



The Economic Impact of Exact Sciences on Dane County and Wisconsin*

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**The views expressed herein are those of the authors and not necessarily those of the Center for Research on the Wisconsin Economy, the Department of Economics, or the University of Wisconsin – Madison.*

Executive Summary

This report evaluates the economic impact of Exact Sciences Corporation on the Dane County and broader Wisconsin economy. Exact Sciences, headquartered in Madison, has grown from 19 employees and \$4.8 million in revenue in 2009 to approximately 7,200 employees globally (around half are in Wisconsin, primarily in Dane County) and \$3.2 billion in revenue by 2025, driven primarily by the commercial success of Cologuard, a non-invasive colorectal cancer screening test approved by the Food and Drug Administration (FDA) in August 2014.

- To estimate what Dane County's economy would have looked like without Exact Sciences, we use a synthetic control approach: we construct a weighted combination of eleven similar Midwestern university counties to serve as a statistical "twin" for Dane County, tracking the period before the firm's 2009 relocation from Massachusetts. By 2024, Dane County's life sciences employment exceeded this benchmark by approximately 3,500 jobs—closely matching Exact Sciences' local workforce—while total employment exceeded the benchmark by approximately 23,200 jobs and county GDP by \$6.6 billion.
- Applying the local labor market multiplier of 4.9 estimated by Moretti (2010) for high-technology employment, Exact Sciences' approximately 3,500 Dane County life sciences jobs imply an additional 17,150 jobs in the local nontradable sector, for a total employment impact of approximately 20,650 jobs. This accounts for the vast majority of the 23,200-job gap between Dane County and its synthetic counterpart, suggesting that Exact Sciences—through both direct employment and multiplier effects—is the primary driver of the county's outperformance.
- A complementary state-level synthetic control analysis finds a medical laboratory employment gap of over 4,000 jobs for Wisconsin relative to other Midwestern states. Scaling the county-level GDP estimates by the ratio of state-to-county life sciences employment gaps, we estimate that Exact Sciences contributes approximately \$6–7 billion to Wisconsin's GDP, or roughly 1.7–2.0% of the state's \$354.4 billion economy. Under a more conservative multiplier of 3 (vs. Moretti's 4.9), the estimated statewide GDP impact is approximately \$4.9 billion, or roughly 1.4% of state GDP.
- Exact Sciences' growth has been anchored by the University of Wisconsin–Madison and the University Research Park, which provided the talent pipeline, research infrastructure, and physical campus that attracted the firm from Massachusetts in 2009. The firm has in turn deepened Madison's life sciences ecosystem, contributing to employment growth across professional services, construction, and related sectors.

1 Introduction

Exact Sciences Corporation, headquartered in Madison, Wisconsin, has emerged as one of the most consequential homegrown biotech firms in the American Midwest. Founded in 1995 and relocated from Marlborough, Massachusetts to Madison in 2009, the company has grown from 19 employees to approximately 7,200 globally, driven primarily by the commercial success of Cologuard, a non-invasive colorectal cancer screening test approved by the Food and Drug Administration (FDA) in August 2014, and its 2019 acquisition of Genomic Health. Revenue has grown from \$4.8 million in 2009 to \$3.2 billion in 2025. Of the firm's global workforce, approximately 3,500 employees are based in Wisconsin—primarily in Dane County, with additional staff at a clinical laboratory in Marshfield (Yahr, 2022). The firm has invested over \$1.2 billion in cumulative capital expenditures and \$3.2 billion in research and development over this period. In November 2025, Abbott Laboratories announced a pending acquisition of Exact Sciences at a total equity value of approximately \$21 billion and an estimated enterprise value of \$23 billion (Abbott Laboratories, 2025).

This growth trajectory offers a rare natural experiment in regional economics: a clearly identifiable firm-level shock—the 2009 headquarters relocation followed by the 2014 FDA approval and subsequent commercialization of a blockbuster diagnostic product—occurring in a well-defined regional economy with suitable comparison units. This paper exploits this opportunity to rigorously evaluate the economic impact of Exact Sciences on the Dane County and broader Wisconsin economy, addressing the central question: what would the Dane County and broader Wisconsin economy look like had Exact Sciences not relocated to Madison?

Our primary empirical approach is the synthetic control method (Abadie, Diamond and Hainmueller, 2010), which constructs a data-driven counterfactual for both Dane County and Wisconsin using comparable Midwestern units to estimate the causal employment and GDP impact. We interpret the magnitude of these estimates through the local labor market multipliers of Moretti (2010). The findings contribute to the growing body of work on the regional economic impact of biotech and life sciences firms, which remains disproportionately focused on coastal clusters (Cortright and Mayer, 2002; Zucker, Darby and Brewer, 1998), and inform the ongoing policy debate over targeted economic development incentives (Bartik, 2019).

2 Background

2.1 Exact Sciences: Key Milestones

The growth of Exact Sciences can be organized around several pivotal events. In 2009, CEO Kevin Conroy relocated the company's headquarters from Marlborough, Massachusetts to Madison, Wisconsin. The relocation was deeply connected to Madison's life sciences ecosystem: Conroy had previously served as CEO of Third Wave Technologies, a molecular diagnostics company founded by UW–Madison professor emeritus Jim Dahlberg and chemistry professor Lloyd Smith, and spun off from patents held by the Wisconsin Alumni Research Foundation (WARF). When Conroy took the helm of the nearly defunct Exact Sciences in 2009—the firm had been reduced to just two employees—he brought the company to Madison, where he and several senior managers were already based from their Third Wave tenure. Conroy has cited UW–Madison's top-ranked biochemistry program and the ability to recruit Ph.D.-level scientists as the primary reasons for the relocation (Eisen, 2018).

Between 2009 and 2013, the company operated primarily as a pre-revenue R&D firm, investing in clinical trials for Cologuard while earning modest license revenue from earlier agreements. Employment grew from 19 to 102 during this period, and the firm invested \$105 million in R&D. The FDA approval of Cologuard in August 2014 marked a decisive inflection point: revenue surged from \$1.8 million in 2014 to \$39.4 million in 2015 and \$876 million by 2019. Employment scaled correspondingly, from 236 in 2014 to 4,110 by 2019.

The 2019 acquisition of Genomic Health, a genomics-based oncology diagnostics company based in Redwood City, California, approximately doubled Exact Sciences' product portfolio and further expanded its workforce. The acquisition brought approximately 800 employees outside Wisconsin, and the firm subsequently expanded sales and commercial teams nationally. By 2025, the firm employed approximately 7,200 people globally, with roughly half—approximately 3,500—based in Wisconsin (Yahr, 2022). Revenue reached \$3.2 billion. Cumulative capital expenditures from 2009 through 2025 exceeded \$1.2 billion, reflecting substantial investment in laboratory facilities, corporate headquarters, and manufacturing infrastructure primarily in the Madison area. Table 1 summarizes the key milestones.

Table 1: Exact Sciences Growth at Key Milestones

Year	Milestone	Employees	Revenue (\$M)	R&D (\$M)	Capex (\$M)
2009	HQ Relocation	19	4.8	4.2	0.5
2012	Pre-FDA	87	4.1	42.1	0.7
2014	Cologuard Approval	236	1.8	28.7	12.0
2016	Commercial Scale-Up	736	99.4	33.5	14.9
2019	Genomic Health Acq.	4,110	876.3	139.7	172.7
2022	Mature Operations	6,400	2,084.3	394.2	214.5
2024	Current Operations	7,000	2,758.9	431.2	136.0
2025	Pre-Acquisition	7,200	3,247.0	523.0	134.7

Source: Exact Sciences SEC 10-K filings (2009–2025). All figures are company-wide (global). Capex = capital expenditures (purchases of property, plant, and equipment). Prior to the 2019 Genomic Health acquisition, virtually all employees were in Wisconsin; post-acquisition, approximately half of the global workforce is Wisconsin-based (Yahr, 2022).

