50] and individual i's perceived city size[51]. represents the vector of economic controls with the associated vector of coefficients. It includes GDP growth[52], inflation rate[53], unemployment rate[54], house price index[55] and Gini coefficient[56] for individual i's country in the years 2021 and 2024. All specifications include year and country dummies to control for year and country-specific effects.

The descriptive statistics table is provided below.

	(1)	(2)	(3)	(4)	(5)
	Number	Mean	Stand. dev	Min	Max
woman	63,483	0.524	0.499	0	1
age_cat	63,483	2.093	0.749	1	3
educ	63,272	2.061	0.715	1	3
AI	63,483	0.280	0.449	0	1
politics	63,483	0.148	0.355	0	1
csize	63,468	1.993	0.807	1	3
vulnerable	37,079	0.100	0.300	0	1
rich	63,483	0.663	0.473	0	1
lifesat	63,483	0.830	0.375	0	1
country sat	63,483	0.584	0.493	0	1
Eurosc	63,483	0.574	0.494	0	1
inf	58,303	3.056	2.493	0.500	58.50
gini	54,742	29.46	4.564	21.70	44.80
unemp	58,303	6.778	3.072	2.600	16.50
gdpg	58,298	4.731	3.837	-1.700	14.90
hp	50,092	4.426	4.670	-8.200	14.80

Table 1: Descriptive Statistics[57]

4. Results and discussion

Regressions' results are provided in the table below. Column (1) reports marginal effects for a logit model that includes a dummy for the vulnerability of individual i's professions to displacement by AI and automation[58] and no economic controls. The vulnerability dummy was removed from the model in Column (2) to assess whether this control was fundamental to the results. Column (3) reports the results for the model including economic controls, and Column (4) results when changing the proxy for AI threat, keeping GDP growth and inflation as economic controls.

Results show that AI perceptions are always strongly statisti-

[45] Country's aggregate performance impacts the perception of future economic threats (or their absence), which is likely to influence one's opinion regarding European integration.

[46] As monetary policy is managed at the EU level, low inflation is likely to enhance trust in and support for European institutions.

[47] High unemployment can deteriorate one's perception of future economic outcomes and increase perceived economic uncertainty, reducing one's propensity of supporting integration. Despite representing different threats, the same logic works for the house price index.

[48] The literature shows that income inequalities are positively correlated with Eurosceptical attitudes, as they decrease trust in political institutions.
Kuhn, Theresa; van Elsas, Erika; Hakhverdian, Armèn; Van der Brug, Wouter (2013). *An even wider gap in an even closer Union. Rising inequalities and euroscepticism in 12 West European democracies, 1976-2008.* GINI discussion paper 91, p. 14.

[49] 3 categories: 15-34 years old; 25-59 years old; 60+ years old.

[50] 3 categories: below education, secondary and above secondary education

[51] 3 categories: small, medium size and big city

[52] Eurostat (n.d.). *Real GDP Growth Rate – Volume.*

[53] Eurostat (n.d.). *HICP - annual data (average index and rate of change).*
World Bank (n.d.). *Inflation, consumer prices (annual, %).*

[54] Eurostat (n.d.). *Unemployment rate – annual data.*
World Bank (n.d.). *Unemployment, total (% of total labor force) (modeled ILO estimate).*

[55] Eurostat (n.d.). *Gini coefficient of equivalised disposable income.*

[56] Eurostat (n.d.). *House price index, deflated – annual data.*

[57] Information for gender, age, education, AI perceptions, political views, city size, profession's vulnerability to automation displacement, no difficulty in paying bills, life satisfaction, satisfaction with national democracy, Eurosceptical views, inflation, gini coefficient, unemployment, GDP growth and house price index.

[58] The variable considers individuals working in the agriculture and fishing sectors, and white-collar workers. The tasks performed in these professions can be easily automated as they are routine-based, therefore being likely to be displaced by automation according to the RBTC hypothesis.

cally significant predictors of Eurosceptic attitudes. As the adjusted improves with the inclusion of economic variables, they show as relevant in predicting the likelihood of one holding Eurosceptic views. The exclusion of these variables overestimated the coefficient associated with AI prospective views on Euroscepticism.

	(1)	(2)	(3)	(4)
AI jobs	-0.0634***	-0.0470***	-0.0410***	-
	(0.0259)	(0.0231)	(0.0271)	
AI life	-	-	-	0.0943*** (0.0279)
Socio-demographic controls	Yes	Yes	Yes	Yes
Economic controls	No	No	Yes	Yes
Year and country dummies	Yes	Yes	Yes	Yes
Observations	35,896	62,261	49,886	32,319
Adjusted	0.2154	0.2573	0.2845	0.2269

Table 2: Regressions' results
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The marginal effects indicate that perceiving AI as a labour market threat decreases the likelihood of individual *i* having a positive image of EU institutions, with effects ranging from 6.34 to 4.10 percentage points. These results align with the initial rationale that viewing AI as an economic threat may reduce support for international cooperation and EU-level governance.

However, the findings also reveal that the impact of AI perceptions on Euroscepticism depends on how the AI threat is defined. When considering views on AI's anticipated impact on humanity's way of life over the next 20 years, holding a negative perception is associated with a 9.43 percentage point increase in the likelihood of individual *i* supporting EU institutions. This suggests that while negative prospective perceptions of AI can reduce citizens' support for EU institutions, they can also have the opposite effect, prompting individuals to seek solutions to AI-related threats through international cooperation. Such differences are likely to be explained by the percieved threat's nature: while percieved economic threats can trigger the support for protectionist responses, a civilizational threat can drive individuals to advocate for cooperation and collective solutions.

5. Conclusion

This study consists in a preliminary analysis of the relationship between prospective views on AI's economic impact and political attitudes.

The results indicate that perceptions of AI's future impacts are likely to shape attitudes toward international cooperation and EU integration, although citizens' political responses depend on the nature of the perceived threats. Further research in sociology and political science is needed to explore this relationship more deeply.

These conclusions have strong implications, as they show that European cohesion and the support for its institutions depend on national and supranational responses to concerns about AI and automation present and future structural changes in the economy. Therefore, it would be recommended that national and European political agendas align their labour market strategies and broader economic policies within a coherent, forward-looking framework that directly addresses the potential risks of job displacement posed by AI and automation. This includes investing in reskilling and lifelong learning, supporting sectors likely to be affected, and ensuring that technological innovation is matched with inclusive economic planning aimed at reducing social and regional inequalities.

Due to the lack of surveys that integrate questions on AI perceptions with political preferences, research potential in this area remains limited. Consequently, the development of new and comprehensive surveys exploring attitudes toward AI, automation, and political views would be highly valuable, as understanding the electorate's response to advances in these technologies will become increasingly important amid the ongoing sixth wave of technological progress.