

Analysis of Material Source Mergers and Acquisitions on Project Delivery Quality and Costs Lessons Learned

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Many people contributed to this work

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- Project Team:
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Project Background



M&A activity is infrequently analyzed

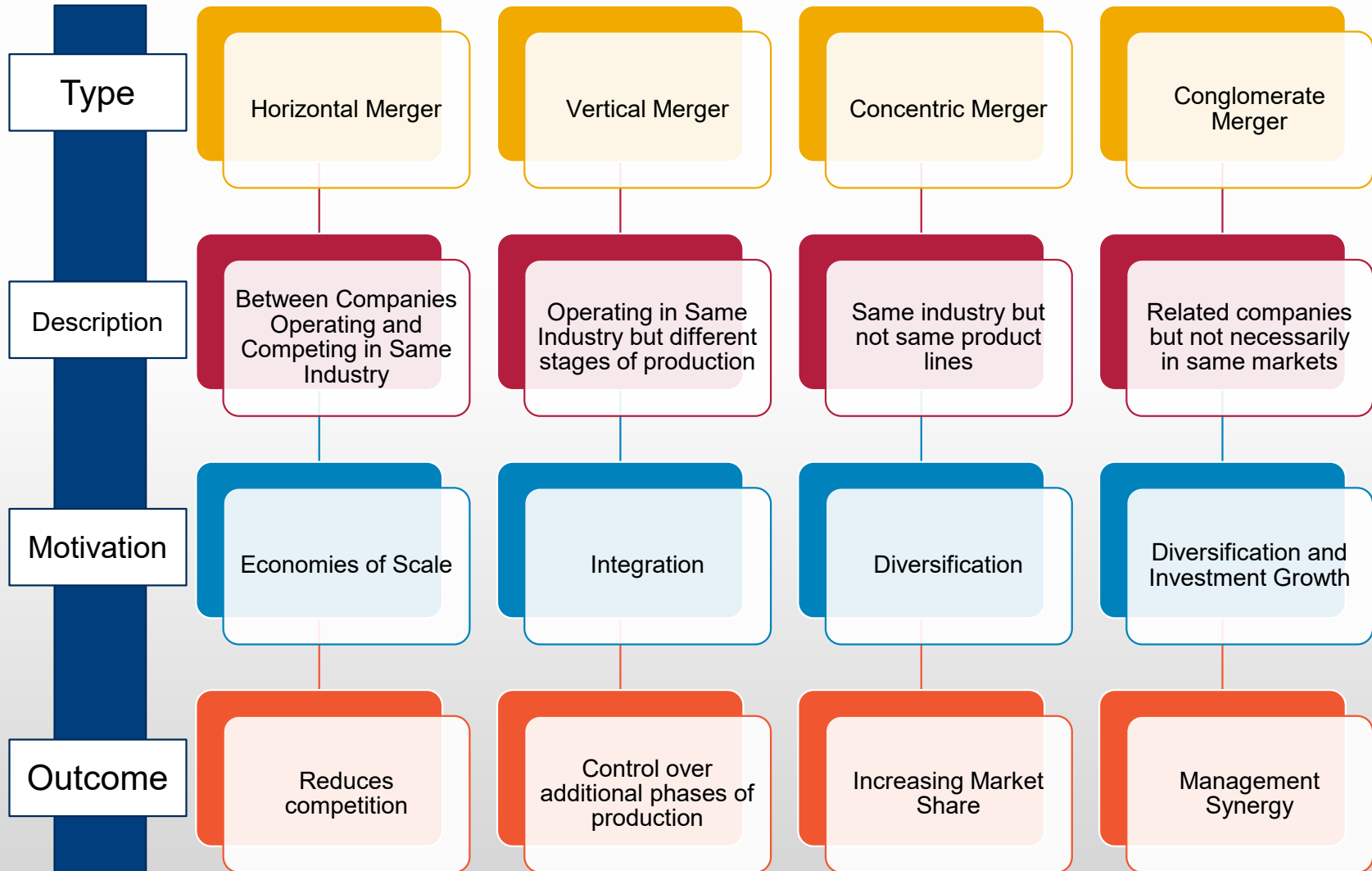
M&A activity has the potential to affect the construction industry