2.2 Operations in Wisconsin

While Exact Sciences’ operations are concentrated at its Madison headquarters and campus in the University Research Park, the firm also maintains significant operations elsewhere in Wisconsin. In January 2022, Exact Sciences acquired PreventionGenetics, a clinical DNA testing laboratory in Marshfield, Wisconsin, for \$190 million (Wisconsin Public Radio, 2022). Founded in 2004, PreventionGenetics employs approximately 173 people and provides germline DNA sequencing, whole exome and genome sequencing, and panels for inherited diseases including cancer, complementing Exact Sciences’ Cologuard and Oncotype DX product lines. The Marshfield facility leverages the region’s health care workforce, anchored by Marshfield Clinic Health System, and extends Exact Sciences’ economic footprint into rural Wisconsin.

Within the Madison metropolitan area, Exact Sciences operates across multiple campuses. The Discovery Campus on South Bedford Street comprises 695,000 square feet of laboratory, warehouse, and office space, including a 75,000 square-foot FDA-regulated production laboratory capable of processing 7 million Cologuard kits per year. The Innovation One headquarters at the University Research Park is a five-story, approximately 138,000 square-foot building completed in early 2020. The Legacy Campus on East Badger Road houses additional operations. In total, Exact Sciences’ Madison real estate footprint exceeds 800,000 square feet.

2.3 UW–Madison and the University Research Park

The University of Wisconsin–Madison and the University Research Park (URP) played a central role in attracting Exact Sciences to Madison. UW–Madison is consistently

ranked among the top research universities in the United States, with annual research expenditures exceeding \$1.9 billion and particular strengths in biochemistry, molecular biology, oncology, and biomedical engineering. The Wisconsin Alumni Research Foundation (WARF), the nation's first university technology transfer office (founded in 1925), has generated \$1.2 billion in cumulative licensing revenue and spawned over 200 startup companies. Critically, the enzyme technology underlying Cologuard traces to Third Wave Technologies, founded by UW–Madison professor emeritus Jim Dahlberg and chemistry professor Lloyd Smith based on WARF-licensed patents. Third Wave was sold to Hologic in 2008 for \$580 million, and several of its senior managers—including Conroy—subsequently brought Exact Sciences to Madison (UW–Madison News, 2025).

The University Research Park, a 255-acre campus adjacent to UW–Madison, hosts more than 126 companies in over 1.8 million square feet of laboratory and office space, with Exact Sciences as its largest tenant (University Research Park, 2024). The Research Park also houses Forward BIOLABS, a nonprofit life sciences incubator that has supported over 55 startups.

The appeal of this ecosystem was central to the 2009 relocation decision (Office of Governor Jim Doyle, 2009). The \$1 million state loan facilitated the move, but the primary draw was the talent pipeline: by 2015, approximately 50 percent of Exact Sciences' R&D laboratory workforce were UW graduates; by 2022, more than 60 percent of R&D staff were graduates of the UW System (The Badger Herald, 2015; Yahr, 2022). Madison also offered a cost of living approximately 37% lower than the Boston area, with less competition for laboratory space and specialized talent (NerdWallet, 2024).

2.4 Public Assistance

Exact Sciences received approximately \$38 million in cumulative state and local assistance over thirteen years (Table 2). This included a \$1 million relocation loan from the Wisconsin Department of Commerce in 2009 (Office of Governor Jim Doyle, 2009); \$9 million in performance-based Enterprise Zone tax credits from the Wisconsin Economic Development Corporation (WEDC) in 2015, requiring the creation of 758 jobs and \$26.2 million in capital investment (Wisconsin Economic Development Corporation, 2015); approximately \$9.3 million in Tax Increment Financing (TIF) from the City of Madison across four grants in 2017–2018 for laboratory, headquarters, and parking facilities (Becker, 2018); and an additional \$18.5 million in WEDC Enterprise Zone tax credits tied to a \$350 million campus expansion and 1,300 new jobs by 2025 (Yahr, 2022). These programs were uniformly performance-based, with assistance contingent on achieving specified job creation and capital investment thresholds. Notably, Exact Sciences substantially exceeded the conditions of the 2015 tax credit program, creating over 2,700 jobs against a requirement of 758 (Yahr, 2022).

Table 2: Public Assistance to Exact Sciences

Year	Program	\$M	Conditions
2009	WI Dept. of Commerce Loan	1.0	Relocation from MA
2015	WEDC Enterprise Zone Credits	9.0	758 jobs; \$26.2M investment
2017	City of Madison TIF (1 Exact Ln)	2.5	250 jobs
2017–18	City of Madison TIF (650 Forward Dr)	2.1	250 jobs
2018	City of Madison TIF (Innovation One)	2.6	HQ at Research Park
2018	City of Madison TIF (URP renovation)	2.1	Parking and offices
2022	WEDC Enterprise Zone Credits	18.5	1,300 jobs; \$350M investment
Total		37.8	

Note: All programs are performance-based. The 2015 WEDC credits required 758 jobs; Exact Sciences created over 2,700. Sources: Office of Governor Jim Doyle (2009); Wisconsin Economic Development Corporation (2015); Becker (2018); Yahr (2022).

3 Data

The primary data source is the Quarterly Census of Employment and Wages (QCEW), published by the Bureau of Labor Statistics (Bureau of Labor Statistics, 2025). The QCEW provides establishment-level counts of employment and wages by industry (NAICS code) and geography, derived from unemployment insurance tax records. We use annual average data for Dane County (FIPS 55025) and the state of Wisconsin. For industry-level analysis at the county level, we use QCEW annual data for the period 2001–2024, obtained from BLS bulk data files (2001–2013) and the BLS QCEW Data API (2014–2024). We supplement QCEW data with county-level GDP estimates from the Bureau of Economic Analysis (BEA) Regional Economic Accounts (CAGDP1 series, 2001–2024).

Key industries analyzed include total nonfarm employment (NAICS 10), scientific research and development services (NAICS 5417), and medical and diagnostic laboratories (NAICS 6215). Exact Sciences’s 10-K filings suggest that it was classified under NAICS 5417 initially and reclassified to NAICS 6215 later. For this reason, our synthetic control analyses examine both NAICS codes separately and in combination.

3.1 Comparison Counties

For the synthetic control analysis, we construct a panel of comparable Midwestern counties anchored by flagship state university campuses. The donor pool includes eleven counties: Champaign County, IL (University of Illinois Urbana-Champaign); Monroe County, IN (Indiana University Bloomington); Johnson County, IA (University of Iowa); Douglas County, KS (University of Kansas); Washtenaw County, MI (University of Michigan); Hennepin County, MN (University of Minnesota); Boone County, MO (University of Missouri);

Lancaster County, NE (University of Nebraska–Lincoln); Grand Forks County, ND (University of North Dakota); Franklin County, OH (Ohio State University); and Clay County, SD (University of South Dakota). These counties share key characteristics with Dane County—flagship university-anchored economies, Midwestern location—but did not experience a comparable firm-level employment shock during the study period.

3.2 Comparison States

We complement the county-level analysis with a state-level synthetic control analysis using Wisconsin as the treated unit and the other eleven Midwestern states as donors: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, and South Dakota. State-level QCEW data are obtained from BLS bulk files (2001–2013) and the QCEW Data API (2014–2024).

4 Methods

4.1 Synthetic Control Method

We employ the synthetic control method of Abadie, Diamond and Hainmueller (2010) to estimate the causal impact of Exact Sciences on the Dane County and Wisconsin economies. This approach constructs a weighted combination of control units that best reproduces the treated unit’s pre-treatment trajectory for each outcome variable. We take 2009—the year Exact Sciences relocated its headquarters to Madison—as the treatment year, and use 2001–2008 as the pre-treatment period.

