



PPIC

PUBLIC POLICY
INSTITUTE OF CALIFORNIA

Are Company Headquarters Leaving California?

Technical Appendix

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Appendix A. Data and Methods

Dun & Bradstreet Data

Our analysis is built on a longitudinal database derived from Mergent’s Dun & Bradstreet (D&B) annual snapshots, covering the universe of U.S. business establishments from 2010 to 2021. This dataset includes key information about individual business establishments such as:

- **Identifying information:** Unique DUNS number, company name, and location (address, county, state, city).
- **Headquarter affiliation:** Identification of the headquarter establishment.
- **Industry classification:** Industry codes based on the Standard Industrial Classification (SIC).
- **Employment:** The number of employees at each establishment.

One could, in principle, do this analysis using the National Establishment Time Series (NETS) data, which have been used in earlier PPIC research on business dynamics (Neumark et al., 2005). The Mergent data are far less expensive and more up to date. In addition, the NETS will no longer be doing annual updates beyond 2022 (covering data through 2021), whereas the Mergent data will allow us to continue to track future changes in headquarter behavior in California and other states (as well as other employment dynamics generally). There are other official sources of establishment-level data (Quarterly Census of Employment and Wages, County Business Patterns, and Nonemployer Statistics), but these do not allow any measurement of relocation or identification of headquarters.

Data Cleaning and Definition of Terms

We perform several steps to prepare the data for analysis:

1. Resolving missing start years:

- a. When the start year was missing, we interpolate based on the first year of non-missing employment data.
- b. We use the earliest recorded start year for establishments with multiple entries.

2. Industry classification:

- a. Approximately 27% of establishments were initially classified as “non-classifiable.” We impute industries using a backfilling approach when possible (that is, for firms that change their industry code in future years).

3. Headquarter identification:

- a. We define headquarters by (1) an establishment identified as the headquarters by another establishment, or (2) an establishment listed itself as the headquarters. (The latter is a subset of (1).)

4. Headquarter relocation: A change in the state of the headquarter.

5. Headquarter births and deaths: The first and last appearance of an establishment identified as a headquarter in the data, respectively. For deaths, we need to see at least one year where the establishment no longer appears.

Validation of HQ Relocation Measures

We rely on data covering the universe of business establishments to track corporate headquarters relocations, which will be far more comprehensive than information drawn solely from media sources, such as those in Vranich and Ohanian (2022). Nonetheless, we did some work to corroborate the completeness of our data (and the accuracy of the media-based lists), by comparing what we see in the Mergent data to Table 2 from Vranich and Ohanian (2022), which identifies 11 Fortune-1000 companies reported to have moved their headquarters out of California between 2018 and 2021, and to a random selection of smaller companies from their Appendix A.

Tables A1 and A2 below summarize our validation findings. Table A1 considers information for the 11 reported relocations. Our constructed Mergent headquarters relocation dataset detects 7 moves with matching firm names, origin states, and destination states. Although our dataset sometimes shows a few year difference relative to Vranich and Ohanian (2022), such discrepancies are reasonable given that headquarter relocations often occur in stages over multiple years.

For the four companies in Vranich and Ohanian (2022) not captured in our dataset, we find plausible explanations. CBRE Group opened a new headquarters in Texas in 2019 under a different name and establishment ID, and ceased operations at its California headquarters by 2020, making its move less straightforward to track. Our data did not record a move for KLA Corporation or Kaiser Aluminum, likely because our dataset ends in 2021, precisely when Vranich and Ohanian (2022) indicated the relocations occurred. A company press release also confirms that KLA Corporation opened a second headquarters in Michigan rather than fully relocating their California headquarters.¹ Finally, we observe that Woodward Inc. has maintained a headquarters in Colorado since 2011, suggesting the “relocation” noted by media sources was instead a workforce shift among its existing facilities rather than a formal headquarters move.