- Competition
- Market control
- Materials pricing

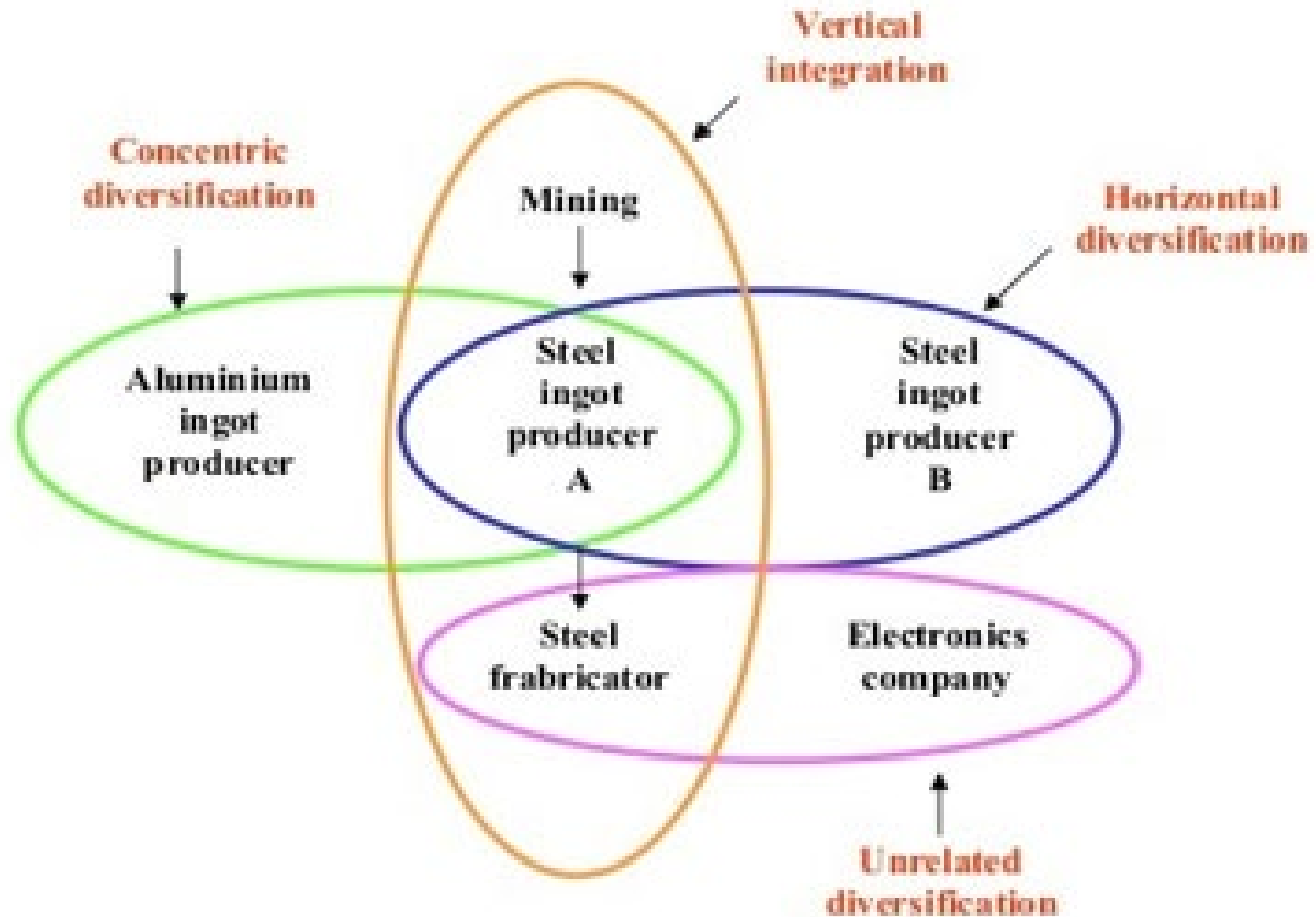
Inequitable market control and price increases can have significant effects on

- Bidding processes
- Consumer behaviors
- Market characteristics (including entry/exit, growth, labor and workforce)

Understanding Types and Motivations for Mergers is important



Types of Acquisitions



M&A Activity in Construction Industry

No more frequent than in other industries

Anecdotally most M&A activity in this field happened over a decade ago or very recent