Because the donor counties vary enormously in size (e.g., Clay County, SD has approximately 3,600 total jobs while Hennepin County, MN has over 750,000), we index each county’s outcome to its 2008 level (2008 = 100) before estimating the synthetic control weights. This normalization ensures that the optimization matches *growth trajectories* rather than levels, preventing large counties from mechanically dominating the synthetic control. The synthetic control is formed by choosing weights $w_j \geq 0$, $\sum_j w_j = 1$, to minimize the sum of squared differences between Dane County’s indexed values and the weighted combination of donor counties’ indexed values over the pre-treatment period. Post-treatment gaps are then converted back to levels by multiplying by Dane County’s 2008 base value and dividing by 100.

At the county level, we estimate separate synthetic controls for five outcome variables: (i) medical laboratory employment (NAICS 6215), (ii) scientific R&D services employment (NAICS 5417), (iii) combined life sciences employment (NAICS 6215 + 5417), (iv) total nonfarm employment, and (v) GDP (from BEA Regional Economic Accounts). This multi-outcome approach allows us to trace the impact of Exact Sciences through its direct industry classifications, combined life sciences employment, and broader economic

aggregates. At the state level, we focus on life sciences employment outcomes (medical laboratory and combined life sciences). Although Exact Sciences is transformative for Dane County, the firm's approximately 3,500 Wisconsin jobs represent a small fraction of the state's 2.6 million nonfarm workforce and \$354 billion economy. A single firm of this size cannot generate a detectable signal in state-level aggregates such as total employment or GDP, where the treatment effect is swamped by other macroeconomic forces affecting Wisconsin relative to its Midwestern peers. The synthetic control method is most credible when the treatment is large relative to the outcome being measured; at the state level, this condition is satisfied only for the narrow life sciences sectors where Exact Sciences accounts for a substantial share of employment.

4.2 Local Multiplier Framework

To interpret the magnitude of the synthetic control estimates, we draw on the local labor market multiplier estimated by Moretti (2010). Using an instrumental variables approach with data on U.S. metropolitan areas, Moretti estimates that each additional job in the high-technology tradable sector creates approximately 4.9 additional jobs in the local nontradable sector (services, retail, construction, health care, etc.)—the largest multiplier among all sectors examined, and roughly three times the manufacturing multiplier of 1.6. Moretti (2012) summarizes this finding as follows: for each new high-tech job in a city, five additional jobs are ultimately created outside of the high-tech sector in that city.

Two channels drive this multiplier. First, an *income effect*: high-wage workers in the tradable sector (such as Exact Sciences employees) spend locally, raising demand for nontradable goods and services. Second, an *agglomeration effect*: the clustering of high-tech activity attracts further economic activity through knowledge spillovers, labor market pooling, and specialized supplier networks (Moretti, 2010; Moretti and Wilson, 2014). The second channel is particularly relevant to Madison, where UW–Madison and the University Research Park provide precisely the kind of innovation cluster that generates agglomeration externalities.

We apply this multiplier to the synthetic control estimate of Exact Sciences' direct employment impact to derive an estimate of total local employment effects, and compare the result to the observed total nonfarm employment gap. This provides a consistency check: if the synthetic control estimates and the peer-reviewed multiplier yield similar total employment figures, confidence in both estimates is strengthened.

5 Results

5.1 Descriptive Analysis

Before turning to the causal analysis, we present descriptive evidence on Exact Sciences' growth and its relationship to local employment trends.

Figure 1 shows indexed medical laboratory employment (NAICS 6215) for Dane County, Wisconsin, and the United States, with 2014 (the year of Cologuard's FDA approval) as the base year. While national and state-level medical lab employment grew modestly over this period, Dane County's medical lab employment surged dramatically, increasing by a factor of more than eight between 2014 and 2024. This divergence is striking and consistent with the hypothesis that a single firm—Exact Sciences—drove the vast majority of growth in this sector in Dane County.

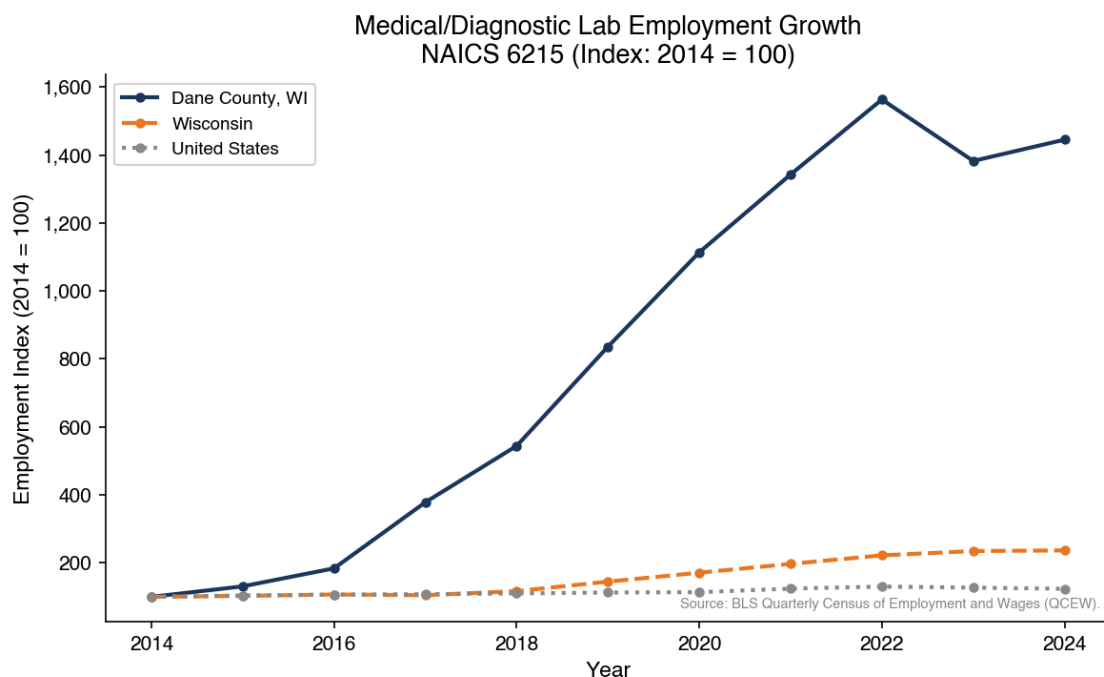


Figure 1: Medical/Diagnostic Lab Employment Growth (NAICS 6215, Index: 2014=100)

Figure 2 compares average weekly wages in medical laboratories across the three geographies. Prior to 2017, Dane County's medical lab wages were comparable to or below the state and national averages. Beginning in 2017—coinciding with Exact Sciences' rapid commercial scale-up—Dane County wages surged well above both benchmarks, reflecting the high-skill nature of Exact Sciences' workforce and the wage premium associated with a rapidly growing employer competing for specialized talent.

