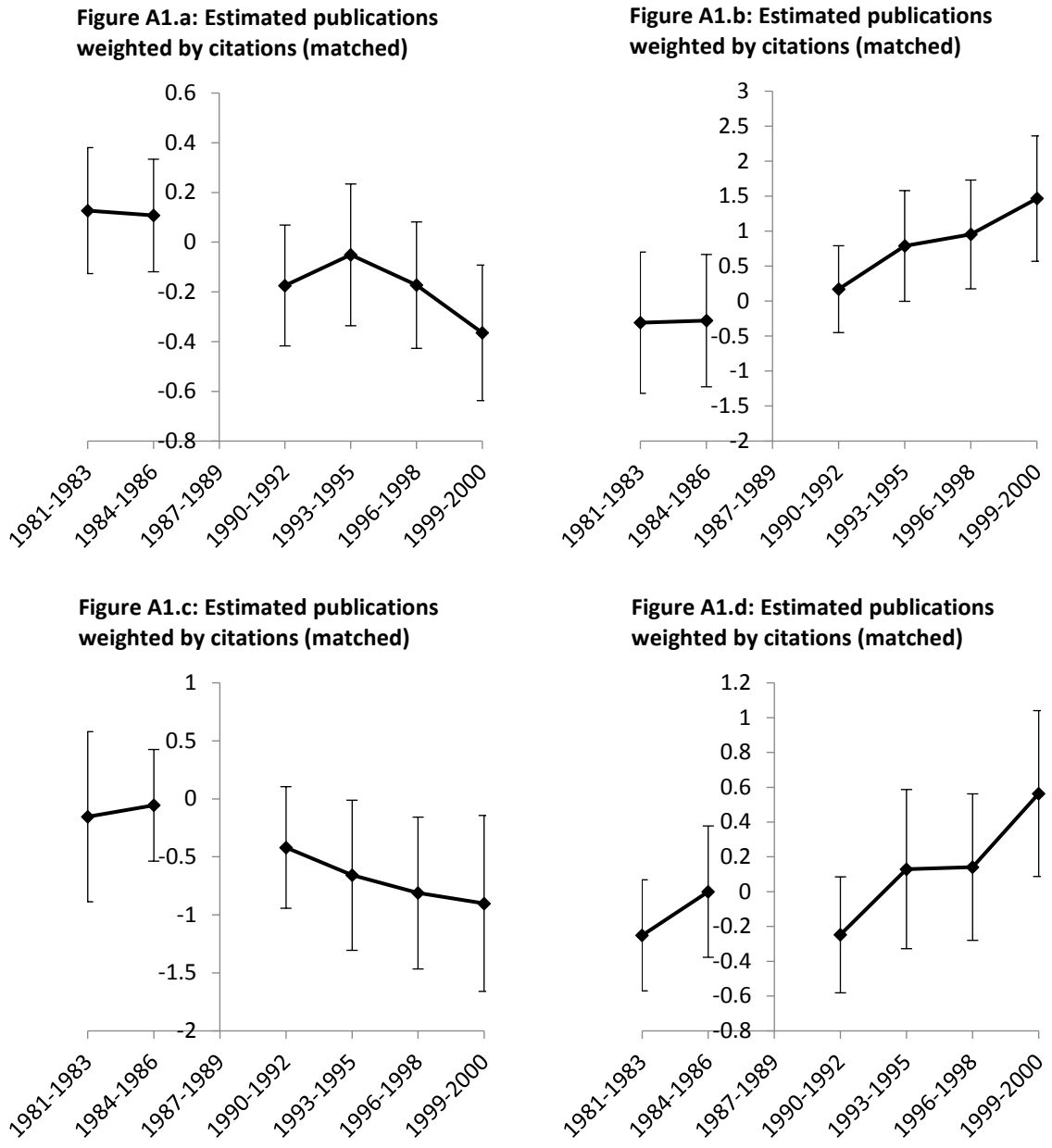
ONLINE APPENDIX

Figure A1. Estimated relative difference in the quality-adjusted output of specialists versus generalists after the collapse of the Soviet Union using the matched sample.*