Most M&A activity in this field does not involve large enough volume to warrant additional scrutiny

However, recent court actions and proceedings in mid-Atlantic region has cast some new light in this area

Bid and Project Data Collected and Analyzed

To assess M&A activity on pricing

Thirty states targeted for initial analysis divided by AASHTO regions

Looked at 10 years data and anecdotal information on M&A activity



Sampled states

Region 1

- Massachusetts, New York, Pennsylvania, & Vermont

Region 2

- Arkansas, Florida, Georgia, Louisiana, North Carolina, South Carolina, Tennessee, Virginia, & West Virginia

Region 3

- Illinois, Indiana, Michigan, Michigan, Minnesota, Ohio, & Wisconsin

Region 4

- Arizona, California, Colorado, Idaho, Montana, Nebraska, Nevada, New Mexico, Oklahoma, Oregon, & Utah

Findings from Data Analysis



FHWA provided data (Oman Systems)

FHWA data included:

- State
- Pay items & descriptions
- Quantities, units & prices
- Job numbers
- Bid dates
- Counties & districts
- Categories

FHWA data was first sorted by state

For each state, pay items were sorted to identify only:

- Concrete
- Asphalt
- Aggregate
- Granular backfill

Bid date and project number data was used to identify project bids using Bid Express then matched projects with contractor names and costs

Challenges & Observations



Data Set provided insights, but...

Some additional items would have been helpful:

- Total number of bidders/project
- Breakdown of bid pricing of other bids in comparison to winning bidder's pricing

Bid Express has some additional details

- Project committee determined further effort not possible under this project schedule and budget

Data identified spikes and items of interest

We found several potential examples of bid pricing inconsistency around M&A activities

No clear evidence that could link to M&A

- Some factors emerged: macroeconomic factors (all bid prices changed consistently), ARRA funding, changes in project scopes, variety of mobilization or other costs, low engineer's estimates

Legal and Antitrust Analysis



SUGGESTIONS FOR THE DETECTION AND PREVENTION
OF CONSTRUCTION CONTRACT BID RIGGING

Identify Issues and provide basic Anti-trust analysis

Anti trust analysis

- desk scan and review of prior merger cases in markets related to the roadbuilding industry
- review of how the FTC/USDOJ Horizontal Merger Guidelines have been applied to these mergers in the highway materials and construction fields

We identified trends in case law

Homogeneity: Roadbuilding materials are almost universally regarded as homogeneous products.

Narrow geographies:

- High transportation costs
- Barriers to entry
- High sunk costs

Market Entry: No cases where the potential entry or creation of a new entity was sufficiently realistic to offset anticompetitive effects.

- Rather, market entry was only feasible when an established competitor was able to purchase divested assets.

Herfindahl-Hirschman Index can be used to determine market share

Literature review and findings

Price increases accompanied mergers in all cases, regardless of the policy action taken (2003-2013) (not limited to construction materials)

- Increases vary based on policy action taken however all had increases

Michigan study found one materials merger resulted in 18% increase in price, but two others found no statistical increase

- Interesting additional finding: 6.0% lower price for each doubling in the number of bidders on a project and 5.6% lower for each doubling in the quantity of asphalt
- After first two years, however, the 18% increase regressed to comparable levels

