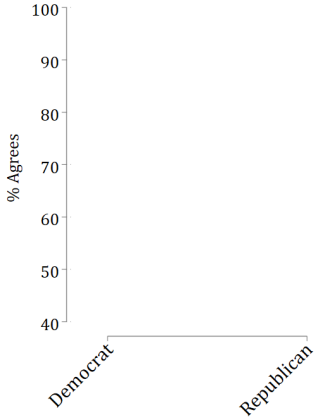
Polarized Technologies

Gaia Dossi
UCL

Marta Morando
LSE

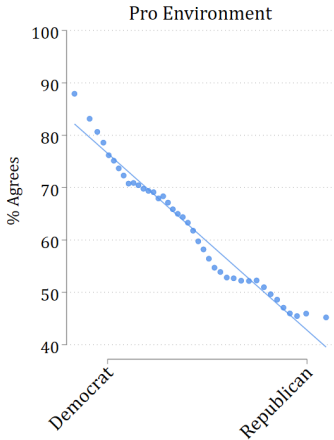
April 2025

Democrats and Republicans Have Different Views on Fundamental Issues



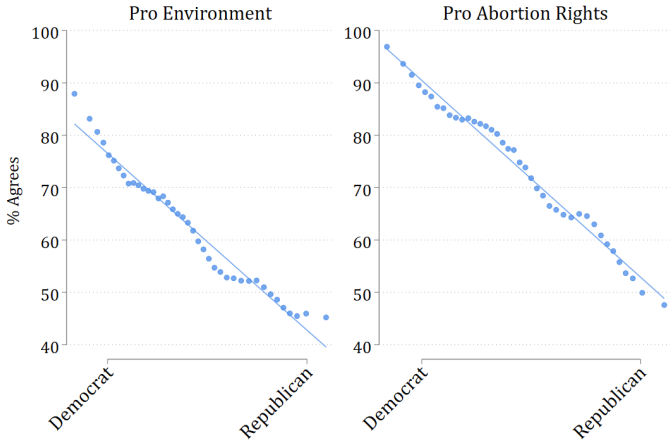
Notes. ≈ 500,000 US citizens from CCES (2006-2023). All plots control for age, sex, county FE, year FE, employment status FE, race FE, education FE, and income bracket FE.

Democrats and Republicans Have Different Views on Fundamental Issues



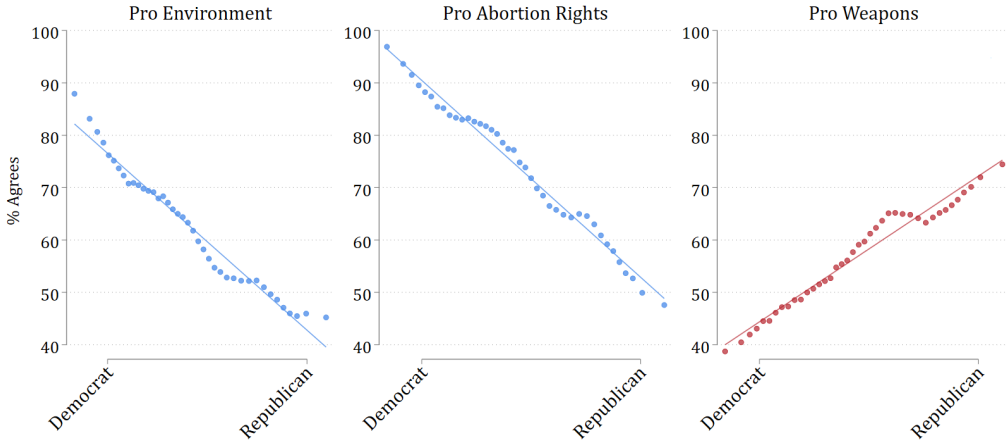
Notes. ≈ 500,000 US citizens from CCES (2006-2023). All plots control for age, sex, county FE, year FE, employment status FE, race FE, education FE, and income bracket FE.

Democrats and Republicans Have Different Views on Fundamental Issues



Notes. ≈ 500,000 US citizens from CCES (2006-2023). All plots control for age, sex, county FE, year FE, employment status FE, race FE, education FE, and income bracket FE.

Democrats and Republicans Have Different Views on Fundamental Issues



Notes. ≈ 500,000 US citizens from CCES (2006-2023). All plots control for age, sex, county FE, year FE, employment status FE, race FE, education FE, and income bracket FE.

Democrats and Republicans Have Different Views on Fundamental Issues

- Views polarized by party (Gentzkow, 2016; Bertrand and Kamenica, 2023; Desmet et al., 2024)

Democrats and Republicans Have Different Views on Fundamental Issues

- Views polarized by party (Gentzkow, 2016; Bertrand and Kamenica, 2023; Desmet et al., 2024)
- What are the implications of this divide?