* We base this figure on 10 years of publication data before the collapse of the Soviet Union and 10 years after the collapse. Each point on graph (a) represents the coefficient value on the covariate *Specialist* × *TimePeriod* and thus describes the relative difference in quality-adjusted publication rates between specialists and generalists in slow-paced areas. Each point on graph (b) represents the coefficient value on the covariate *Specialist* × *SovietImpact* × *TimePeriod* and thus describes the relative difference in quality-adjusted publication rates between specialists and generalists in fast-paced areas and the same difference in slow-paced areas. Each point on graph (c) represents the coefficient value on the covariate *SovietImpact* × *TimePeriod* and thus describes the relative difference in quality-adjusted publication rates between generalists in fast- versus slow-paced areas. Each point on graph (d) represents the sum of coefficients $\beta_1 + \beta_3$ and thus describes the relative difference in quality-adjusted publication rates between specialists in fast- versus slow-paced areas. The bars surrounding each point represent the 95% confidence interval. Note that the larger confidence intervals are due to reduced degrees of freedom, as we split the post-Soviet dummy into multiple period dummies. All values are relative to the base-year group of 1987–1989. The estimates are based on the matched sample.

Figure A2. Estimated relative difference in the total number of collaborators of specialists versus generalists after the collapse of the Soviet Union using the non-matched sample.*

Figure A2.a: Estimated total number of collaborators (not matched)

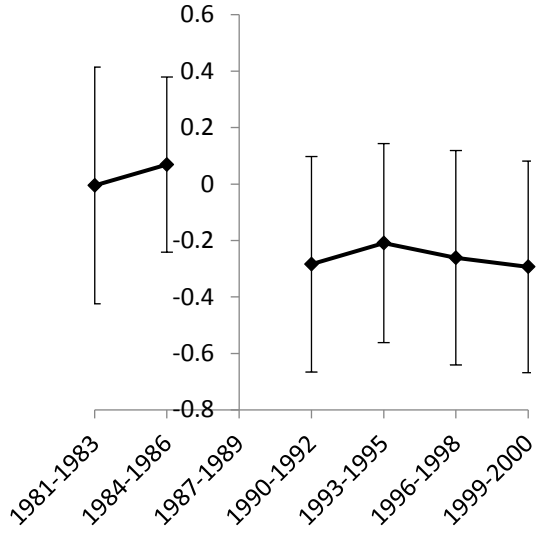


Figure A2.b: Estimated total number of collaborations (not matched)

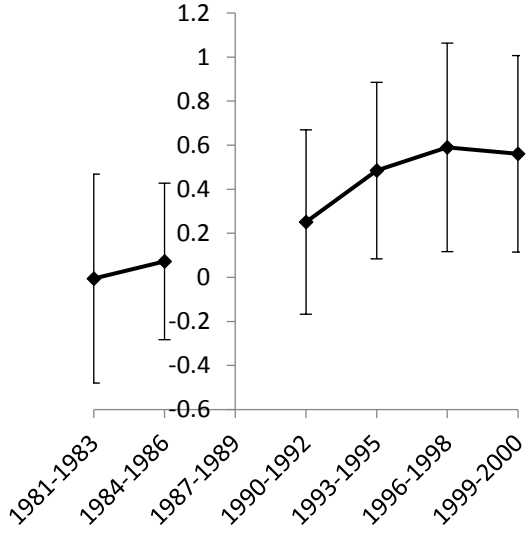


Figure A2.c: Estimated total number of collaborators (not matched)

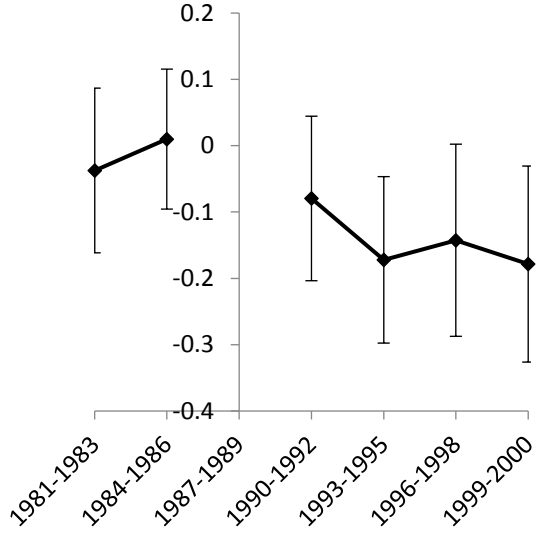
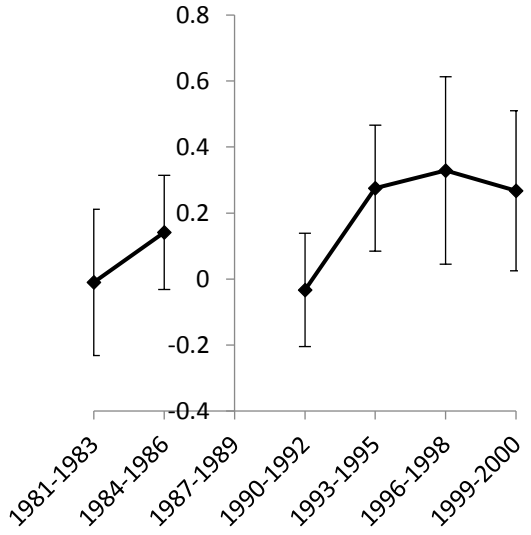