Table A2 considers information for a random selection of 30 cases for smaller companies from Appendix A of Vranich and Ohanian. Because some of these companies were hard to match to the Mergent data, we first used Mergent Intellect to match as many of these as we could to a DUNS number.² Using that number, we could determine whether the company had a headquarters as we define it (which requires being part of a multi-establishment firm), whether there was a headquarters move, and whether the details matched. When they did not match, we also looked for additional new sources beyond those cited by CaliFormers.

The rows shaded in green are cases where the sources match. The unshaded rows are the cases for which we would not have coded a headquarters move in the Mergent data, because either (i) the company had a single establishment, or (ii) the company was not found in the data. These were the main reasons for not identifying a headquarters move from California in the Mergent data, a classification we think is correct based on what seems to be the appropriate definition of a headquarters.

Finally, the rows shaded in grey or red are those where there is more evidence of a contradiction. For two of the cases shaded in grey, Mergent indicates no headquarters move, and in each case there is confirming evidence that there was, in fact, no headquarters move. For one other (Optym), we found that the move reported in CaliFormers as a relocation from California to Florida is in fact a move from Florida to Texas, which is supported by a media report. For the rows shaded red, there is direct contradiction, with three cases in which Mergent indicates no move, but no news stories to contradict the CaliFormers classification, and one case where the sources indicate moves in different directions.

¹ <https://ir.kla.com/news-events/press-releases/detail/415/kla-announces-grand-opening-of-200-million-second>

² Mergent Intellect is a directory of business information also based on the Dun & Bradstreet data.

Overall, these comparisons show that our establishment-level approach largely detects actual headquarter moves from media-based sources. Based on Appendix Table A2, there are 12 actual headquarter moves among the CaliFormers cases we identified (the green-, grey-, and red-shaded rows), and there are at most four false negatives where headquarter movers are not detected in Mergent. That said, this investigation suggests that CaliFormers overstates the number of headquarter relocations, given that many of the moves it detects are of what appear to be single-establishment firms. And regardless, we view the systematic data collection underlying the Mergent data as providing more reliable information on headquarter relocations; and of course the Mergent data are far more comprehensive, because there is no reason the media sources would be expected to detect all relocations.

TABLE A1

Comparing headquarter relocation estimates across sources, Fortune-1000 companies

2022 Fortune Ranking	Hoover HQ Relocation			Mergent Corresponding Records		
	Company	Move Year	Destination	Mergent Company Name	Mergent Move Year	Mergent Move Destination
11	McKesson Corp.	2019	TX	MCKESSON CORPORATION	2019	TX
65	Tesla	2021	TX	TESLA MOTORS INC	2021	TX
91	Oracle	2020	TX	ORACLE CORPORATION	2021	TX
123	Hewlett Packard Enterprise (HPE)	2022	TX	HEWLETT PACKARD ENTERPRISE CO	2021	TX
126	CBRE Group	2020	TX			
188	Charles Schwab	2019	TX	CHARLES SCHWAB CORPORATION	2022	TX
474	KLA Corporation (HQ2)	2021	MI			
733	Parsons	2019	VA	PARSONS INFRASTRUCTURE & TECHN	2021	VA
				PARSONS CORPORATION	2019	VA
906	Kaiser Aluminum	2021	TN	KAISER ALUMINUM INVESTMENTS CO		
917	NortonLifeLock / Symantec	2019	AZ	SYMANTEC CORPORATION	2019	AZ
972	Woodward Inc	2018	CO			

SOURCE: Table 2 in Vranich and Ohanian (2022) and authors' analysis from Mergent data, 2010-2021

TABLE A2

Comparing headquarter relocation estimates across sources, 30 randomly chosen smaller companies