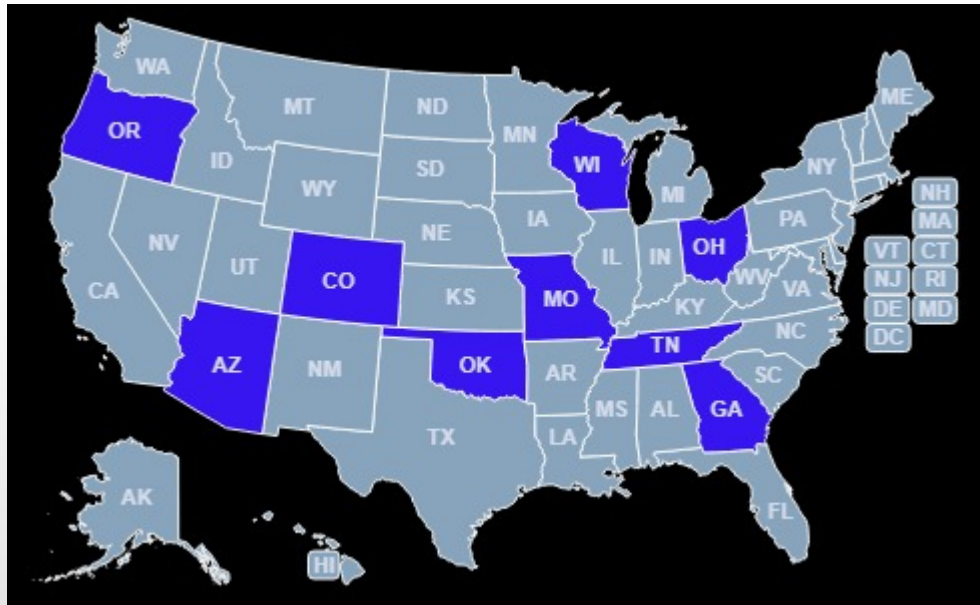
Case Studies



Case Studies used to highlight sampled practices

Oversight team determined that case studies could provide useful information to other states and FHWA

- Georgia
- Missouri
- Oklahoma
- Arizona
- Wisconsin
- Tennessee
- Oregon
- Colorado
- Ohio



Note: West Virginia was originally selected but declined to participate due to ongoing litigation

State Lessons Learned

MATERIAL PRICE INFLATION THROUGH 2021						
	2016	2017	2018	2019	2020	2021
Asphalt Paving	-5.9	-0.4	7.2	4.0	2.1	1.8
Cement	4.8	4.3	2.4	4.1	3.8	2.9
Reinforcing Bars	-12.0	6.2	25.6	-1.8	-1.0	-11.7
Const. Machinery	0.7	0.5	-0.3	3.0	2.0	1.8
Fabricated Pipe	-0.9	0.8	3.9	-1.8	-0.6	-1.5
Gypsum Products	1.6	7.5	5.9	2.2	-0.7	1.2
Lumber Softwood	3.1	12.6	9.0	-10.0	2.0	-0.3
Plywood	-3.3	6.2	13.6	-3.8	0.4	0.0
Aggregates	4.2	3.4	3.6	3.8	2.9	2.1
Sheet-Metal Work	0.2	1.3	5.0	2.6	-0.1	-1.5
Structural Steel	-0.7	2.3	6.9	2.3	-0.2	-0.2

Source: IHS Global Insight Inc. Note: Escalation Rates are Annual Averages.

General Findings from State Case Studies

General Contractor Makeup

- Firm sizes ranges from small/family owned to large publicly traded
- Some noted decline in numbers, generally stable
- Specialization

Monitoring Efforts

- Limited proactive monitoring
- Associations are a better source of information than states
- All are familiar with providing information for screening when necessary
- Little interest unless prices rise dramatically above estimates

General Findings from State Case Studies

Suppliers

- Most consolidations in early 2000s but not much lately
- Land use restrictions - NIMBY
- Healthy competition is evident

Competition and Macro-issues

- Some state increases in size of program
- Increased lettings hasn't encouraged new entrants
- Little recent activity related to competitive issues

General Findings

In Wisconsin, Oregon, and Georgia, there does not appear to be significant recent mergers amongst roadbuilding materials suppliers. Even in Tennessee, where some recent consolidation has occurred, the case studies did not reveal a corresponding anti-competitive result

- However, great deal of consolidation prior to study years
- State DOT staff can identify effects of potential mergers and offer ideas for divestitures to minimize effects on competition
- Sharing information across the “community” is essential

State Lessons Learned

- **Georgia**

- Uses an in-house estimation team
- Bids are evaluated using a multi-tiered manual process
- Observations show that mergers can lead to lower prices based on gains in efficiency

- **Missouri**

- Follows ownership and makeup of the contractors
- High level of transparency of what information is used for estimation

- **Oklahoma**

- Stable contractor pool (around 250 pre-qualified firms)
- Track name changes and use AASHTOWare SiteManager
- Examine trends and track prices; strongly review penny bids (unbalanced)

- **Arizona**

- Healthy competition for projects (fewer than 4 bids very rare)
- Complete bid-item analysis if outside of the 10%
- Compare regularly with Colorado, New Mexico, Nevada prices