Figure A2.d: Estimated total number of collaborators (not matched)



* We base this figure on 10 years of publication data before the collapse of the Soviet Union and 10 years after the collapse. Each point on graph (a) represents the coefficient value on the covariate *Specialist* × *TimePeriod* and thus describes the relative difference in the total number of collaborators between specialists and generalists in slow-paced areas. Each point on graph (b) represents the coefficient value on the covariate *Specialist* × *SovietImpact* × *TimePeriod* and thus describes the relative difference in the total number of collaborators between specialists and generalists in fast-paced areas and the same difference in slow-paced areas. Each point on graph (c) represents the coefficient value on the covariate *SovietImpact* × *TimePeriod* and thus describes the relative difference in the total number of collaborators between generalists in fast- versus slow-paced areas. Each point on graph (d) represents the sum of coefficients $\beta_1 + \beta_3$ and thus describes the relative difference in the total number of collaborators between specialists in fast- versus slow-paced areas. The bars surrounding each point represent the 95% confidence interval. Note that the larger confidence intervals are due to reduced degrees of freedom, as we split the post-Soviet dummy into multiple period dummies. All values are relative to the base-year group of 1987–1989. The estimates are based on the non-matched sample.

Figure A3. Estimated relative difference in the number of unique collaborators of specialists versus generalists after the collapse of the Soviet Union using the non-matched sample.*

Figure A3.a: Estimated number of unique collaborators (not matched)

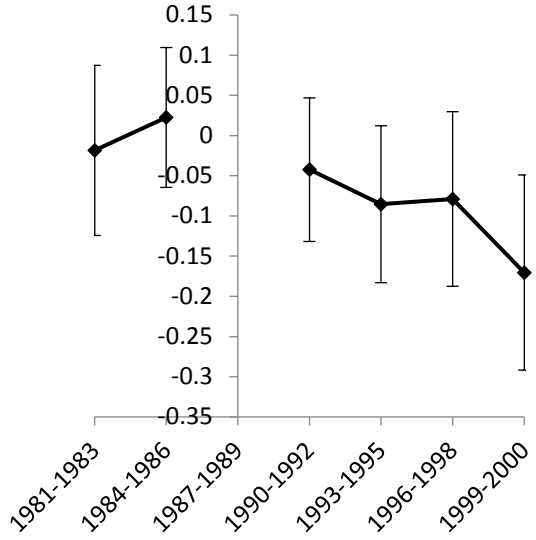


Figure A3.b: Estimated number of unique collaborations (not matched)

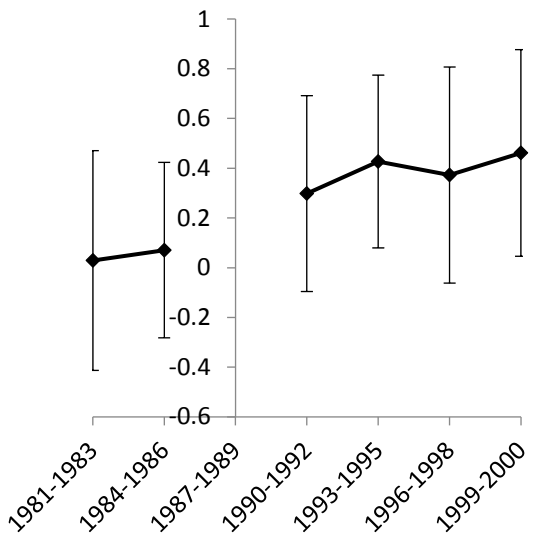


Figure A3.c: Estimated number of unique collaborators (not matched)