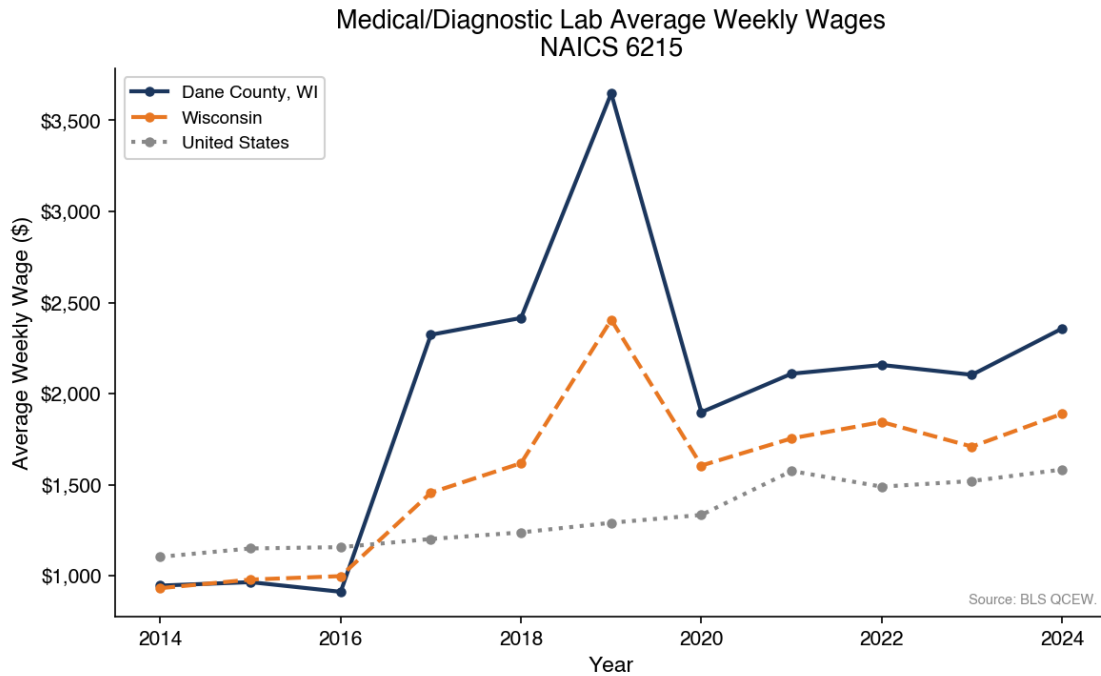


Figure 2: Medical/Diagnostic Lab Average Weekly Wages (NAICS 6215)

5.2 County-Level Synthetic Control Results

We present synthetic control results for five outcome variables, with 2009 as the treatment year (the year Exact Sciences relocated to Madison).

Total Nonfarm Employment

Figure 3 shows the synthetic control results for total nonfarm employment. The synthetic Dane County is constructed from Grand Forks County, ND (63.7%), Douglas County, KS (20.9%), and Boone County, MO (15.4%). The synthetic control tracks Dane County's employment growth closely during the pre-treatment period (2001–2008). After 2009, Dane County's employment initially falls slightly below its synthetic counterpart during the Great Recession recovery, but begins diverging upward around 2015. By 2024, the gap reaches approximately 23,200 jobs (Figure 4), with acceleration visible after the 2019 Genomic Health acquisition.

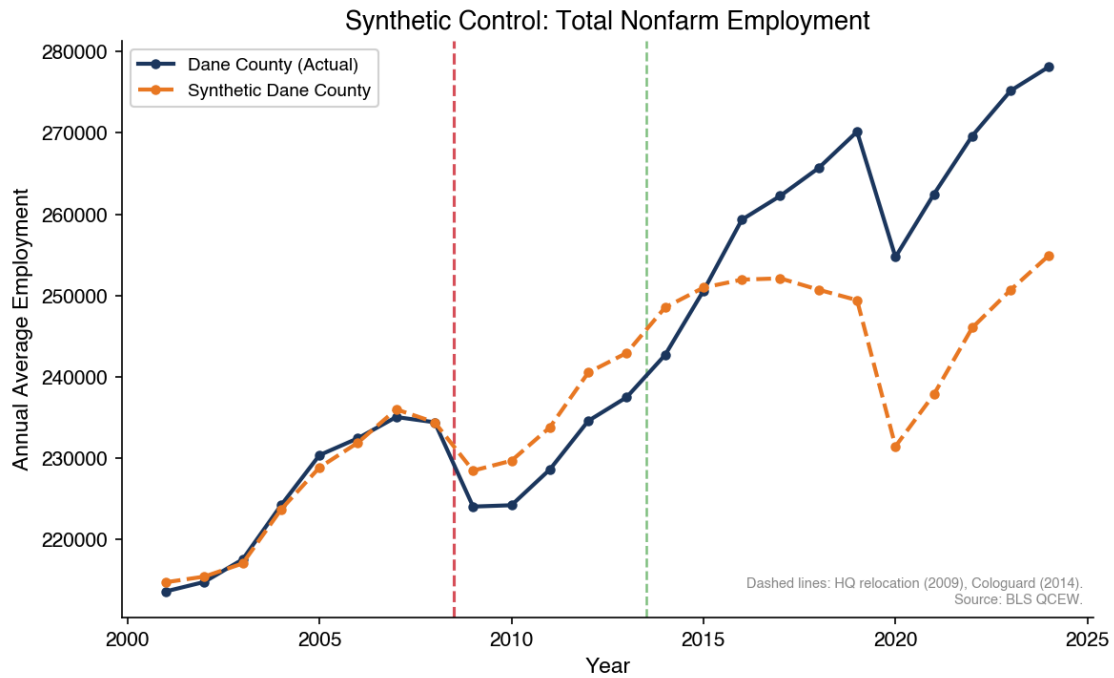


Figure 3: Synthetic Control: Total Nonfarm Employment

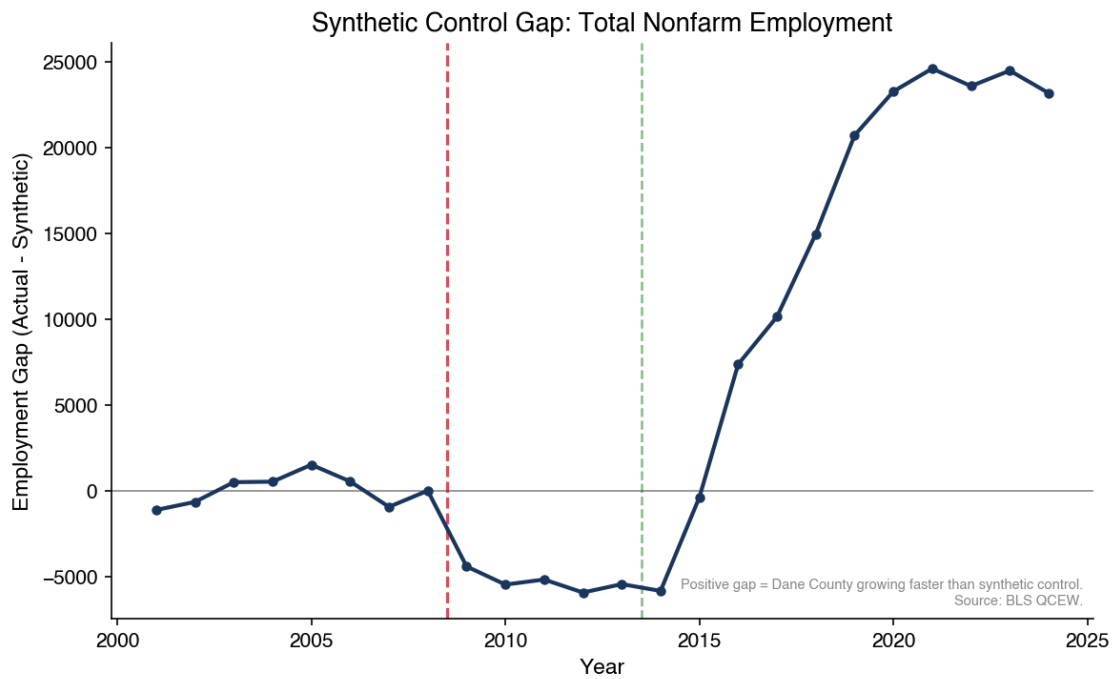


Figure 4: Synthetic Control Gap: Total Nonfarm Employment

Life Sciences Employment

Figures 5–6 present results for combined life sciences employment (NAICS 6215 + 5417), which captures Exact Sciences employees regardless of their NAICS classification. The synthetic control is constructed from Johnson County, IA (58.3%) and Douglas County, KS (41.7%). Combined life sciences employment in Dane County begins diverging from its synthetic counterpart shortly after 2009, with the gap widening sharply after 2015. By 2024, actual life sciences employment exceeds the synthetic control by approximately 3,500 jobs. Gaps in the synthetic control series in 2016 and 2018 result from QCEW data suppression in Douglas County, KS, which carries 41.7% of the synthetic weight; when employment data are suppressed for confidentiality in a donor county, the synthetic value cannot be computed for that year.