State Lessons Learned

- **Oregon**

- Provide publicly owned or controlled aggregates sources for that have history of minimal bidders/suppliers
- Projects are bid more often (weekly or bi-weekly) instead of monthly

- **Tennessee**

- Some concerns over competition due to local zoning limiting material sources
- Projects sometimes broken apart to increase competition on a set of smaller projects
- Alternative bids are used to increase number of bidders

- **Colorado**

- Mostly family held firms – primarily spread across three regions (Western Slope, Front Range, and Central Mountains)
- Fewer than 20% of bids trigger justifications
- RAMP Program saw increases in prices/supply and demand

- **Ohio**

- Not much work in concrete pavements, primarily an asphalt use state
- Zoning and permits for material sources (quarries) are limited to a fixed number
- Projects are bundled to protect competition against single bid can help

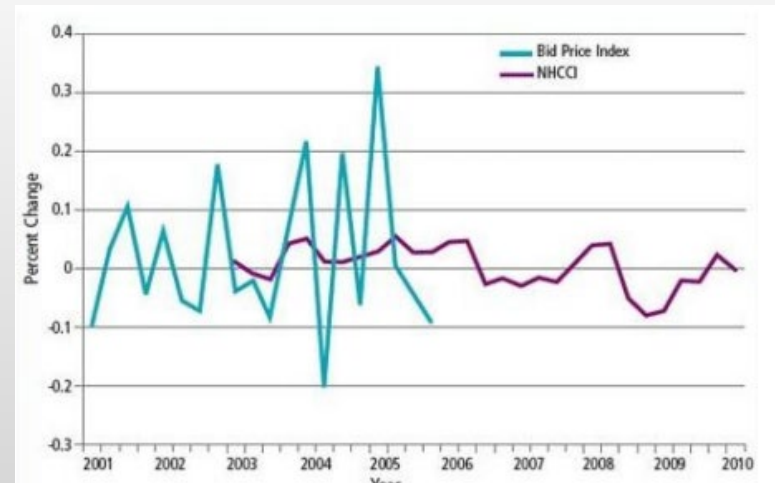
State Lessons Learned

Wisconsin

- Stable industry; few new entrants or acquisitions (or at least not formally tracking)
- Some concern over aggregate sourcing
- Unbalanced bid analysis: look at all items 5% over or under 10%
- Single bids fairly steady around 15%
- 3.2 bids per proposal/track year over year
- Keeping track of the construction cost index (split across state/100 items tracked) and the asphalt index and concreted index and structures index. Similar to Ohio DOT.



Recommendations for Further Consideration



Preliminary Observations and Next Opportunities

While we were unable to find a “smoking gun” there are some practices that warrant additional conversation

Overall, working with industry is crucial to improve estimating practices

Reliance on engineer’s estimates / desire for independent estimation

Continue to perform trend analysis to monitor market conditions and identify non-competitive behaviors

Preliminary Observations and Next Opportunities

Study results will be available this Fall

National webinar will provide additional information and more details on the Case Studies

Further monitoring should be considered – and at least regularly reported for industry information

Key Resources

2010 Horizontal Merger Guidelines, available at

https://www.ftc.gov/system/files/documents/public_statements/804291/100819hmg.pdf

2006 Commentary on the Horizontal Merger Guidelines, available at

<https://www.ftc.gov/sites/default/files/attachments/mergerreview/commentaryonthehorizontalmergerguidelinesmarch2006.pdf>

A Merger Screening System to Monitor Acquisitions Occurring in the Aggregate, Asphalt Concrete, and Concrete Industries,” published by the DOJ, available at

<https://www.justice.gov/sites/default/files/atr/legacy/2012/04/26/279595.pdf>

FHWA Lacks Adequate Oversight and Guidance for Engineer’s Estimates,” published by the U.S. Department of Transportation Office of Inspector General, available at

<https://www.oig.dot.gov/sites/default/files/FHWA%20Engineers%20Estimate%20Final%20Report%5E3-13-19.pdf>

“Guidelines on Preparing Engineer’s Estimate, Bid Reviews and Evaluation,” published by FHWA, available at <https://www.fhwa.dot.gov/programadmin/contracts/ta508046.pdf>

“National Review of State Cost Estimation Practice,” published by FHWA, available at <https://www.fhwa.dot.gov/construction/contracts/2014cost.pdf>

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thank you!