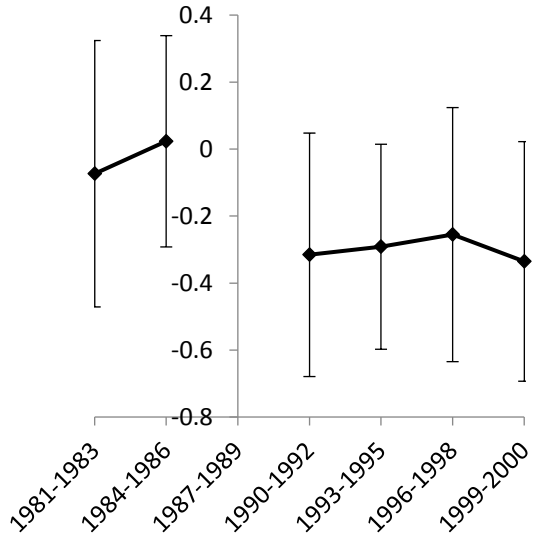
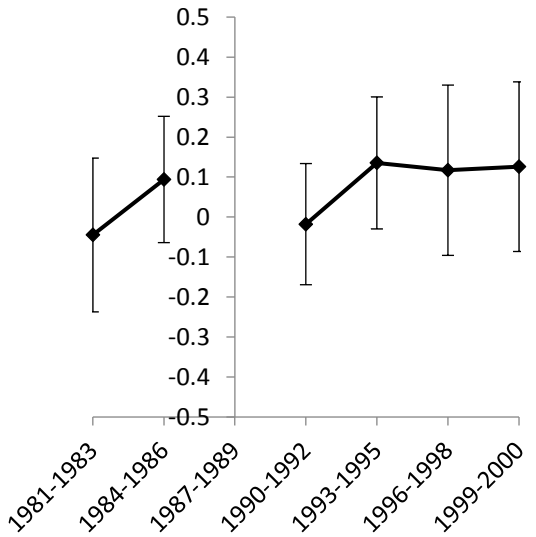


Figure A3.d: Estimated number of unique collaborators (not matched)



* We base this figure on 10 years of publication data before the collapse of the Soviet Union and 10 years after the collapse. Each point on graph (a) represents the coefficient value on the covariate *Specialist* × *TimePeriod* and thus describes the relative difference in the number of unique collaborators between specialists and generalists in slow-paced areas. Each point on graph (b) represents the coefficient value on the covariate *Specialist* × *SovietImpact* × *TimePeriod* and thus describes the relative difference in the number of unique collaborators between specialists and generalists in fast-paced areas and the same difference in slow-paced areas. Each point on graph (c) represents the coefficient value on the covariate *SovietImpact* × *TimePeriod* and thus describes the relative difference in the number of unique collaborators between generalists in fast- versus slow-paced areas. Each point on graph (d) represents the sum of coefficients $\beta_1 + \beta_3$ and thus describes the relative difference in the number of unique collaborators between specialists in fast- versus slow-paced areas. The bars surrounding each point represent the 95% confidence interval. Note that the larger confidence intervals are due to reduced degrees of freedom, as we split the post-Soviet dummy into multiple period dummies. All values are relative to the base-year group of 1987–1989. The estimates is based on the non-matched sample.

Table A1. Differential Creative Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Continuous Diversification Measure*

	Full Sample		Matched Sample	
	Simple count of publications	Citation-weighted count of publications	Simple count of publications	Citation-weighted count of publications
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	–.741•• (.252)	–1.115• (.460)	–.616+ (.330)	–1.580•• (.482)
Specialist × AfterSovietCollapse (β_2)	.201•• (.062)	.429• (.220)	.236•• (.079)	.565•• (.191)
SovietImpact × AfterSovietCollapse (β_3)	.038 (.045)	.056 (.090)	.026 (.063)	.146 (.093)
No. of observations	241,376	241,216	169,061	169,061
No. of mathematicians	12,929	12,917	8,952	8,952
Chi^2	1376.65••	306.54••	861.64••	140.54••
Log-likelihood	–247383.60	–2192008.90	–160963.93	–1187197.60

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A2. Differential Breakthrough Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Continuous Diversification Measure*