30 Randomly Sampled "CaliFormers" Company	Identified as Single Establishment in Mergent Intellect (i.e., no HQ)	Company Not Found in Mergent Data	No Move Found	Move Details Differ	Move Details Matched	Additional Information from Media Sources
Flannery Trim					Yes	
Advanex Americas					Yes	
Oracle					Yes	
Violin Systems					Yes	
Tesla					Yes	
Riders Share				News story says move from CA to TX; Mergent says TX to CA		
Optym				Moved from FL to TX based on Mergent data		News story refers to company considering HQ move from FL to TX
Aercap U.S. Global Aviation LLC			X			
Yamaha Motor Corp.			X			News story confirms no HQ move
Aerojet-Rocketdyne Def. Unit			X			News story confirms no HQ move
DealerSocket			X			
Hall Technologies			X			
Hangar Technology		X				Company name appears in news story, but not HQ move
Directive		X				Company name appears in news story, but not HQ move
Markaaz Inc.		X				
U.S. Pulmonary Hypertension		X				Company name appears in news story, but not HQ move
Noodoe EV		X				
Regroup Mass Notification		X				
MD7, LLC	X					
Alfresco Software Inc.	X					
TV4 Entertainment	X					
American Technology Network (ATN)	X					
AHV Communities	X					
StemExpress	X					
GemCap	X					
Zox LLC	X					
PolarOnyx	X					
Canoo	X					
Haptx fka Axon VR	X					

30 Randomly Sampled "CaliFormers" Company	Identified as Single Establishment in Mergent Intellect (i.e., no HQ)	Company Not Found in Mergent Data	No Move Found	Move Details Differ	Move Details Matched	Additional Information from Media Sources
Bonelli Doors + Windows	X					

SOURCE: Appendix A in Vranich and Ohanian (2022) and authors' analysis from Mergent data, 2010-2021

NOTES: Green rows indicate cases where CaliFormers and Mergent data agree that a headquarters relocation occurred and the details match. Gray and red rows represent cases in which we would not have coded a headquarters move in Mergent—either because the company had only one establishment, was not found in the data, or the available data (and sometimes other news sources) indicated no move occurred at the same time and between the same locations. Red rows are a subset of these, where CaliFormers reports a move from California but Mergent shows a California headquarters with no or a different relocation; while we did not find external evidence contradicting CaliFormers' claim in these cases.

Industry Codes

TABLE A3

Industry aggregation definition

SIC 2-digit code	SIC Name	Our SIC Category
1	Agricultural Production - Crops–	Ag, Forestry, Fishing
2	Agricultural Production - Livestock	Ag, Forestry, Fishing
7	Agricultural Services	Ag, Forestry, Fishing
8	Forestry	Ag, Forestry, Fishing
9	Fishing, Hunting, and Trapping	Ag, Forestry, Fishing
10	Metal Mining	Mining
12	Coal Mining	Mining
14	Nonmetallic Minerals, Except Fuels	Mining
15	General Building Contractors	Construction
16	Heavy Contractors, Except Building	Construction
17	Special Trade Contractors	Construction
20	Food and Kindred Products	Manufacturing
21	Tobacco Products	Manufacturing
22	Textile Mill Products	Manufacturing
23	Apparel and Other Textile Products	Manufacturing
24	Lumber and Wood Products	Manufacturing
25	Furniture and Fixtures	Manufacturing
26	Paper and Allied Products	Manufacturing
27	Printing and Publishing	Manufacturing
28	Chemicals and Allied Products	Manufacturing
29	Petroleum and Coal Products	Manufacturing
30	Rubber and Misc. Plastics Products	Manufacturing
31	Leather and Leather Products	Manufacturing
32	Stone, Clay and Concrete Products	Manufacturing
33	Primary Metal Industries	Manufacturing
34	Fabricated Metal Products	Manufacturing
35	Industrial Machinery and Equipment	Manufacturing
36	Electronic and Other Electric Equipment	Manufacturing
37	Transportation Equipment	Manufacturing
38	Instruments and Related Products	Manufacturing
39	Miscellaneous Manufacturing Industries	Manufacturing
40	Railroad Transportation	Transportation, Warehousing, Utilities
41	Local and Interurban Passenger Transit	Transportation, Warehousing, Utilities