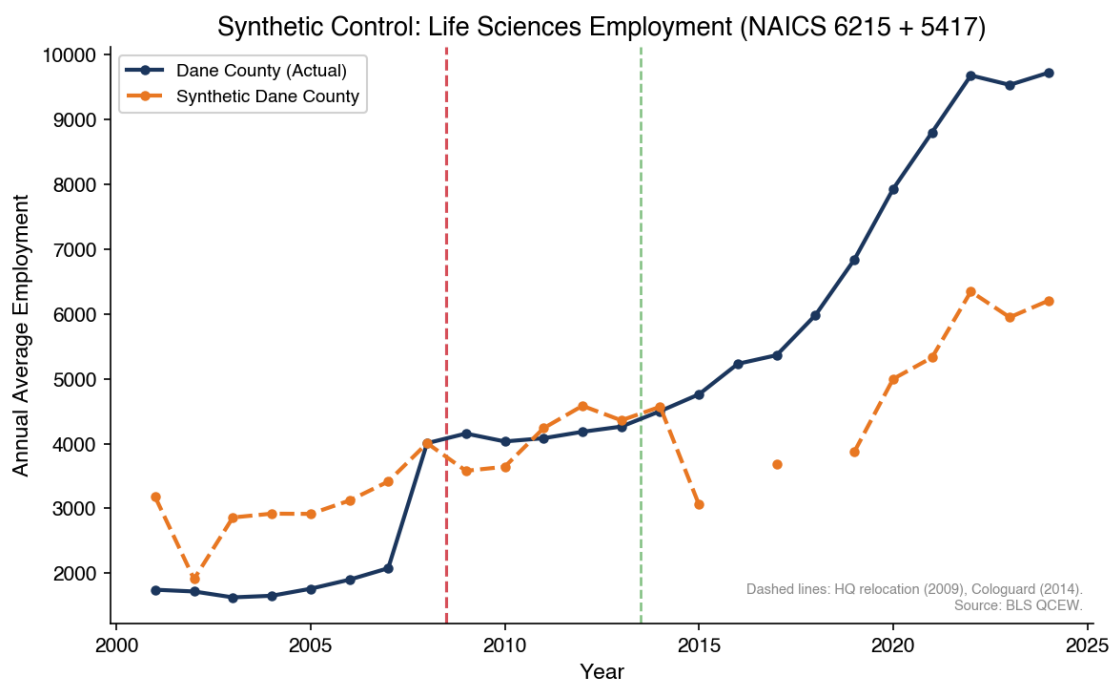


Figure 5: Synthetic Control: Combined Life Sciences Employment (NAICS 6215 + 5417)

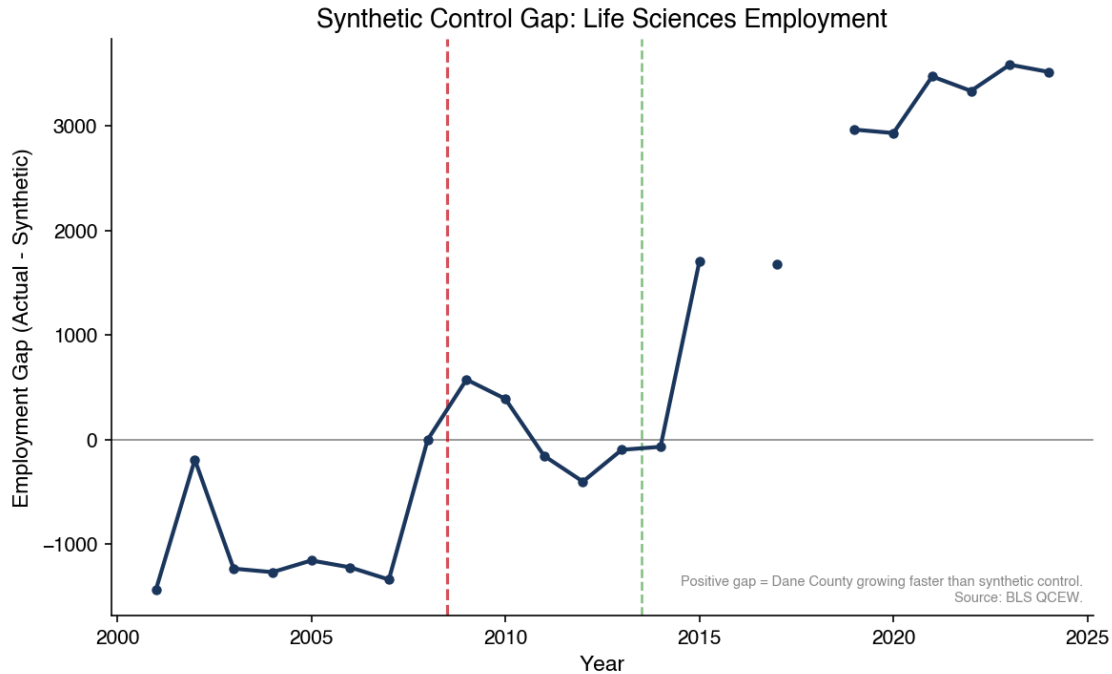
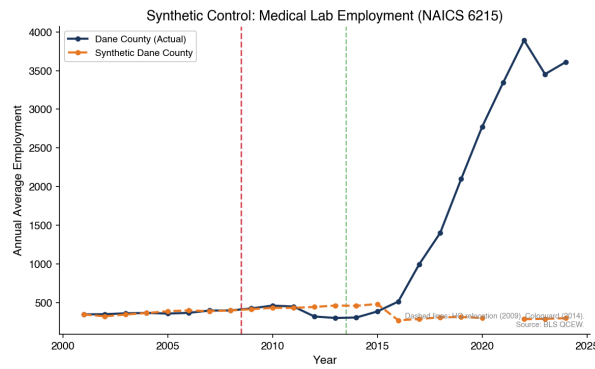
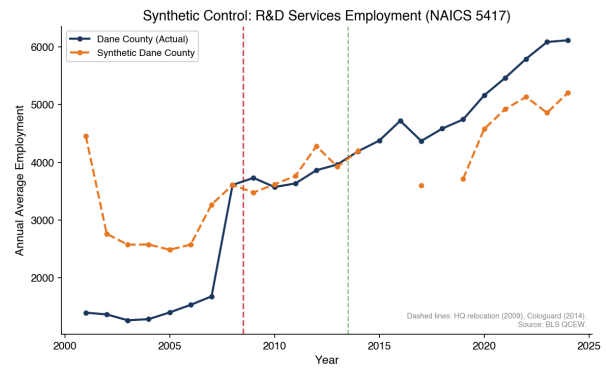


Figure 6: Synthetic Control Gap: Combined Life Sciences Employment

When examined separately, medical laboratory employment (NAICS 6215) in Dane County diverges dramatically from its synthetic counterpart beginning around 2016, reaching a gap of over 3,300 jobs by 2024 (Figures 7a–8a). The missing data point in 2021 reflects QCEW data suppression in Johnson County, IA (13.4% weight). R&D services employment (NAICS 5417) shows a more moderate but still positive gap of approximately 900 jobs by 2024 (Figures 7b–8b), though this estimate should be interpreted with caution: the sharp jump in Dane County's NAICS 5417 employment in 2008 (from approximately 1,700 to 3,600) creates a pre-treatment trajectory that no donor combination can match well, resulting in poor pre-treatment fit. Missing values in 2015–2016 and 2018 are due to data suppression in Douglas County, KS (60.5% weight) and Champaign County, IL (21.6% weight), respectively. The pattern across these two NAICS codes is consistent with the reclassification story: Exact Sciences employees were initially classified under NAICS 5417, and reclassified to NAICS 6215 as the firm transitioned from R&D to commercial laboratory operations.