	Full Sample		Matched Sample	
	Count of breakthroughs (publications in top 5% cited)	Count of breakthroughs (publications in top 10% cited)	Count of breakthroughs (publications in top 5% cited)	Count of breakthroughs (publications in top 10% cited)
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	–1.373• (.574)	–1.202•• (.442)	–1.707• (.744)	–1.239• (.539)
Specialist × AfterSovietCollapse (β_2)	.464•• (.175)	.467•• (.123)	.532• (.224)	.501•• (.162)
SovietImpact × AfterSovietCollapse (β_3)	.129 (.098)	.110 (.076)	.254• (.117)	.163 (.101)
No. of observations	79,756	121,890	51,607	81,171
No. of mathematicians	4,215	6,444	2,724	4,271
Chi^2	353.50••	616.77••	177.82••	309.03••
Log-likelihood	–31159.56	–56972.73	–17403.04	–33442.78

$^{+}$ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A3. Differential Number of Collaborators of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Continuous Diversification Measure*

	Full Sample		Matched Sample	
Variable	**Total number of collaborators** **(1)**	**Total number of unique collaborators** **(2)**	**Total number of collaborators** **(3)**	**Total number of unique collaborators** **(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	–1.238•• (.379)	–.978•• (.298)	–.932+ (.502)	–.863• (.399)
Specialist × AfterSovietCollapse (β_2)	.229•• (.088)	.135+ (.072)	.340•• (.111)	.194• (.093)
SovietImpact × AfterSovietCollapse (β_3)	.175• (.067)	.075 (.056)	.163+ (.092)	.096 (.078)
No. of observations	213,426	213,440	148,535	148,549
No. of mathematicians	11,416	11,417	7,860	7,861
Chi^2	314.00••	532.66••	223.42••	328.82••
Log-likelihood	–223550.06	–178252.42	–140855.58	–116584.95

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A4. Differential Creative Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Continuous Soviet Index Measure and Our Main Specification of Specialists and Generalists (i.e., Top 10th Percentile of the Diversification Distribution)*

	Full Sample		Matched Sample	
	Simple count of publications	Citation-weighted count of publications	Simple count of publications	Citation-weighted count of publications
Variable	**(2)**	**(1)**	**(4)**	**(3)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.404• (.158)	.420 (.391)	.455• (.187)	1.015• (.403)
Specialist × AfterSovietCollapse (β_2)	–.082• (.033)	–.243• (.108)	–.060 (.039)	–.246•• (.081)
SovietImpact × AfterSovietCollapse (β_3)	–.310• (.121)	–.105 (.328)	–.455• (.146)	–.681• (.295)
No. of observations	113,512	113,406	76,795	76,783
No. of mathematicians	6,140	6,132	4,024	4,024
Chi^2	1063.34••	191.15••	664.71••	98.62••
Log-likelihood	–104277.83	–787244.10	–68826.06	–451704.49

$^{+}$ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A5. Differential Breakthrough Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Continuous Soviet Index Measure and Our Main Specification of Specialists and Generalists (i.e., Top 10th Percentile of the Diversification Distribution)*

	Full Sample		Matched Sample	
	Count of breakthroughs (publications in top 5% cited)	Count of breakthroughs (publications in top 10% cited)	Count of breakthroughs (publications in top 5% cited)	Count of breakthroughs (publications in top 10% cited)
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.685^{+} (.387)	.569^{+} (.311)	.909 (.587)	.843^{+} (.461)
Specialist × AfterSovietCollapse (β_2)	–.279$^{••}$ (.097)	–.308$^{••}$ (.069)	–.270$^{•}$ (.116)	–.340$^{••}$ (.083)
SovietImpact × AfterSovietCollapse (β_3)	.005 (.292)	.021 (.242)	–.330 (.454)	–.259 (.359)
No. of observations	30,642	49,110	20,641	34,061
No. of mathematicians	1,634	2,617	1,075	1,771
Chi^2	191.66$^{••}$	337.61$^{••}$	95.43$^{••}$	195.17$^{••}$
Log-likelihood	–10427.25	–19880.36	–6399.54	–12674.41

$^{+}$ $p < .10$; $^{•}$ $p < .05$; $^{••}$ $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A6. Differential Number of Collaborators of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Continuous Soviet Index Measure and Our Main Specification of Specialists and Generalists (i.e., Top 10th Percentile of the Diversification Distribution)*