SIC 2-digit code	SIC Name	Our SIC Category
42	Trucking and Warehousing	Transportation, Warehousing, Utilities
44	Water Transportation	Transportation, Warehousing, Utilities
45	Transportation by Air	Transportation, Warehousing, Utilities
46	Pipelines, Except Natural Gas	Transportation, Warehousing, Utilities
47	Transportation Services	Transportation, Warehousing, Utilities
48	Communications	Transportation, Warehousing, Utilities
49	Electric, Gas, and Sanitary Services	Transportation, Warehousing, Utilities
50	Wholesale Trade – Durable Goods	Wholesale Trade
51	Wholesale Trade – Nondurable Goods	Wholesale Trade
52	Building Materials and Garden Supplies	Retail Trade
53	General Merchandise Stores	Retail Trade
54	Food Stores	Retail Trade
55	Automotive Dealers and Service Stations	Retail Trade
56	Apparel and Accessory Stores	Retail Trade
57	Furniture and Home Furnishing Stores	Retail Trade
58	Eating and Drinking Places	Leisure & Hospitality
59	Miscellaneous Retail	Retail Trade
60	Depository Institutions	Finance and Real Estate
61	Nondepository Institutions	Finance and Real Estate
62	Security and Commodity Brokers	Finance and Real Estate
63	Insurance Carriers	Finance and Real Estate
64	Insurance Agents, Brokers, and Services	Finance and Real Estate
65	Real Estate	Finance and Real Estate
67	Holding and Other Investment Offices	Finance and Real Estate
70	Hotels and Other Lodging Places	Leisure & Hospitality
72	Personal Services	Other Services
73	Business Services	Business Services
75	Auto Repair, Services, and Parking	Other Services
76	Miscellaneous Repair Services	Other Services
78	Motion Pictures	Motion Pictures
79	Amusement and Recreation Services	Leisure & Hospitality
80	Health Services	Health and Social Services
81	Legal Services	Professional, Scientific and Technical Services
82	Educational Services	Educational Services
83	Social Services	Health and Social Services
84	Museums, Botanical, and Zoological Gardens	Leisure & Hospitality
86	Membership Organizations	Other Services
87	Engineering and Management Services	Professional, Scientific and Technical Services

SIC 2-digit code	SIC Name	Our SIC Category
88	Private Households	Private Households
89	Services, NEC	Other Services
91	Executive, Legislative, and General Government	Government
92	Justice, Public Order, and Safety	Government
93	Finance, Taxation, and Monetary Policy	Government
94	Administration of Human Resources	Government
95	Environmental Quality and Housing	Government
96	Administration of Economic Programs	Government
97	National Security and International Affairs	Government
99	Nonclassifiable Establishments	NEC

State Indices

TABLE A4

State-level indexes

State	Taxes/Regulations (Economic Freedom Index)		Top Marginal Tax Rate		% Government Employment		Workforce Education Index (Standardized)		Zillow Home Value Index	
	2010	2021	2010	2021	2010	2021	2010	2020	2010	2021
AL	5.80	6.40	3.25	3.15	13.07	11.79	-1.29	-1.23	12.21	20.49
AK	4.35	5.42	0.00	0.00	14.33	13.49	0.60	-0.14	24.80	34.43
AZ	5.95	5.99	4.54	4.50	11.13	8.71	-0.21	-0.30	14.79	40.46
AR	5.46	6.01	7.00	5.90	12.71	11.03	-1.80	-1.70	11.68	18.66
CA	4.13	4.27	10.55	13.30	11.13	9.51	0.07	0.33	29.88	69.25
CO	5.94	6.60	4.63	4.50	10.95	10.08	1.63	1.89	21.82	50.90
CT	6.34	6.18	6.50	6.99	10.64	9.06	1.61	1.42	25.27	31.98
DE	5.38	5.06	6.95	6.60	11.12	9.96	0.09	-0.14	23.62	33.74
FL	6.72	7.80	0.00	0.00	9.81	7.12	-0.29	-0.30	13.95	32.67
GA	6.02	7.31	6.00	5.75	11.24	8.67	-0.30	-0.14	13.01	27.76
HI	4.98	4.58	11.00	11.00	11.03	10.07	0.69	0.48	42.57	74.92
ID	5.43	7.31	7.80	6.50	12.08	9.99	-0.20	-0.61	15.16	45.35
IL	5.34	5.70	3.00	4.95	10.59	9.20	0.46	0.64	15.86	22.83
IN	5.64	7.25	3.40	3.23	11.17	9.49	-0.84	-0.92	11.47	20.56
IA	5.22	6.14	5.84	5.37	12.13	11.62	-0.22	-0.45	12.07	19.14
KS	6.06	6.79	6.45	5.70	13.22	12.32	0.63	0.48	11.81	19.18
KY	4.73	5.87	6.00	5.00	12.15	10.09	-1.57	-1.23	10.74	17.67
LA	5.72	6.61	3.90	3.78	13.19	10.62	-1.72	0.02	15.38	20.19
ME	5.01	5.32	6.85	7.15	11.07	9.88	-0.01	-1.70	18.08	33.10
MD	6.32	5.61	6.25	5.75	10.33	9.02	1.69	2.36	25.43	37.99