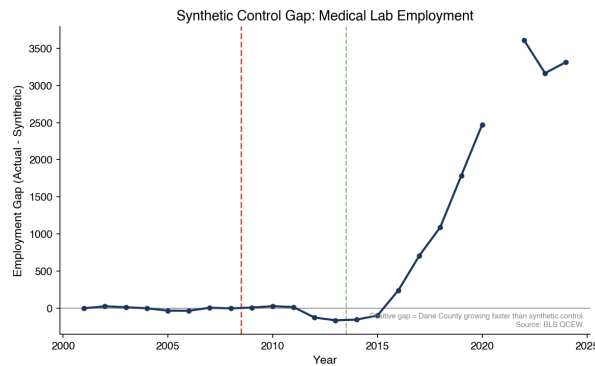


(a) Medical Labs (NAICS 6215)

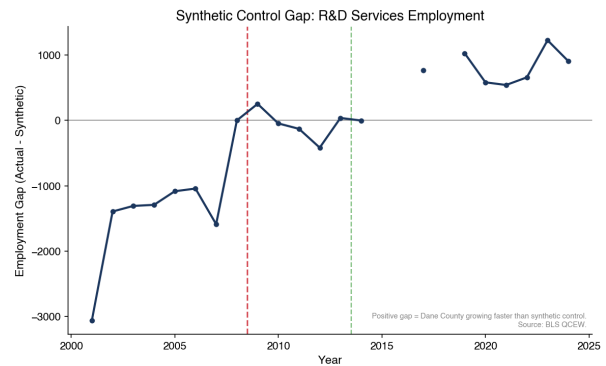


(b) R&D Services (NAICS 5417)

Figure 7: Synthetic Control: Industry-Level Employment



(a) Medical Labs (NAICS 6215)



(b) R&D Services (NAICS 5417)

Figure 8: Synthetic Control Gap: Industry-Level Employment

County GDP

Figure 9 shows the synthetic control results for county GDP. The synthetic Dane County is constructed from Lancaster County, NE (55.0%), Johnson County, IA (40.7%), and Hennepin County, MN (4.3%). GDP in Dane County begins diverging from its synthetic counterpart as early as 2012, with the gap widening steadily. By 2024, Dane County's GDP exceeds the synthetic control by approximately \$6.6 billion (Figure 10). To place this in perspective, Dane County's GDP grew from \$32.5 billion in 2009 to \$51.3 billion in 2024, an increase of \$18.8 billion. The \$6.6 billion gap with the synthetic control implies that roughly one-third of Dane County's total GDP growth over this period exceeded what would have been expected based on the trajectories of comparable Midwestern university counties.

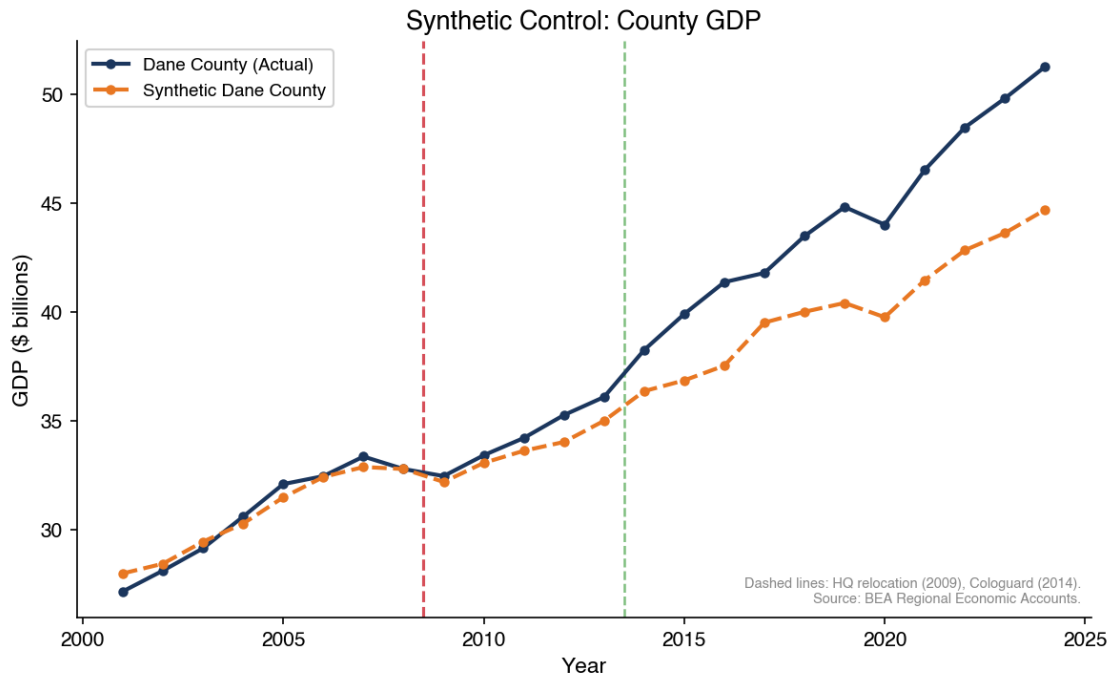


Figure 9: Synthetic Control: County GDP

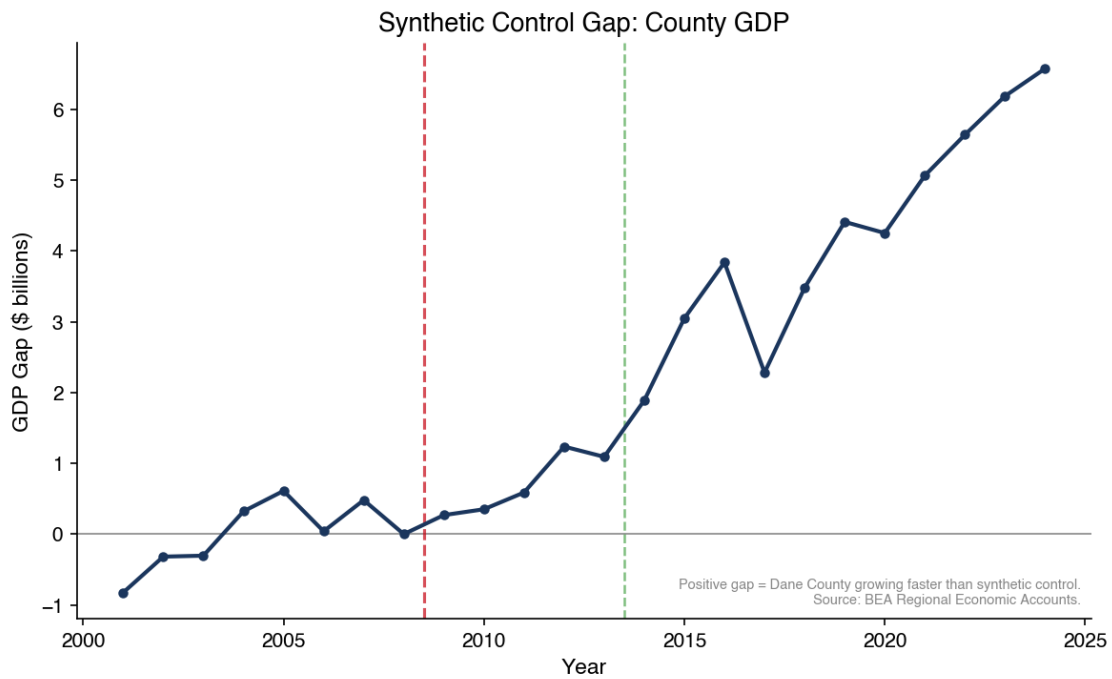


Figure 10: Synthetic Control Gap: County GDP

Table 3 summarizes the synthetic control results across all five outcomes.