	Full Sample		Matched Sample	
	Total number of collaborators	Total number of unique collaborators	Total number of collaborators	Total number of unique collaborators
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.705•• (.238)	.495• (.208)	.590• (.265)	.447+ (.238)
Specialist × AfterSovietCollapse (β_2)	–.118• (.047)	–.081• (.038)	–.107+ (.055)	–.064 (.045)
SovietImpact × AfterSovietCollapse (β_3)	–.398• (.174)	–.364• (.159)	–.497• (.206)	–.438• (.185)
No. of observations	96,917	96,917	65,986	65,986
No. of mathematicians	5,243	5,243	3,459	3,459
Chi^2	123.02••	197.00••	62.00••	114.73••
Log-likelihood	–88856.43	–71016.24	–57696.83	–48287.99

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A7. Changes in the Breakthrough Output of Specialist and Generalist Mathematicians after the Collapse of the Soviet Union*

	Full Sample		Matched Sample	
	Count of breakthroughs (publications in top 5% cited)	**Count of breakthroughs (publications in top 10% cited)**	**Count of breakthroughs (publications in top 5% cited)**	**Count of breakthroughs (publications in top 10% cited)**
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.587• (.257)	.461• (.203)	.685+ (.369)	.736• (.292)
Specialist × AfterSovietCollapse (β_2)	–.285•• (.094)	–.315•• (.068)	–.265• (.114)	–.343•• (.082)
SovietImpact × AfterSovietCollapse (β_3)	–.227 (.224)	–.171 (.178)	–.413 (.316)	–.455+ (.252)
No. of observations	30,642	49,110	20,641	34,061
No. of mathematicians	1,634	2,617	1,075	1,771
Chi^2	192.90••	338.44••	97.87••	200.33••
Log-likelihood	–10427.39	–19880.25	–6399.02	–12668.48

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data is a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are conditional fixed-effect Poisson with robust standard errors, clustered at the author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A8. Differential Creative Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Only Japan*

	Full Sample		Matched Sample	
	Simple count of publications	Citation-weighted count of publications	Simple count of Publications	Citation-weighted count of publications
Variable	**(2)**	**(1)**	**(4)**	**(3)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	1.392• (.550)	1.564•• (.566)	.969+ (.558)	1.606•• (.401)
Specialist × AfterSovietCollapse (β_2)	–.026 (.199)	–.045 (.240)	.275 (.169)	–.218 (.262)
SovietImpact × AfterSovietCollapse (β_3)	–1.211• (.496)	–.451+ (.242)	–.927+ (.492)	–.528• (.245)
No. of observations	3,963	3,945	2,535	2,535
No. of mathematicians	211	210	131	131
Chi^2	98.76••	72.89••	75.43••	97.18••
Log-likelihood	–3440.28	–12593.53	–2111.21	–6717.17

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A9. Differential Breakthrough Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Only Japan*

	Full Sample		Matched Sample	
	Count of breakthroughs (publications in top 5% cited)	**Count of breakthroughs (publications in top 10% cited)**	**Count of breakthroughs (publications in top 5% cited)**	**Count of breakthroughs (publications in top 10% cited)**
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	1.261 (1.850)	.880 (.820)	21.736•• (2.572)	2.074• (.891)
Specialist × AfterSovietCollapse (β_2)	–.630 (1.060)	.444 (.545)	–2.454 (1.522)	–.128 (.654)
SovietImpact × AfterSovietCollapse (β_3)	–.302 (.976)	1.029• (.178)	–1.312 (1.359)	.579 (.527)
No. of observations	465	1,255	255	758
No. of mathematicians	25	67	13	39
Chi^2	5999.73••	47.23••	693.13••	142988.67••
Log-likelihood	–85.30	–315.44	–33.12	–159.09

$^{+}$ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A10. Differential Number of Collaborators of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Only Japan*

	Full Sample		Matched Sample	
Variable	**Total number of collaborators** **(1)**	**Total number of unique collaborators** **(2)**	**Total number of collaborators** **(3)**	**Total number of unique collaborators** **(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	4.098•• (.648)	3.514•• (.458)	2.696•• (.503)	2.999•• (.462)
Specialist × AfterSovietCollapse (β_2)	.244 (.223)	.163 (.209)	.441 (.269)	.185 (.252)
SovietImpact × AfterSovietCollapse (β_3)	–2.816•• (.333)	–2.725•• (.340)	–2.602•• (.354)	–2.623•• (.356)
No. of observations	3,175	3,175	2,043	2,043
No. of mathematicians	170	170	106	106
Chi^2	155.83••	170.02••	153.64••	116.44••
Log-likelihood	–2638.75	–2063.65	–1509.05	–1273.62