Democrats and Republicans Have Different Views on Fundamental Issues

- Views polarized by party (Gentzkow, 2016; Bertrand and Kamenica, 2023; Desmet et al., 2024)

- What are the implications of this divide?
  - Impact on individual decisions (e.g., consumption, health, fertility)

Democrats and Republicans Have Different Views on Fundamental Issues

- Views polarized by party (Gentzkow, 2016; Bertrand and Kamenica, 2023; Desmet et al., 2024)
- What are the implications of this divide?
  - Impact on individual decisions (e.g., consumption, health, fertility)
- This paper: This divide is reflected in the content and diffusion of new technologies

This Paper: Party Affiliation and Production and Diffusion of Innovation

- Setting: United States in years 2001–2023
- Data: Assemble a novel dataset of patents linked to political affiliation of inventors
- Analysis: How party affiliation shapes content and diffusion of new technologies

Preview of Findings

1. Inventors patent technologies aligned with the views of their political party
   - 1.1 Democrat and Republican inventors 1/3 differently likely to patent green innovation
   - 1.2 Similar gap for other polarized technologies: female health and weapons

Preview of Findings

1. Inventors patent technologies aligned with the views of their political party
   - 1.1 Democrat and Republican inventors 1/3 differently likely to patent green innovation
   - 1.2 Similar gap for other polarized technologies: female health and weapons

2. The match is driven by inventors' party affiliation
   - 2.1 Holds across inventor and patent economic returns
   - 2.2 Holds across organization characteristics and within organizations

Preview of Findings

1. Inventors patent technologies aligned with the views of their political party
   - 1.1 Democrat and Republican inventors 1/3 differently likely to patent green innovation
   - 1.2 Similar gap for other polarized technologies: female health and weapons
2. The match is driven by inventors' party affiliation
   - 2.1 Holds across inventor and patent economic returns
   - 2.2 Holds across organization characteristics and within organizations
3. The diffusion of innovation is polarized
   - 3.1 Inventors are 20% more likely to cite technologies aligned with views of their party
   - 3.2 Similar pattern for citations from inventors outside those technologies

Contributions to the Literature

- Party affiliation matters for household decisions and labor market outcomes
  - Consumption (e.g., Mian et al., 2023; Conway and Boxell, 2024), investment (e.g., Meeuwis et al., 2021), health and fertility (e.g., Allcott et al., 2020; Bursztyn et al., 2022; Dahl et al., 2022), productivity (e.g., Colonnelli et al., 2022; Teso et al., 2023; Engelberg et al., 2024), on-the-job decisions (e.g., Cohen and Yang, 2019; Jelveh et al., 2024)

  $\Rightarrow$ This paper: Link views associated with political party to content of work

Contributions to the Literature

- Party affiliation matters for household decisions and labor market outcomes
  - Consumption (e.g., Mian et al., 2023; Conway and Boxell, 2024), investment (e.g., Meeuwis et al., 2021), health and fertility (e.g., Allcott et al., 2020; Bursztyn et al., 2022; Dahl et al., 2022), productivity (e.g., Colonnelli et al., 2022; Teso et al., 2023; Engelberg et al., 2024), on-the-job decisions (e.g., Cohen and Yang, 2019; Jelveh et al., 2024)

  $\Rightarrow$ This paper: Link views associated with political party to content of work

- Inventor demographics matter for the direction of innovation
  - Gender (Koning et al., 2021; Einio et al., 2022), socio-economics status (Einio et al., 2022), race (Dossi, 2024), family and childhood location (Bell et al., 2018), geography (Fry, 2023; Moscona and Sastry, 2022)

  $\Rightarrow$ This paper: Link between views of inventors' political party and direction of innovation

Contributions to the Literature

- Party affiliation matters for household decisions and labor market outcomes
  - Consumption (e.g., Mian et al., 2023; Conway and Boxell, 2024), investment (e.g., Meeuwis et al., 2021), health and fertility (e.g., Allcott et al., 2020; Bursztyn et al., 2022; Dahl et al., 2022), productivity (e.g., Colonnelli et al., 2022; Teso et al., 2023; Engelberg et al., 2024), on-the-job decisions (e.g., Cohen and Yang, 2019; Jelveh et al., 2024)

  $\Rightarrow$ This paper: Link views associated with political party to content of work

- Inventor demographics matter for the direction of innovation
  - Gender (Koning et al., 2021; Einio et al., 2022), socio-economics status (Einio et al., 2022), race (Dossi, 2024), family and childhood location (Bell et al., 2018), geography (Fry, 2023; Moscona and Sastry, 2022)

  $\Rightarrow$ This paper: Link between views of inventors' political party and direction of innovation

- Individuals' networks shape the diffusion of innovation
  - Networks (e.g., Jaffe et al., 1993, 2000), interaction (e.g., Singh, 2005), gender homophily (e.g., Koffi, 2024; Subramani and Saksena, 2024)

  $\Rightarrow$ This paper: Inventors' political affiliation shapes the diffusion of new technologies

Outline

1. Data
2. Main Results
3. Mechanisms
4. Polarized Diffusion
5. Discussion and Conclusions

Outline

A New Dataset of Inventors Matched with Party Affiliation

- USPTO patents and inventors between 2001 and 2023
- Match inventors resident in the US to Voter Register Data (Matching Algorithm)
  - In 2020, 73% of eligible voters where registered to vote
  - Registration rates higher for people with demographics similar to inventors
  - Upon registering, one can declare affiliation with a party (or remain unaffiliated)
- Information in voter records:

Last Name	First Name	Middle Name	City	ZipCode	Birth Date	Gender	Party	Registration Date
JOHN	SMITH	P	OAKLAND	941624	19250630	M	DEM	20071016

Focus on Florida, New Jersey, New York, Pennsylvania

- Merge patents and inventor records to voter registration data for FL, NJ, NY, & PA
  1. Top quartile of US states by total innovation (▸ Figure)
  2. States with closed primary system: Registration with a party is 4X higher
- Match rate: 53% of patents granted over the period
- Matched and unmatched inventors have similar characteristics (▸ Balance Table)
- Robustness & external validity: Match w/ Campaign Contributions data (Bonica, 2019)