State	Taxes/Regulations (Economic Freedom Index)		Top Marginal Tax Rate		% Government Employment		Workforce Education Index (Standardized)		Zillow Home Value Index	
MA	5.97	6.12	5.30	5.00	9.30	8.17	2.04	1.73	30.54	52.26
MI	4.59	6.00	4.35	4.25	11.38	9.24	-0.09	-0.30	9.94	21.44
MN	4.77	5.29	7.85	9.85	10.72	9.69	1.11	1.11	17.09	31.26
MS	5.11	5.70	5.00	5.00	15.00	13.09	-1.84	-1.39	11.07	17.08
MO	6.23	6.69	3.90	3.40	11.21	9.54	-0.43	-0.45	12.71	21.14
MT	5.54	6.55	4.49	4.35	12.03	10.52	0.37	0.17	18.96	40.93
NE	6.40	6.85	6.84	6.84	12.00	10.79	0.40	0.33	12.76	22.17
NV	5.53	6.18	0.00	0.00	9.02	7.22	-0.97	0.95	14.49	40.08
NH	7.11	7.96	0.00	0.00	10.44	8.71	1.25	-1.23	21.55	37.83
NJ	4.97	5.46	8.97	10.75	11.34	9.23	1.09	1.42	29.60	43.46
NM	4.76	4.98	4.90	5.90	15.71	13.90	-0.36	-0.61	16.79	25.58
NY	3.63	4.09	8.97	10.90	12.16	10.43	0.71	0.95	26.26	41.66
NC	5.76	7.31	7.75	5.25	12.56	10.19	-0.48	0.02	15.52	27.68
ND	6.47	7.14	4.86	2.90	12.49	11.98	0.06	-0.14	16.37	24.34
OH	4.58	5.89	5.93	3.99	10.97	9.47	-0.51	-0.61	11.63	19.22
OK	6.48	6.94	5.50	5.00	13.64	12.18	-0.84	-1.23	11.02	17.66
OR	4.29	4.56	7.15	6.24	11.27	9.70	0.59	0.64	21.56	47.20
PA	5.42	6.67	3.07	3.07	9.52	8.11	-0.28	0.48	16.07	23.25
RI	4.87	5.31	9.90	5.99	9.40	8.54	0.22	-0.14	22.88	37.93
SC	4.65	6.62	7.00	7.00	13.12	10.96	-0.95	-0.61	14.40	24.93
SD	7.47	7.59	0.00	0.00	11.65	10.76	-0.22	-0.45	14.74	26.77
TN	6.71	7.73	0.00	0.00	10.82	8.83	-1.20	-0.92	13.64	27.16
TX	6.80	7.64	0.00	0.00	11.40	9.30	-0.87	-0.45	13.60	27.21
UT	5.15	6.67	5.00	4.95	11.08	9.62	0.87	0.80	19.73	48.95
VT	4.54	4.27	8.95	8.75	11.20	10.49	1.30	1.27	21.53	34.13
VA	7.00	7.13	5.75	5.75	11.19	9.83	1.14	1.42	21.89	33.69
WA	4.63	6.01	0.00	0.00	12.60	10.91	1.10	-2.02	24.98	54.28
WV	4.80	5.34	6.50	6.50	14.22	13.57	-2.17	1.11	10.08	14.32
WI	4.78	6.49	7.75	7.65	11.36	10.27	-0.05	-0.45	15.71	25.58
WY	5.27	6.63	0.00	0.00	15.75	14.63	-0.01	-0.14	20.33	31.19