$^{+}$ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A11. Differential Creative Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Dichotomous Diversification Measure with the Threshold at 50th Percentile of the Diversification Distribution*

	Full Sample		Matched Sample	
	Simple count of publications	Citation-weighted count of publications	Simple count of Publications	Citation-weighted count of publications
Variable	**(2)**	**(1)**	**(4)**	**(3)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.195•• (.073)	.284• (.139)	.147 (.094)	.428•• (.158)
Specialist × AfterSovietCollapse (β_2)	–.053• (.022)	–.099+ (.060)	–.036 (.026)	–.215•• (.062)
SovietImpact × AfterSovietCollapse (β_3)	–.151•• (0.054)	–.226• (.100)	–.131• (.064)	–.243• (.122)
No. of observations	241,376	241,216	169,061	169,061
No. of mathematicians	12,929	12,917	8,952	8,952
Chi^2	1375.65••	287.87••	857.69••	132.08••
Log-likelihood	–247395.68	–2192602.80	–160979.11	–1187143.70

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A12. Differential Breakthrough Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Dichotomous Diversification Measure with the Threshold at 50th Percentile of the Diversification Distribution*

	Full Sample		Matched Sample	
	Count of breakthroughs (publications in top 5% cited)	Count of breakthroughs (publications in top 10% cited)	Count of breakthroughs (publications in top 5% cited)	Count of breakthroughs (publications in top 10% cited)
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.474•• (.173)	.458•• (.134)	.499• (.238)	.381• (.178)
Specialist × AfterSovietCollapse (β_2)	–.179•• (.063)	–.190•• (.045)	–.234•• (.080)	–.209•• (.057)
SovietImpact × AfterSovietCollapse (β_3)	–.265+ (.136)	–.257• (.107)	–.172 (.199)	–.159 (.140)
No. of observations	79,756	121,890	51,607	81,171
No. of mathematicians	4,215	6,444	2,724	4,271
Chi^2	337.58••	599.91••	175.50••	307.53••
Log-likelihood	–31158.63	–56967.03	–17401.17	–33439.19

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A13. Differential Number of Collaborators of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—Dichotomous Diversification Measure with the Threshold at 50th Percentile of the Diversification Distribution*

	Full Sample		Matched Sample	
	Total number of collaborators	Total number of unique collaborators	Total number of collaborators	Total number of unique collaborators
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.376•• (.105)	.329•• (.087)	.234+ (.138)	.230• (.116)
Specialist × AfterSovietCollapse (β_2)	–.059+ (.032)	–.056• (.025)	–.084• (.039)	–.055+ (.032)
SovietImpact × AfterSovietCollapse (β_3)	–.173• (.075)	–.213•• (.062)	–.075 (.094)	–.130+ (.077)
No. of observations	213,426	213,440	148,535	148,549
No. of mathematicians	11,416	11,417	7,860	7,861
Chi^2	314.40••	534.15••	218.15••	325.70••
Log-likelihood	–223558.55	–178247.35	–140870.74	–116589.05

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications, nonlinear age profile, and individual and year fixed effects. The difference in the number of observations across models is a consequence of estimating all our models using the *xtpoisson* command in Stata; the command drops units without within-individual variance after factoring in all the independent and control variables.

Table A14. Differential Creative Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—No Individual and Year Fixed Effects*

	Full Sample		Matched Sample	
	Simple count of publications	Citation-weighted count of publications	Simple count of Publications	Citation-weighted count of publications
Variable	**(2)**	**(1)**	**(4)**	**(3)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.279•• (.105)	.612•• (.206)	.338•• (.121)	.771•• (.252)
Specialist × AfterSovietCollapse (β_2)	–.069• (.030)	–.273• (.107)	–.037 (.036)	–.240•• (.079)
SovietImpact × AfterSovietCollapse (β_3)	–.235• (.092)	–.462•• (.175)	–.335•• (.107)	–.607•• (.208)
SovietImpact × Specialist	.074 (.057)	.330 (.215)	.080 (.061)	.390+ (.225)
Specialist	–.177•• (.017)	–.269•• (.075)	–.105•• (.018)	–.150• (.060)
SovietImpact	–.098• (.049)	–.046 (.182)	–.062 (.050)	.082 (.179)
AfterIronCurtain	–.060• (.028)	–.058 (.142)	–.069•• (.027)	.008 (.081)
No. of observations	116,781	116,781	77,686	77,686
No. of mathematicians	6,358	6,358	4,076	4,076
Chi^2	3003.39••	6727.71••	2262.22••	5004.30••
Log-likelihood	–125934.66	–823039.86	–82492.91	–474208.55

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications and nonlinear age profile.