Linking Technologies to Views of Political Parties

- Focus on politically polarized issues that can be mapped to technologies ▸ Topics
- Dictionary approach on patents' abstracts to define three dummies:
  - Green
  - Female health
  - Weapons
- Robustness checks with non-dictionary measures: CPC classification

Outline

Empirical Specification

Define Y as $= 1$ if inventor i ever patented in technology j, $= 0$ otherwise

$$y_{i,t,c,s,a} = \beta_1 \text{Democrat}_i + \beta_2 \text{Other}_i + \beta_3 \text{Female}_i + \gamma_t + \delta_c + \zeta_s + \mu_a + \epsilon_{i,t,c,s,a}$$

- t represents year, c county, s CPC section, a birth year
- Other_i: small parties (e.g., Independent) and unaffiliated inventors
- Omitted party category: Republicans
- $\hat{\beta}_1 = \Delta$ propensity of Democrat and a Republican to ever patent technology j
- Standard errors clustered at county level

Inventors Patent Technologies Aligned With Views of their Political Party

	Green Technologies	
	(1)	(2)
Democrat	0.0024***	0.0034***
	(0.0009)	(0.0009)
N. of Inventors	95,595	95,302
Effect Size	21.61%	31.48%
Patent Year FE	✓	✓
County FE	✓	✓
Section FE	×	✓
Inventor-level Controls	×	✓

▸ Full Table

Inventors Patent Technologies Aligned With Views of their Political Party

	Green Technologies	
	(1)	(2)
Democrat	0.0024***	0.0034***
	(0.0009)	(0.0009)
N. of Inventors	95,595	95,302
Effect Size	21.61%	31.48%
Patent Year FE	✓	✓
County FE	✓	✓
Section FE	×	✓
Inventor-level Controls	×	✓

- Democrat inventors: 22% more likely to patent green technologies. After FEs: 31%

Full Table

Inventors Patent Technologies Aligned With Views of their Political Party

	Green Technologies		Female Health Technologies	
	(1)	(2)	(3)	(4)
Democrat	0.0024***	0.0034***	0.0037***	0.0019***
	(0.0009)	(0.0009)	(0.0008)	(0.0007)
N. of Inventors	95,595	95,302	95,595	95,302
Effect Size	21.61%	31.48%	68.12%	34.72%
Patent Year FE	✓	✓	✓	✓
County FE	✓	✓	✓	✓
Section FE	×	✓	×	✓
Inventor-level Controls	×	✓	×	✓

- Democrat inventors: 68% more likely to patent female technologies. After FEs: 35%

Full Table

Inventors Patent Technologies Aligned With Views of their Political Party

	Green Technologies		Female Health Technologies		Weapon-related Technologies	
	(1)	(2)	(3)	(4)	(5)	(6)
Democrat	0.0024***	0.0034***	0.0037***	0.0019***	-0.0099***	-0.0067***
	(0.0009)	(0.0009)	(0.0008)	(0.0007)	(0.0014)	(0.0010)
N. of Inventors	95,595	95,302	95,595	95,302	95,595	95,302
Effect Size	21.61%	31.48%	68.12%	34.72%	-57.74%	-39.40%
Patent Year FE	✓	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓	✓
Section FE	×	✓	×	✓	×	✓
Inventor-level Controls	×	✓	×	✓	×	✓

- Democrat inventors: 58% less likely to patent weapons. After FEs: 39% less likely

Full Table

Comparison with Match by Gender

	Green Technologies		Female Health Technologies		Weapon-related Technologies	
	(1)	(2)	(3)	(4)	(5)	(6)
Democrat	0.0024***	0.0034***	0.0037***	0.0019***	-0.0099***	-0.0067***
	(0.0009)	(0.0009)	(0.0008)	(0.0007)	(0.0014)	(0.0010)
Female		0.0012		0.0069***		-0.0027***
		(0.0010)		(0.0011)		(0.0007)
N. of Inventors	95,595	95,302	95,595	95,302	95,595	95,302
Effect Size	21.61%	31.48%	68.12%	34.72%	-57.74%	-39.40%
Patent Year FE	✓	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓	✓
Section FE	×	✓	×	✓	×	✓
Inventor-level Controls	×	✓	×	✓	×	✓

- Female health: Size of match by political party is 1/3 of match by gender

▸ Male/Female ▸ Full Table

Robustness Checks: Alternative Specifications

- Additional Fixed Effects (Figure)
  - Zip code of residence
  - County-by-year
  - CPC class

- Alternative Dependent Variables (Figure)
  - LHS defined as $= 1$ if inventor i ever patented in technology j as first author
  - LHS defined as % of patents in technology j by inventor i
  - Using a Poisson count model on total n. of patents in technology j by inventor i

- Alternative Units of Observation (Table)
  - Estimating a regression at the patent level (instead of inventor level)

Robustness Checks: Alternative Samples

- Is the match driven by inventors adopting the views of the firm? Figure
  - Similar results for sample who registered young (before entering labor market)
- Is the match driven by patent examiners selectively granting patents? Figure
  - Similar results in sample of patent applications
- Is the match limited to four US states? Figure
  - Similar results across all US states using Campaign Contributions data

Outline

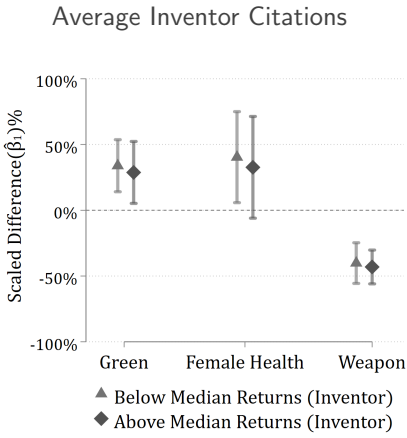
What Drives the Match Between Inventors and Technologies?