SOURCE: Fraser Institute: Economic Freedom Index of North America (2010, 2021); Information Technology and Innovation Foundation : The State New Economy Index (2010, 2020); Zillow: Home Value Index (2010, 2021).

NOTE: The Workforce Education Index is unavailable for 2021, as the most recent State New Economy Index was published in 2020. Additionally, the weighting used to compute the Workforce Education Index changed between 2010 and 2020. To ensure comparability across years, we standardized each year's index. Note that for the regression models in the report, we invert the Economic Freedom Index.

Appendix B. Supplementary Tables and Figures

TABLE B1

Employment and wages by occupational group in California: 2023

	Employment	Annual median wage	Hourly median wage
Typical occupations at headquarters			
Management (11-0000)	1,308,800	\$135,840	\$65.31
Chief Executives (11-1011)	38,920	231,080	111.10
Compensation and Benefits Managers (11-3111)	2,990	154,530	74.29
Human Resources Managers (11-3121)	27,980	166,920	80.25
Business and Financial Operations (13-0000)	1,210,190	87,880	42.25
Human Resources Specialists (13-1071)	96,920	79,870	38.40
Management Analysts (13-1111)	110,430	99,800	47.98
Compensation and Benefits Specialists (13-1141)	13,970	82,870	39.84
Accountants and Auditors (13-2011)	166,020	92,160	44.31
Legal (23-0000)	151,180	130,840	62.91
Lawyers (23-1011)	94,300	185,050	88.96
Office and Administrative Support (43-0000)	1,986,980	49,450	23.77
Bill and Account Collectors (43-3011)	23,220	48,420	23.28
Bookkeeping and Accounting Clerks (43-3031)	165,360	53,980	25.95
Payroll and Timekeeping Clerks (43-3051)	23,660	60,170	28.93
Secretaries and Administrative Assistants (43-6014)	175,090	50,220	24.14
All other occupations			
Computer and Mathematical (15-0000)	759,060	135,760	65.27
Architecture and Engineering (17-0000)	337,470	108,660	52.24
Life, Physical, and Social Science (19-0000)	212,680	96,830	46.55
Community and Social Service (21-0000)	360,300	60,220	28.95
Educational Instruction and Library (25-0000)	1,008,660	68,990	33.17
Arts, Design, Entertainment, Sports, and Media (27-0000)	361,880	76,020	36.55
Healthcare Practitioners and Technical (29-0000)	955,900	111,500	53.61
Healthcare Support (31-0000)	1,180,570	34,640	16.65
Protective Service (33-0000)	427,100	49,370	23.74
Food Preparation and Serving Related (35-0000)	1,600,160	35,970	17.30
Building and Grounds Cleaning and Maintenance (37-0000)	510,000	39,230	18.86
Personal Care and Service (39-0000)	378,650	36,980	17.78
Sales and Related (41-0000)	1,437,100	41,620	20.01
Farming, Fishing, and Forestry (45-0000)	204,930	35,020	16.84
Construction and Extraction (47-0000)	668,430	64,640	31.08

	Employment	Annual median wage	Hourly median wage
Installation, Maintenance, and Repair (49-0000)	546,790	61,650	29.64
Production (51-0000)	784,980	45,450	21.85
Transportation and Material Moving (53-0000)	1,554,090	44,200	21.25
All occupations	17,945,910	54,030	25.98

SOURCES: Bureau of Labor Statistics Occupational Employment and Wages, 2023

NOTES: California statistics shown for occupational groups, along with their SOC code. We show all 2-digit occupations and, in the first panel, some examples of likely headquarter-specific occupations.