Table A15. Differential Breakthrough Output of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—No Individual and Year Fixed Effects*

	Full Sample		Matched Sample	
Variable	**Count of breakthroughs (publications in top 5% cited) (1)**	**Count of breakthroughs (publications in top 10% cited) (2)**	**Count of breakthroughs (publications in top 5% cited) (3)**	**Count of breakthroughs (publications in top 10% cited) (4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.472^{+} (.256)	.399$^{\bullet}$ (.200)	.571 (.367)	.645$^{\bullet}$ (.293)
Specialist × AfterSovietCollapse (β_2)	–.240$^{\bullet\bullet}$ (.091)	–.285$^{\bullet\bullet}$ (.064)	–.235$^{\bullet}$ (.113)	–.320$^{\bullet\bullet}$ (.079)
SovietImpact × AfterSovietCollapse (β_3)	–.174 (.224)	–.136 (.176)	–.312 (.320)	–.374 (.259)
SovietImpact × Specialist	.513$^{\bullet}$ (.254)	.461$^{\bullet}$ (.193)	.563^{+} (.291)	.536$^{\bullet}$ (.225)
Specialist	–.423$^{\bullet\bullet}$ (.076)	–.323$^{\bullet\bullet}$ (.054)	–.184$^{\bullet}$ (.085)	–.121$^{\bullet}$ (.060)
SovietImpact	.017 (.222)	–.040 (.171)	.063 (.241)	–.033 (.190)
AfterIronCurtain	–.133 (.085)	–.044 (.058)	.066 (.097)	.094 (.065)
No. of observations	116,781	116,781	77,686	77,686
No. of mathematicians	6,358	6,358	4,076	4,076
Chi^2	10204.70$^{\bullet\bullet}$	10876.01$^{\bullet\bullet}$	8689.40$^{\bullet\bullet}$	8735.13$^{\bullet\bullet}$
Log-likelihood	–16967.68	–29730.01	–10566.15	–19068.42

$^{+}$ $p < .10$; $^{\bullet}$ $p < .05$; $^{\bullet\bullet}$ $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications and nonlinear age profile.

Table A16. Differential Number of Collaborators of Specialists Relative to Generalists in Areas Affected by the Collapse of the Soviet Union—No Individual and Year Fixed Effects*

	Full Sample		Matched Sample	
Variable	**Total number of collaborators (1)**	**Total number of unique collaborators (2)**	**Total number of collaborators (3)**	**Total number of unique collaborators (4)**
Specialist × SovietImpact × AfterSovietCollapse (β_1)	.410•• (.153)	.320• (.135)	.429• (.175)	.343• (.155)
Specialist × AfterSovietCollapse (β_2)	–.118•• (.045)	–.068+ (.036)	–.091+ (.053)	–.047 (.043)
SovietImpact × AfterSovietCollapse (β_3)	–.250+ (.127)	–.253 (.117)	–.373• (.151)	–.337• (.134)
SovietImpact × Specialist	–.111 (.125)	–.021 (.122)	.016 (.133)	.053 (.131)
Specialist	–.088• (.036)	–.174•• (.030)	–.058 (.041)	–.096•• (.036)
SovietImpact	–.060 (.110)	.001 (.109)	–.061 (.109)	–.026 (.109)
AfterIronCurtain	.008 (.041)	–.047 (.031)	–.004 (.044)	.035 (.035)
No. of observations	116,781	116,781	77,686	77,686
No. of mathematicians	6,358	6,358	4,076	4,076
Chi^2	2546.82••	6354.71••	2092.03••	4378.16••
Log-likelihood	–109210.62	–89903.36	–70810.55	–60643.89

+ $p < .10$; • $p < .05$; •• $p < .01$.

* The data are a panel at the author level based on publication data between 1980 and 2000. The unit of analysis is the author-year. All models are Poisson with robust standard errors, clustered at the individual author level, in parentheses. All models include controls for cumulative publications and nonlinear age profile.