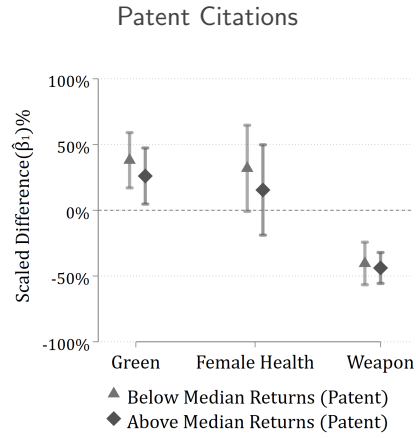
- The Role of Returns
  - Match persists across low- and high- inventor and patent economic returns
  - Inventor "quality" does not drive match with polarized technologies

- The Role of Organizations
  - Match persists across organization characteristics and within organizations
  - Match is mostly driven by inventors sorting into technologies, not organizations

The Role of Returns

Differential Returns Do Not Explain Match With Polarized Technologies

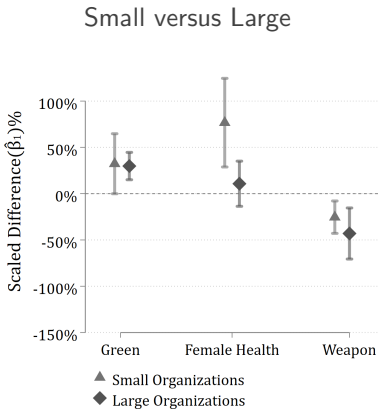




- We proxy returns with patent citations (Akcigit et al., 2016)
- Measure of patent economic value and therefore of inventor income (Trajtenberg, 1990)

The Role of Organizations

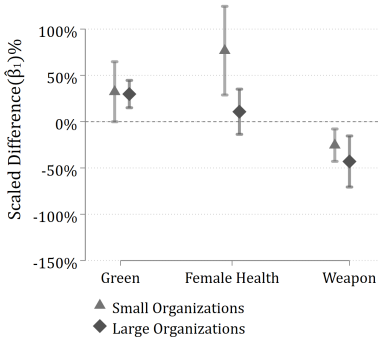
Match with Polarized Technologies Persists Across Assignee Characteristics



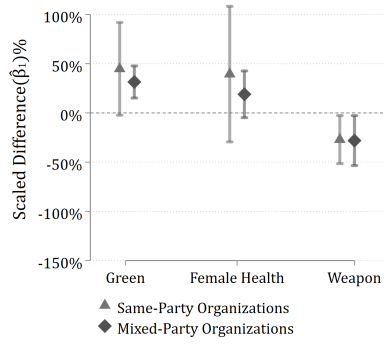
- Match holds in small assignees: unlikely to be due to networks in hiring (Colonnelli et al., 2022)

Match with Polarized Technologies Persists Across Assignee Characteristics

Small versus Large

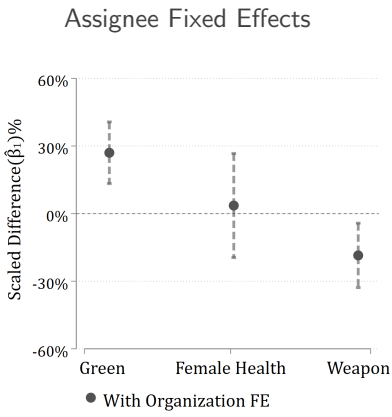


Same-Party versus Mixed-Party



- Match holds in small assignees: unlikely to be due to networks in hiring (Colonnelli et al., 2022)
- Also holds in politically-homogeneous assignees: unlikely to be driven by homophily in hiring

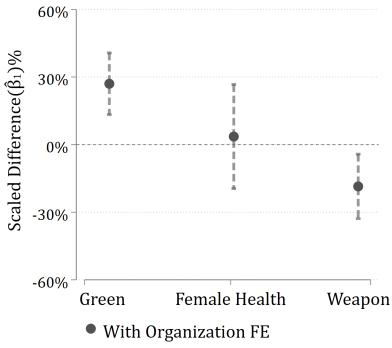
Match with Polarized Technologies Persists Across Assignees



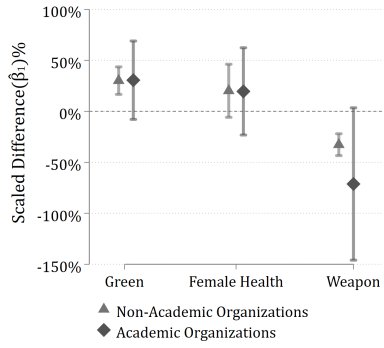
- Match holds within assignees (caveat: sample only includes large assignees)

Match with Polarized Technologies Persists Across Assignees

Assignee Fixed Effects



Academic versus Non-Academic



- Match holds within assignees (caveat: sample only includes large assignees)
- Also holds in universities: inventors have more freedom to choose direction of research

Outline

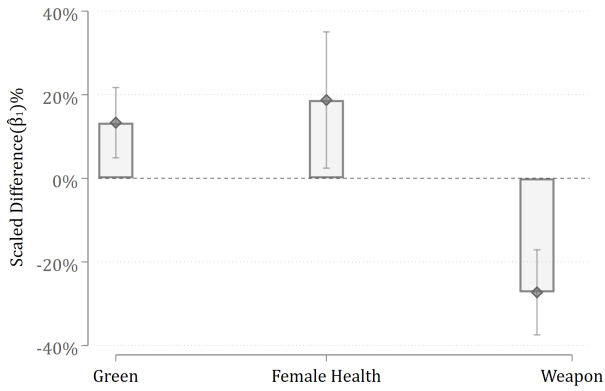
How Party Affiliation Shapes the Diffusion of Innovation

- So far: party affiliation shapes the propensity to patent polarized technologies
- Does party affiliation shape the diffusion of polarized technologies?