TABLE B2

Numbers of HQs, branches, and single-establishment firms: 2021

Type	Count	Employment	% Total Employment	Average Size
Panel A: California Establishments				
Firms headquartered in CA	49,832	4,809,275		
CA branches of CA HQ	85,633	2,311,523	8.69%	26.99
CA headquarters	49,832	2,497,752	9.39%	50.12
Single establishments in CA	3,943,868	19,092,998	71.82%	4.84
CA branches of non-CA HQ	81,544	2,176,597	8.19%	26.69
Total	4,160,877	26,586,249	100%	
Panel B: All-U.S. Establishments				
Branches	1,660,820	57,579,377	23.9%	34.67
Headquarters	443,034	27,287,896	11.3%	61.59
Single establishments	30,791,568	156,103,507	64.8%	5.07
Total	32,895,422	240,970,780	100%	

SOURCES: Authors' analysis from Mergent data, 2010-2021

NOTES: Establishments are categorized based by whether they are part of a larger firm, and if so where the firm is headquartered. Figures are based on 2021 data. Percentages reflect each category's share of total employment in California as measured by Mergent. The average size column shows the mean number of employees per establishment within each category.

TABLE B3

Regression model of relocation of headquarters out of California

	(1)	(2)	(3)	(4)
	HQ count		HQ employment	
Taxes/regulations	-11.8** (4.7)		-2046.6*** (409.4)	
Marginal tax rate		-7.9* (4.0)		-1356.0*** (445.9)
Government employment		-7.7 (5.4)		-867.7** (395.6)
Education	-10.7 (7.0)	-10.5 (6.3)	-955.3* (544.5)	-704.8 (542.0)
Home value	16.9* (8.4)	16.8** (7.4)	1139.4* (590.7)	970.3 (587.7)
Distance (1000 mi)	-235.3*** (49.0)	-202.8*** (36.7)	-5934.5** (2220.0)	-1624.4 (3396.5)
Distance^2	61.4*** (15.4)	51.2*** (12.2)	1416.8* (825.0)	120.2 (1173.2)
Destination HQ count	2.0*** (0.3)	1.9*** (0.3)		
Destination HQ employment			3.6*** (0.5)	3.2*** (0.6)
Dependent Mean	54.4	54.4	3696.3	3696.3
Dependent SD	75.2	75.2	5426.7	5426.7
R-squared	0.8	0.8	0.8	0.7
Observations	49	49	49	49

SOURCE: Authors' analysis from Mergent data, 2010-2021

NOTE: See text Figure 3 and discussion for details. Standard errors are reported in parenthesis. *p<0.1, **p<0.05, ***p<0.01.