Table 3: Summary of County-Level Synthetic Control Results (Gap in 2024)

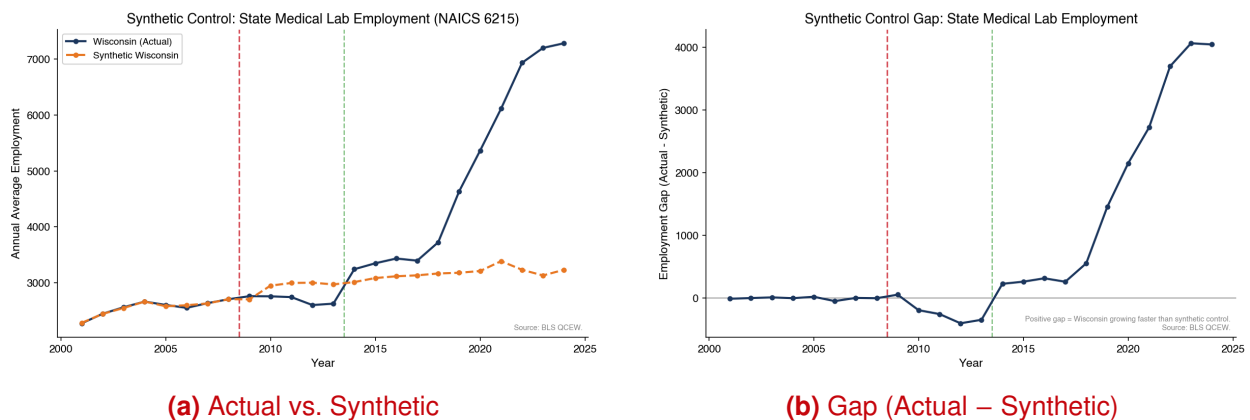
Outcome	Actual	Synthetic	Gap
Medical Labs (NAICS 6215)	3,612	299	+3,313 jobs
R&D Services (NAICS 5417)	6,112	5,206	+906 jobs
Combined Life Sciences	9,724	6,207	+3,517 jobs
Total Nonfarm Employment	278,146	254,966	+23,180 jobs
County GDP (\$000s)	51,263,648	44,687,403	+\$6.6B

Source: BLS QCEW (2001–2024) and BEA Regional Economic Accounts (2001–2024). Treatment year: 2009 (Exact Sciences HQ relocation). Donor pool: 11 Midwestern flagship university counties. Values indexed to 2008 = 100 for weight estimation.

5.3 State-Level Synthetic Control Results

To assess whether the county-level results reflect a broader impact on Wisconsin, we replicate the synthetic control analysis at the state level, using the other eleven Midwestern states as donors.

Figure 11a presents the state-level results for medical laboratory employment (NAICS 6215). The synthetic Wisconsin is constructed primarily from Missouri (45.7%) and Illinois (45.3%). The pre-treatment fit is excellent (RMSPE = 0.71 index points). After 2009, Wisconsin’s medical lab employment diverges sharply from the synthetic control, with the gap reaching approximately 4,050 jobs by 2024 (Figure 11b). This gap is consistent with, and slightly larger than, the county-level medical lab gap of 3,313 jobs, suggesting that Exact Sciences’ medical laboratory employment is concentrated almost entirely in Dane County but that some spillover employment may have reached other parts of the state, including the Marshfield facility.

**Figure 11: State-Level Synthetic Control: Medical Lab Employment (NAICS 6215)**

The combined life sciences outcome (NAICS 6215 + 5417) shows a similar pattern at the

state level, with Wisconsin exceeding its synthetic counterpart by approximately 4,326 jobs by 2024. Table 4 summarizes the state-level synthetic control results.

Table 4: State-Level Synthetic Control Results (Gap in 2024)

Outcome	Actual	Synthetic	Gap
Medical Labs (NAICS 6215)	7,282	3,233	+4,049 jobs
Combined Life Sciences	16,220	11,894	+4,326 jobs

Source: BLS QCEW (2001–2024). Treatment year: 2009. Donor pool: 11 other Midwestern states. R&D services (NAICS 5417) omitted due to poor pre-treatment fit (RMSPE = 10.23).

The county-level medical lab gap of 3,313 jobs is consistent with the state-level gap of 4,049 jobs, confirming that the effects are not an artifact of the county-level donor pool and that most of Wisconsin’s life sciences employment growth is concentrated in Dane County.

6 Discussion

6.1 Interpreting the Results

The combined life sciences employment gap of 3,500 jobs (Table 3) is directly consistent with Exact Sciences’ Dane County workforce, providing the most direct measure of the firm’s employment impact. The much larger total nonfarm employment gap of 23,200 jobs can be understood through local labor market multipliers. Moretti (2010) estimates that each high-technology job creates approximately 4.9 additional jobs in the local nontradable sector—the largest multiplier among all sectors examined. This multiplier operates through an *income effect* (high-wage workers spending locally) and an *agglomeration effect* (clustering of high-tech activity attracting further economic activity through knowledge spillovers and labor market pooling) (Moretti, 2010; Moretti and Wilson, 2014).

Applying this multiplier to Exact Sciences’ 3,500 life sciences jobs implies approximately 17,150 additional nontradable-sector jobs, for a total impact of approximately 20,650 jobs—89% of the observed 23,200-job gap. The close correspondence suggests that Exact Sciences is the primary driver of Dane County’s employment outperformance. Similarly, if the firm accounts for 89% of the \$6.6 billion GDP gap, its contribution to county GDP is approximately \$5.9 billion, or roughly 11.5% of Dane County’s \$51.3 billion GDP in 2024.

6.2 Impact on Wisconsin’s GDP

The above section estimated that Exact Sciences accounts for approximately 89% of the county-level employment gap, implying a contribution to Dane County GDP of approxi-

mately \$5.9 billion ($0.89 \times \$6.6$ billion). To scale this estimate to the state level, we note that the state-level synthetic control finds a combined life sciences employment gap of 4,326 jobs for Wisconsin, compared to 3,517 jobs at the county level. The larger state-level gap reflects additional Exact Sciences employment outside Dane County (including the Marshfield facility) and possible spillover effects. Applying this ratio yields an estimated statewide GDP impact of approximately \$7.3 billion ($\$5.9 \times 4,326 / 3,517$). This figure is likely an upper bound, however, because a portion of the state-level life sciences employment gap outside Dane County reflects the Marshfield facility (PreventionGenetics), which Exact Sciences acquired in 2022. PreventionGenetics was already an operating laboratory contributing to Wisconsin's GDP before the acquisition; its employment would have appeared in state life sciences totals regardless of whether Exact Sciences existed. Adjusting for this, the net statewide GDP impact attributable to Exact Sciences is more plausibly in the range of \$6–7 billion, or roughly 1.7–2.0% of Wisconsin's \$354.4 billion GDP in 2024.

The estimates above rely on Moretti's (2010) high-technology multiplier of 4.9. To assess the sensitivity of our results, we consider a more conservative multiplier of 3 additional nontradable jobs per direct high-technology job. Under this assumption, Exact Sciences' 3,500 Dane County life sciences jobs would generate 10,500 additional jobs, for a total employment impact of 14,000 jobs—approximately 60% of the 23,200-job gap between Dane County and its synthetic counterpart. The implied contribution to Dane County GDP would be approximately \$4.0 billion ($0.60 \times \$6.6$ billion), or roughly 7.8% of the county's \$51.3 billion GDP in 2024. Scaling to the state level using the same county-to-state ratio yields an estimated statewide GDP impact of approximately \$4.9 billion ($\$4.0 \times 4,326 / 3,517$), or roughly 1.4% of Wisconsin's GDP.

This contribution is concentrated in high-wage, export-oriented activity—the firm's revenue represents a net inflow of income to Wisconsin from outside the state—and has grown from essentially zero in 2009 to several billion dollars in fifteen years.

6.3 Capital Investment and Local Spending

Exact Sciences' cumulative company-wide capital expenditures from 2009 through 2025 total \$1.24 billion, with the majority concentrated in Wisconsin—particularly the Discovery Campus, the Innovation One headquarters, and the \$350 million campus expansion announced in 2022 (Yahr, 2022). By 2020, the firm had invested \$95.85 million in capital in Wisconsin under the WEDC Enterprise Zone program alone (University Research Park, 2020). Major projects were built by local firms including J.H. Findorff & Son Inc. (J.H. Findorff & Son Inc., 2020). Cumulative R&D spending totals approximately \$3.2 billion company-wide, with a substantial share supporting Madison-based research scientists

and laboratory infrastructure. Beyond capital and R&D, the firm's operational expenditures generate demand for local professional services, construction, real estate, and other sectors.