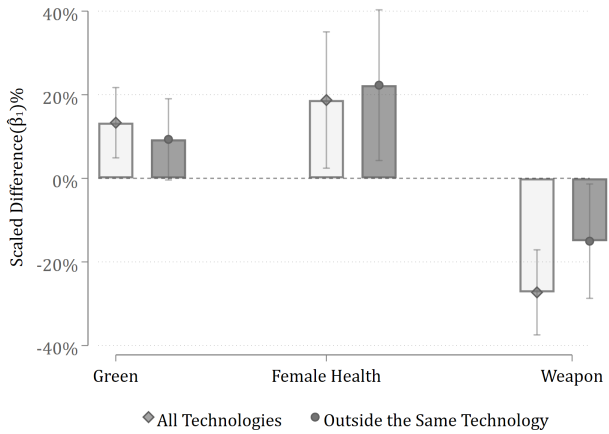
- Measure diffusion using patents' forward citations (e.g., Jaffe et al., 1993, 2000)
- Estimate same specification but $Y = \Pr(\text{Ever cite technology } j)$

$$y_{i,t,c,s,a} = \beta_1 \text{Democrat}_i + \beta_2 \text{Other}_i + \beta_3 \text{Female}_i + \gamma_t + \delta_c + \zeta_s + \mu_a + \epsilon_{i,t,c,s,a}$$

Inventors Cite Technologies Aligned With Views of their Political Party



Inventors Cite Technologies Aligned With Views of their Political Party



Outline

Discussion: What Drives Match with Polarized Technologies?

- Importance of inventor-level decisions, beyond product and labor market demand
- Why do inventors select different technologies depending on their party affiliation?
  1. Different information or beliefs on technology-specific returns (e.g., Alesina et al., 2020)
  2. Intrinsic motivation (e.g., Stern, 2004; Cassar and Meier, 2018) linked to content of work
  3. Childhood environment (Bell et al., 2018; Brown et al., 2023)
- What are the potential implications for innovation and growth?
  - Fewer new ideas (Atkin et al., 2022; Posch et al., 2024)
  - Lost productivity (Colonnelli et al., 2022; Evans et al., 2024)

Conclusions

Conclusions: Content and Diffusion of Innovation are Politically Polarized

- We link US inventors to their party affiliation
- Politically polarized issues: climate change, women's reproductive rights, gun control
- Republican and Democrat inventors are:
  - At least one-third differently likely to patent technologies mapping these issues
  - On average 20% differently likely to cite them
- New margin along which the political polarization of society reflects in the economy
- Implications for innovation & growth $\Rightarrow$ Important avenue for future research

Additional Materials

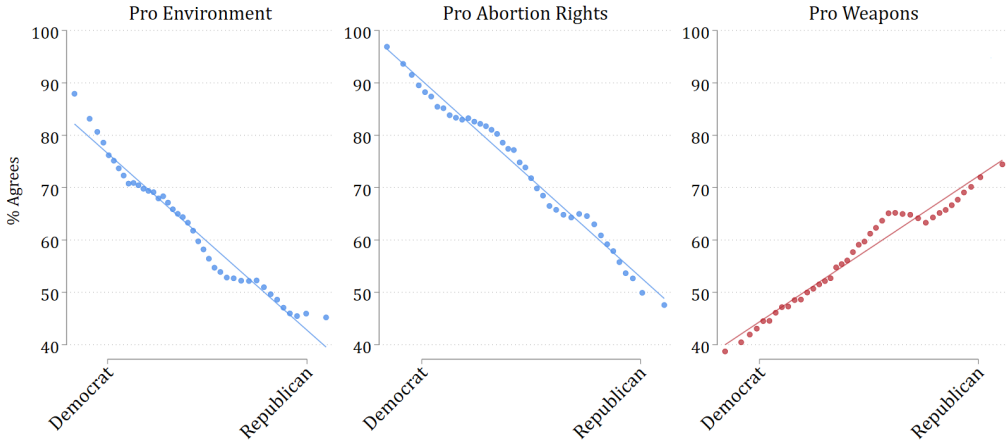
Topics Covered in the CCES – Political Attitudes Module

Back

- Abortion
- Environment
- Guns
- Health care
- Immigration
- Military
- Government spending
- Trade
- Gay marriage
- Affirmative action
- Income vs sales tax