TABLE B4

Regression model of all headquarter relocations across states

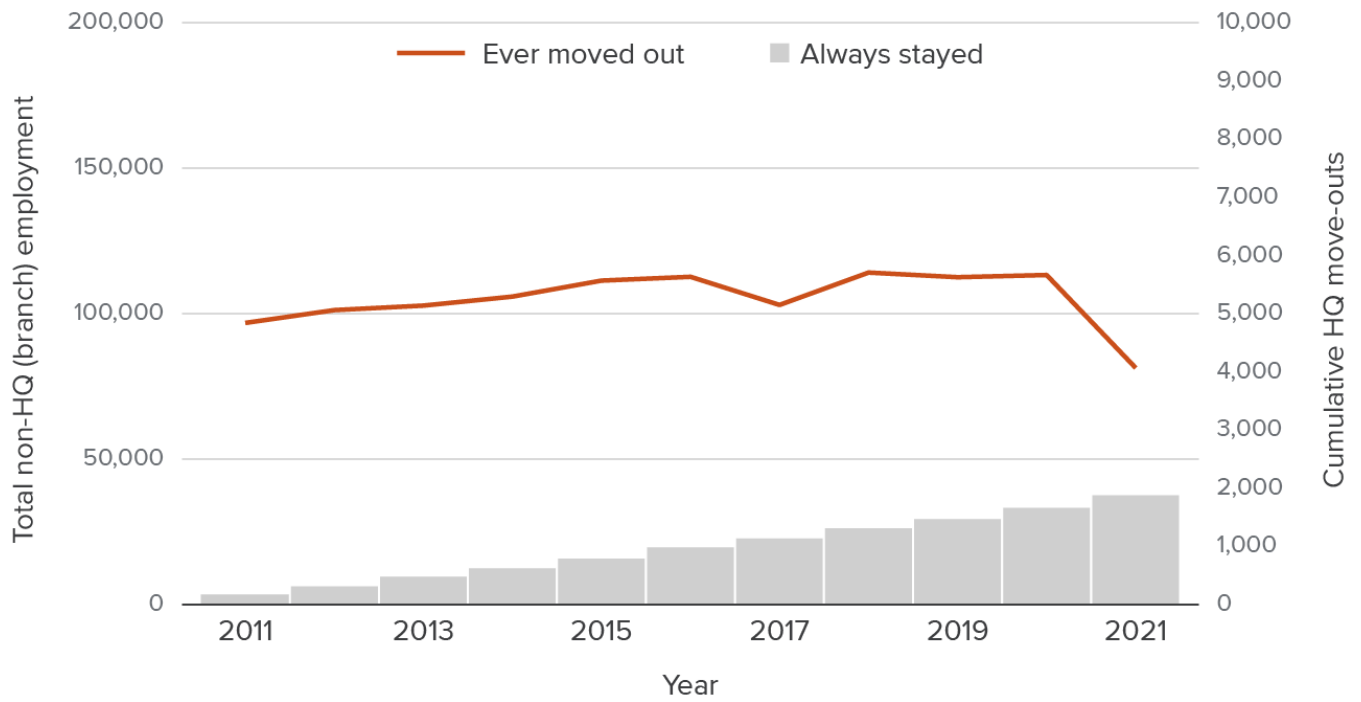
	(1)	(2)	(3)	(4)
	HQ count		HQ employment	
Taxes/regulations	-1.2***		-96.4***	
	(0.2)		(27.7)	
Marginal tax rate		-1.0***		-79.2***
		(0.2)		(22.7)
Government employment		-0.7***		-41.6**
		(0.1)		(21.0)
Education	-0.2	-0.2	3.4	7.1
	(0.1)	(0.1)	(18.6)	(23.7)
Home value	-0.6***	-0.6***	-73.2***	-80.1***
	(0.2)	(0.2)	(20.3)	(20.2)
Distance (1000 mi)	-13.4***	-13.4***	-908.9***	-908.9***
	(2.9)	(2.9)	(182.9)	(183.0)
Distance^2	2.6***	2.6***	173.5***	173.5***
	(0.6)	(0.6)	(37.1)	(37.1)
Origin HQ count	0.2***	0.2***		
	(0.0)	(0.0)		
Destination HQ count	0.2***	0.2***		
	(0.0)	(0.0)		
Origin HQ employment			0.4***	0.4***
			(0.0)	(0.0)
Destination HQ employment			0.4***	0.4***
			(0.0)	(0.0)
Dependent Mean	9.308	9.308	617.471	617.471
Dependent SD	25.601	25.601	1954.473	1954.473
R-squared	0.307	0.306	0.254	0.253
Observations	2450	2450	2450	2450

SOURCE: Authors' analysis from Mergent data, 2010-2021

NOTE: See text Figure 4 and discussion for details. Standard errors are reported in parenthesis. *p<0.1, **p<0.05, ***p<0.01.

FIGURE B1

Employment in non-HQ branches among firms whose HQ left California



SOURCE: Authors' analysis from Mergent data, 2010-2021

NOTE: Line shows total employment at non-HQ branches in California (left axis) for firms whose headquarters relocated out of California (orange line). Cumulative number of HQ relocations is shown in the grey bars (right axis).



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