6.4 Impact on Wisconsin's Services and Other Sectors

A 2024 report by TEconomy Partners for BioForward Wisconsin estimated that Wisconsin's biohealth industry accounts for approximately \$37.7 billion in total economic output and supports over 141,000 jobs, with an average salary approximately 70% above the state average (BioForward Wisconsin and TEconomy Partners, 2024). Exact Sciences is the Madison region's largest single biohealth employer.

The approximately 17,150 additional nontradable-sector jobs implied by the Moretti multiplier span a broad range of sectors: professional and technical services (legal, accounting, IT consulting), construction (driven by \$1.24 billion in cumulative capital expenditures), commercial and residential real estate, transportation and warehousing (Colo-guard's nationwide specimen-shipping logistics), retail trade and food services (supported by employee spending), and health care. The concentration of high-wage jobs also generates fiscal benefits through income, property, and sales tax revenue that almost certainly exceeds the \$38 million in public assistance by a wide margin.

6.5 Impact on UW–Madison and the Life Sciences Ecosystem

The relationship between Exact Sciences and UW–Madison is mutually reinforcing. As described in Section 2, the university provided the talent pipeline and research infrastructure that attracted the firm; the firm's success has in turn strengthened the ecosystem in several ways.

First, Exact Sciences is one of the largest private-sector employers of UW–Madison graduates in the Madison area, with well over 1,000 UW System graduates among its approximately 3,500 Wisconsin employees (The Badger Herald, 2015; Yahr, 2022). This demand has expanded career opportunities for life sciences graduates without requiring relocation to coastal cities, contributing to “brain retention” and generating the kind of aggregate human capital externalities documented by Guo, Roys and Seshadri (2024).

Second, ongoing research collaborations—including work on liquid biopsy technologies with UW Health oncologist Joshua Lang and the university's Circulating Biomarker Core laboratory (Wisconsin State Journal, 2019)—extend the intellectual lineage that connects UW–Madison to the firm through WARF-licensed patents and Third Wave Technologies.

Third, as the anchor tenant of the University Research Park, Exact Sciences has catalyzed broader ecosystem growth. The park's footprint grew 40 percent between 2010

and 2020 (Olver, 2019), and the firm’s presence has attracted other life sciences companies including Illumina, Arrowhead Pharmaceuticals, and Accuray (Olver, 2019; In Business Madison, 2024). The density of firms and talent generates the agglomeration effects—knowledge spillovers, labor market pooling, and specialized supplier networks—that Moretti (2010) and Moretti and Wilson (2014) identify as central to the local multiplier for high-technology employment.

Finally, Exact Sciences has contributed to the local economy through entrepreneurial spinoffs. Maneesh Arora, who served as the firm’s Chief Operating Officer for approximately a decade, founded Elephas Biosciences in Madison in 2020. Elephas is developing a live tumor profiling platform drawing on bioimaging advances at UW–Madison and the Morgridge Institute for Research, and has raised over \$150 million in venture funding (Elephas Biosciences, 2022, 2024, 2025). This pattern—executives building expertise at Exact Sciences and launching new local ventures—illustrates how a single anchor firm can seed an expanding ecosystem.

6.6 Return on Public Investment

Against a cumulative public investment of approximately \$38 million, Exact Sciences has generated returns that are exceptional by the standards of economic development programs. Table 5 summarizes the key metrics, distinguishing Wisconsin-specific figures from company-wide totals.

Table 5: Return on Public Investment in Exact Sciences

Metric	Value
Total public investment	\$37.8 million
Wisconsin direct employment (2024)	~3,500 jobs
Estimated total local employment impact (Moretti multiplier)	~20,650 jobs
Cost per direct Wisconsin job	~\$10,800
Cost per total local job (Moretti)	~\$1,831
WI capital investment under WEDC program (through 2020)	\$95.9 million
Cumulative company-wide revenue (2009–2025)	\$15.6 billion
Cumulative company-wide capex (2009–2025)	\$1.24 billion
County GDP gap (synthetic control, 2024)	\$6.6 billion

Note: Cost per direct job = total public investment / Wisconsin employment. Wisconsin employment estimated at approximately 3,500 based on press reports (Yahr, 2022). Total local employment impact applies the Moretti (2010) high-technology multiplier of 4.9 additional nontradable jobs per direct job. These are gross figures; a net analysis would account for deadweight loss, displacement, and what-if scenarios.

The cost per direct Wisconsin job of approximately \$10,800 compares favorably to the typical range of \$25,000–\$100,000 per job for state economic development incentive pro-

grams (Bartik, 2019). Including the multiplier effects estimated by Moretti (2010), the approximately 20,650 total local jobs attributable to Exact Sciences imply a cost per job of approximately \$1,831—far below the range considered cost-effective in the literature.

These figures represent gross, not net, impact—a full welfare analysis would account for opportunity costs, deadweight loss, and displacement effects. However, the net impact is likely large: the 2009 relocation was not a foregone conclusion (the firm had only 19 employees and was years from commercial revenue), all subsequent incentive programs were performance-based (with disbursement contingent on verified job creation and investment thresholds), and the tax revenue generated by the firm and its employees almost certainly exceeds the \$38 million in assistance many times over. Notably, under the 2015 Enterprise Zone program, Exact Sciences created over 2,700 jobs against a requirement of 758, illustrating how performance-based design can scale public investment alongside demonstrated firm growth.

6.7 Limitations

Several limitations should be noted. First, QCEW data are subject to disclosure suppression at fine industry-county levels, reducing the effective donor pool for industry-level synthetic controls. Second, we cannot fully rule out time-varying confounders; in particular, the total employment and GDP gaps may partly reflect the growth of other major employers (notably Epic Systems). Third, the donor pool of eleven units is relatively small, limiting the precision of permutation-based inference (Abadie, Diamond and Hainmueller, 2010, 2015). Fourth, the Moretti (2010) multiplier of 4.9 is estimated from cross-city variation and may not apply precisely to Dane County; it should be interpreted as an order of magnitude rather than a point estimate. Fifth, we do not observe firm-level data on local procurement or employee residential locations.

7 Conclusion

This paper evaluates the economic impact of Exact Sciences on the Madison and Wisconsin economy using the synthetic control method and the local labor market multiplier framework of Moretti (2010). The synthetic control estimates a life sciences employment gap of 3,500 jobs—directly consistent with the firm’s local workforce—a total nonfarm employment gap of 23,200 jobs, and a county GDP gap of \$6.6 billion. Applying Moretti’s high-technology multiplier, the firm accounts for approximately 89% of the total employment gap and implies a statewide GDP contribution of \$6–7 billion. Against \$38 million in cumulative public investment, the cost per direct Wisconsin job is approximately \$10,800, well below the range considered cost-effective in the literature.

The case illustrates three broader lessons. First, university-adjacent communities in the interior United States can nurture globally competitive biotech firms that generate large

regional economic effects—the role of UW–Madison and the University Research Park underscores the importance of university-industry linkages. Second, performance-based incentive design can scale public investment alongside demonstrated firm growth while managing fiscal risk. Third, a single high-growth firm can have an outsized impact on a regional economy through direct employment, multiplier effects, capital investment, and the deepening of a local innovation ecosystem.

The pending acquisition by Abbott Laboratories—expected to close in the second quarter of 2026—raises important questions about the persistence of these benefits. Whether Abbott will maintain the firm’s Madison workforce at current scale, or whether functions will eventually consolidate at the acquirer’s headquarters, will shape the long-run trajectory of Madison’s life sciences cluster.

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