Polarizing Issues: All Individuals

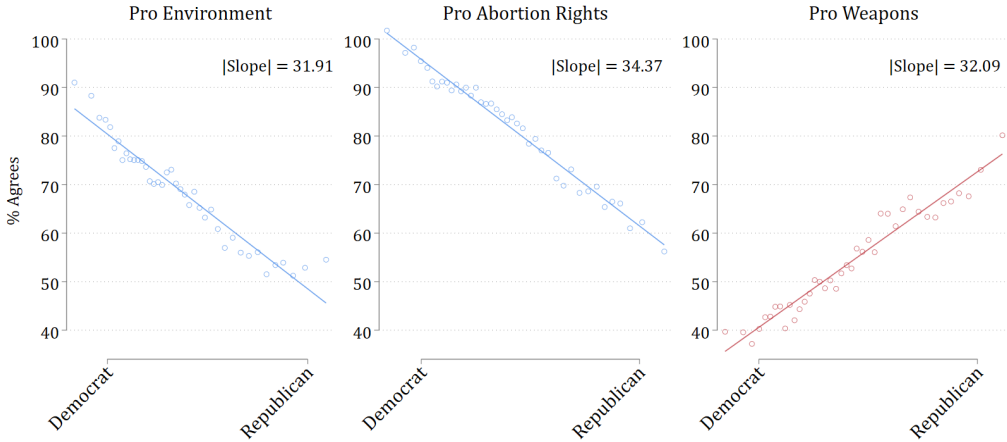
Back



Notes. ≈ 500,000 US citizens from CCES (2006-2023). All plots control for age, sex, county FE, year FE, employment status FE, race FE, education FE, and income bracket FE.

Polarizing Issues: Individuals With Characteristics of Inventors

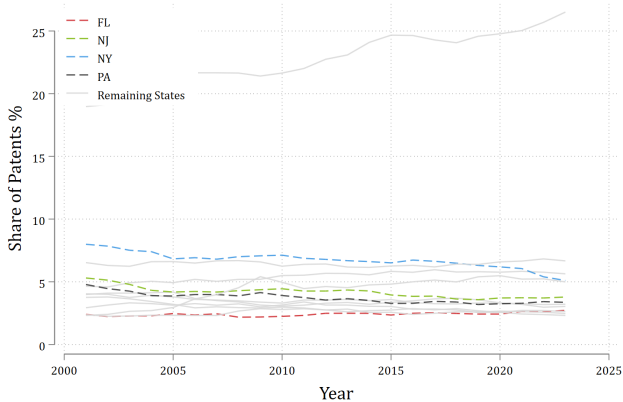
Back



Notes. ≈ 500,000 US citizens from CCES (2006-2023). All plots control for age, sex, county FE, year FE, employment status FE, race FE, education FE, and income bracket FE. Sample: individuals with more than 150k in revenues per year and college graduates.

Importance of FL and NY for Total US Innovation

Back



Notes. The figure plots the evolution of the yearly share of patents (by residence of inventors) for the top 10 US states in terms of innovation.

Merge Between Patent and Voters Data

Back

- NY 2020 (N. 19mln) + FL 2017 & 2022 (N. 16mln) + PA 2020 (N. 13mln) + NJ 2022 (N. 9 mln) voter data
- Drop those younger than 16 and older than 100 at registration + pre-clean strings in same way
- Conservative match algorithm (by state):
  1. Exact match last name, first name, and city of residence
  2. Middle initial matches exactly or missing in one of the two
  3. Remove those younger than 22 at the first or last patenting year
  4. Remove those older than 89 at the first or last patenting year
  5. Among duplicates:
     i. keep those with the same middle initials
     ii. keep those with same party (as Teso et al. (2023))
     iii. keep matches randomly
  6. Results unchanged if we keep only exact matches
- $\approx$ 53% of patents matched
- $\approx$ 8% of all US patents since 2001

Balance Table Matched-Unmatched Inventors

Back

H_0 = difference in characteristic X is larger than $10\% \times SD(X)$

	Matched		Unmatched		Matched-Unmatched	
	Mean (1)	Standard Deviation (2)	Mean (3)	Standard Deviation (4)	Standardized Difference (5)	P-value Equivalence Test (6)
Gender	0.134	0.341	0.151	0.358	-0.047	0.000
Num Consonants First Name	3.682	1.141	3.609	1.254	0.060	0.000
Num Consonants Middle Name	0.826	1.284	0.726	1.282	0.078	0.000
Num Consonants Last Name	4.138	1.400	4.032	1.575	0.070	0.000
Length First Name	5.842	1.516	5.820	1.754	0.013	0.000
Length Middle Name	1.201	1.976	1.078	1.998	0.062	0.000
Length Last Name	6.489	1.970	6.429	2.334	0.027	0.000

Difference between Republican & Democrat Inventors

Back

	Democrat		Republican		Democrat-Republican	
	Mean (1)	Standard Deviation (2)	Mean (3)	Standard Deviation (4)	Standardized Difference (5)	P-value Difference Test (6)
Female Dummy	0.183	0.386	0.088	0.283	0.277	0.000
Birth Year	1965	14.600	1962	13.120	0.215	0.000
Median Family Income (USD)	120,000	50,750	110,000	40,080	0.216	0.000
Section A	0.351	0.477	0.304	0.460	0.101	0.000
Section B	0.233	0.423	0.311	0.463	-0.174	0.000
Section C	0.235	0.424	0.155	0.361	0.203	0.000
Section D	0.015	0.120	0.016	0.124	-0.009	0.218
Section E	0.038	0.191	0.076	0.265	-0.164	0.000
Section F	0.104	0.306	0.173	0.378	-0.198	0.000
Section G	0.485	0.500	0.385	0.487	0.201	0.000
Section H	0.305	0.460	0.279	0.449	0.056	0.000
Section Y	0.235	0.424	0.263	0.440	-0.066	0.000

Inventors Patent Technologies Aligned With Views of Their Party

Back

	Green Technologies			Female Health Technologies			Weapon-related Technologies		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Democrat ($\hat{\beta}_1$)	0.0024***	0.0036***	0.0034***	0.0037***	0.0023***	0.0019***	-0.0099***	-0.0067***	-0.0067***
	(0.0009)	(0.0008)	(0.0009)	(0.0008)	(0.0007)	(0.0007)	(0.0014)	(0.0010)	(0.0010)
Other ($\hat{\beta}_2$)	0.0016*	0.0019**	0.0019**	0.0020**	0.0012	0.0014*	-0.0057***	-0.0038***	-0.0040***
	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0008)	(0.0008)	(0.0010)	(0.0009)	(0.0009)
Female ($\hat{\beta}_3$)			0.0012			0.0069***			-0.0027***
			(0.0010)			(0.0011)			(0.0007)
N. of Inventors	95,595	95,595	95,302	95,595	95,595	95,302	95,595	95,595	95,302
% of Dem.	35.78	35.78	35.78	35.78	35.78	35.78	35.78	35.78	35.78
$\mathbb{E}(LHS)$ for Rep.	0.011	0.011	0.011	0.005	0.005	0.005	0.017	0.017	0.017
Scaled Difference %	21.61	32.49	31.48	68.12	41.63	34.72	-57.74	-39.05	-39.40
Patent Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Section FE	×	✓	✓	×	✓	✓	×	✓	✓
Birth Year FE	×	×	✓	×	×	✓	×	×	✓

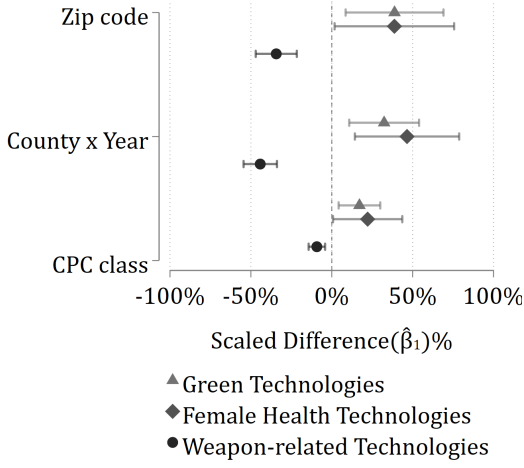
Comparison With Match by Gender: Split by Male and Female

Back

	Male Inventors			Female Inventors		
	(1)	(2)	(3)	(4)	(5)	(6)
Democrat	0.0026***	0.0015**	0.0015**	0.0053**	0.0048*	0.0047*
	(0.0008)	(0.0007)	(0.0007)	(0.0025)	(0.0025)	(0.0025)
N. of Inventors	82,547	82,547	82,547	12,738	12,738	12,738
Effect Size	55%	32%	32%	40%	36%	36%
Patent Year FE	✓	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓	✓
Section FE	×	✓	✓	×	✓	✓
Age Controls	×	×	✓	×	×	✓

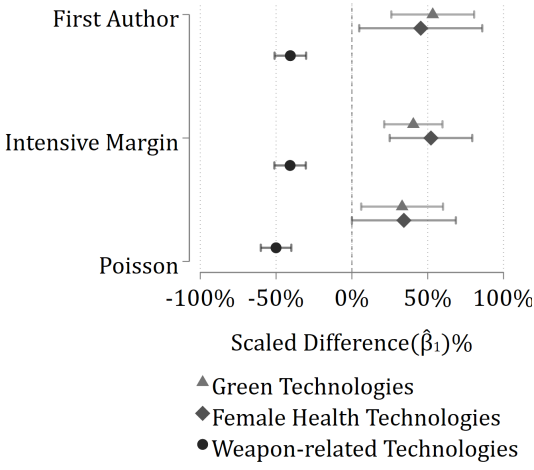
Robustness Checks: Alternative Fixed Effects

Back



Robustness Checks: Alternative Dependent Variables

Back



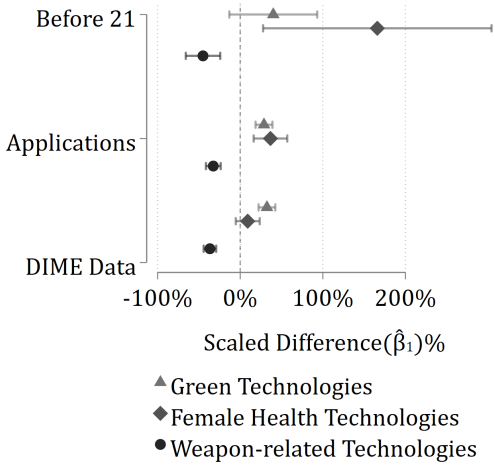
Robustness Checks: Alternative Specification

Back

	Solo-Authored			Teams			Homogeneous		
	Green (1)	Female Health (2)	Weapon-related (3)	Green (4)	Female Health (5)	Weapon-related (6)	Green (7)	Female Health (8)	Weapon-related (9)
Democrat $\hat{\beta}_1$	0.0031**	0.0012	-0.0074***	0.0056***	0.0017	-0.0038***	0.0051***	0.0013*	-0.0029***
	(0.0016)	(0.0009)	(0.0019)	(0.0013)	(0.0012)	(0.0012)	(0.0012)	(0.0008)	(0.0011)
N. of Patents	53,189	53,189	53,189	122,026	122,026	122,026	122,026	122,026	122,026
% of Dem.	31.26	31.26	31.26	37.11	37.11	37.11	23.29	23.29	23.29
$\mathbb{E}(LHS)$ for Rep.	0.005	0.003	0.019	0.006	0.005	0.004	0.004	0.002	0.007
Scaled Difference (%)	60.44	42.44	-40.03	88.23	37.89	-88.85	134.73	53.40	-40.54

Robustness Checks: Alternative Samples

Back



References

Akcigit, U., S. Baslandze, and S. Stantcheva (2016): "Taxation and the International Mobility of Inventors," *American Economic Review*, 106, 2930–2981.

Alesina, A., A. Miano, and S. Stantcheva (2020): "The Polarization of Reality," in *AEA Papers and Proceedings*, American Economic Association 2014 Broadway, Suite 305, Nashville, TN 37203, vol. 110, 324–328.

Allcott, H., L. Boxell, J. Conway, M. Gentzkow, M. Thaler, and D. Yang (2020): "Polarization and Public Health: Partisan Differences in Social Distancing During the Coronavirus Pandemic," *Journal of Public Economics*, 191, 104254.

Atkin, D., M. K. Chen, and A. Popov (2022): "The Returns to Face-to-face Interactions: Knowledge Spillovers in Silicon Valley," Working paper.

Bell, A., R. Chetty, X. Jaravel, N. Petkova, and J. Van Reenen (2018): "Who Becomes an Inventor in America? The Importance of Exposure to Innovation," *The Quarterly Journal of Economics*, 134, 647–713.

Bertrand, M. and E. Kamenica (2023): "Coming Apart? Cultural Distances in the United States over Time," *American Economic Journal: Applied Economics*, forthcoming.

Bonica, A. (2019): "Database on Ideology, Money in Politics, and Elections (DIME)," .

Brown, J. R., E. Cantoni, S. Chinoy, M. Koenen, and V. Pons (2023): "The Effect of Childhood Environment on Political Behavior: Evidence from Young US Movers, 1992–2021," Tech. rep., National Bureau of Economic Research.

Bursztyn, L., J. T. Kolstad, A. Rao, P. Tebaldi, and N. Yuchtman (2022): "Political Adverse Selection," Working Paper 30214, National Bureau of Economic Research.

Cassar, L. and S. Meier (2018): "Nonmonetary Incentives and the Implications of Work as a Source of Meaning," *Journal of Economic Perspectives*, 32, 215–238.

Cohen, A. and C. S. Yang (2019): "Judicial Politics and Sentencing Decisions," *American Economic Journal: Economic Policy*, 11, 160–91.

Colonnelli, E., V. Pinho Neto, and E. Teso (2022): "Politics At Work," Working Paper 30182, National Bureau of Economic Research.

Conway, J. and L. Boxell (2024): "Consuming Values," *Available at SSRN 4855718*.

Dahl, G. B., R. Lu, and W. Mullins (2022): "Partisan Fertility and Presidential Elections," *American Economic Review: Insights*, 4, 473–490.

Desmet, K., I. Ortuno-Ortin, and R. Wacziarg (2024): "Latent Polarization," *Working Paper*.

Dossi, G. (2024): "Race and Science," Working Paper.

Einio, E., J. Feng, and X. Jaravel (2022): "Social Push and the Direction of Innovation," *CEP Discussion Paper 1861*.

Engelberg, J., R. Lu, W. Mullins, and R. Townsend (2024): "Political Sentiment and Innovation: Evidence from Patenters," Working paper.

Evans, R. B., M. P. Prado, A. E. Rizzo, and R. Zambrana (2024): "Identity, Diversity, and Team Performance: Evidence from US Mutual Funds," *Management Science*.

Fry, C. V. (2023): "Crisis and the Trajectory of Science: Evidence from the 2014 Ebola Outbreak," *Review of Economics and Statistics*, 105, 1028–1038.

Gentzkow, M. (2016): "Polarization in 2016," *Toulouse Network for Information Technology Whitepaper*, 1.

Jaffe, A. B., M. Trajtenberg, and M. S. Fogarty (2000): "Knowledge Spillovers and Patent Citations: Evidence from a Survey of Inventors," *American Economic Review*, 90, 215–218.

Jaffe, A. B., M. Trajtenberg, and R. Henderson (1993): "Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations," *The Quarterly Journal of Economics*, 108, 577–598.

Jelveh, Z., B. Kogut, and S. Naidu (2024): "Political Language in Economics," *The Economic Journal*, ueae026.

Koffi, M. (2024): "Innovative Ideas and Gender Inequality," Tech. rep.

Koning, R., S. Samila, and J.-P. Ferguson (2021): "Who Do We Invent For? Patents by Women Focus More on Women's Health, but Few Women Get to Invent," *Science*, 372, 1345–1348.

Meeuwis, M., J. A. Parker, A. Schoar, and D. Simester (2021): "Belief Disagreement and Portfolio Choice," *Journal of Finance*, forthcoming.

Mian, A., A. Sufi, and N. Khoshkhou (2023): "Partisan Bias, Economic Expectations, and Household Spending," *The Review of Economics and Statistics*, 1–18.

Moscona, J. and K. Sastry (2022): "Inappropriate Technology: Evidence from Global Agriculture," Working Paper.

Posch, M., J. Schulz, and J. Henrich (2024): "Surname Diversity, Social Ties and Innovation," Working paper.

Singh, J. (2005): "Collaborative networks as determinants of knowledge diffusion patterns," *Management science*, 51, 756–770.

Stern, S. (2004): "Do Scientists Pay to Be Scientists?" *Management Science*, 50, 835–853.

Subramani, G. and M. Saksena (2024): "Untapped Potential: Investigating Gender Disparities in Patent Citations," Working paper.

Teso, E., J. Spenkuch, and G. Xu (2023): "Ideology and Performance in Public Organizations," *Econometrica*, 91, 1171–1203.

Trajtenberg, M. (1990): "A Penny for Your Quotes: Patent Citations and the Value of Innovations," *The Rand Journal of Economics*, 172–187.