

An Analysis of Construction Overhead Expenses During the “Great Recession”

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The “Great Recession” had a significant impact on numerous industries in the United States. Construction was particularly affected: by January 2010, unemployment reached approximately 20 percent. Construction is cyclical, continuously responding to various market and geopolitical pressures. When the industry is in a lull, competition for the limited construction dollars increases. Many contractors attempt to maintain their same volume of work, but doing so may decrease profitability. One way to combat declining profits is to adjust general overhead costs (indirect expenses). These costs include items such as home office expenses, business development, and bonuses. The objective of this paper was to conduct a study of how the industry adjusted their overhead costs because of the 2008 – 2013 industry decline. The authors developed a survey that collected information on how companies reduced expenses in thirteen overhead categories, along with various demographic information. A total of 480 contractors responded to the survey, and 95 percent reported that they reduced overhead in one or more areas. The median percentage reduction in overhead was between 11 – 25 percent. The authors propose that strategic management of overhead expenses will allow firms to maintain profitability.

Key Words: corporate overhead, recession, management, finance

Introduction

The past several years have been marked by significant economic changes in the United States and throughout the world. The “Great Recession” had wide-ranging impact on numerous industries, but particularly those tied to the business of housing, both on the financial and construction sides. The Recession lasted approximately 18 months, from December 2007 to June 2009 (National Bureau of Economic Research, 2010). Many organizations were substantially affected by the downturn and were forced to change how they transacted with other businesses. Banks’ lending requirements become more stringent, bonding companies were more selective of their clientele, government entities increased their oversight and accountability measures, and consumers limited expenditures of their disposable income.

Economies are highly interdependent systems: the success (or failure) of one group of entities certainly has an impact on others within the system. This paper first provides contextual data of the U.S. economy, and its specific impact on the construction industry. The authors focused on construction spending and employment rates, and then provided a financial snapshot of the typical company during, and after, the recession. The data shows that many construction companies experienced severe losses. The authors conducted a survey of general contractors on how they adjusted their internal overhead expenses because of the Recession. The paper concludes with an analysis of

these expenses and offers recommendations that would assist industry in rapidly adapting to changing market conditions.

Literature Review

The National Bureau of Economic Research (NBER) used several indicators to confirm the existence of the Recession, including manufacturing sales, personal income, and payroll. These measures, along with several others, clearly show that the U.S. was experiencing tremendous financial turmoil. To highlight the reduction of construction spending, the authors analyzed construction spending and employment data from the Bureau of Labor Statistics.

Construction Spending

Figure 1 presents the U.S. Gross Domestic Product (GDP) and inflation-adjusted nonresidential construction put in place (CIP) from the period January 2007 to December 2014 (one year before the Recession and five years after). The authors used seasonally-adjusted data and adjusted for inflation using the produce price index (inputs to new construction, series WPUIP2310001 unchained data from the BLS U3). Nonresidential data was not available prior to 2010 (however, the authors observed that both residential and nonresidential spending showed similar patterns of change).

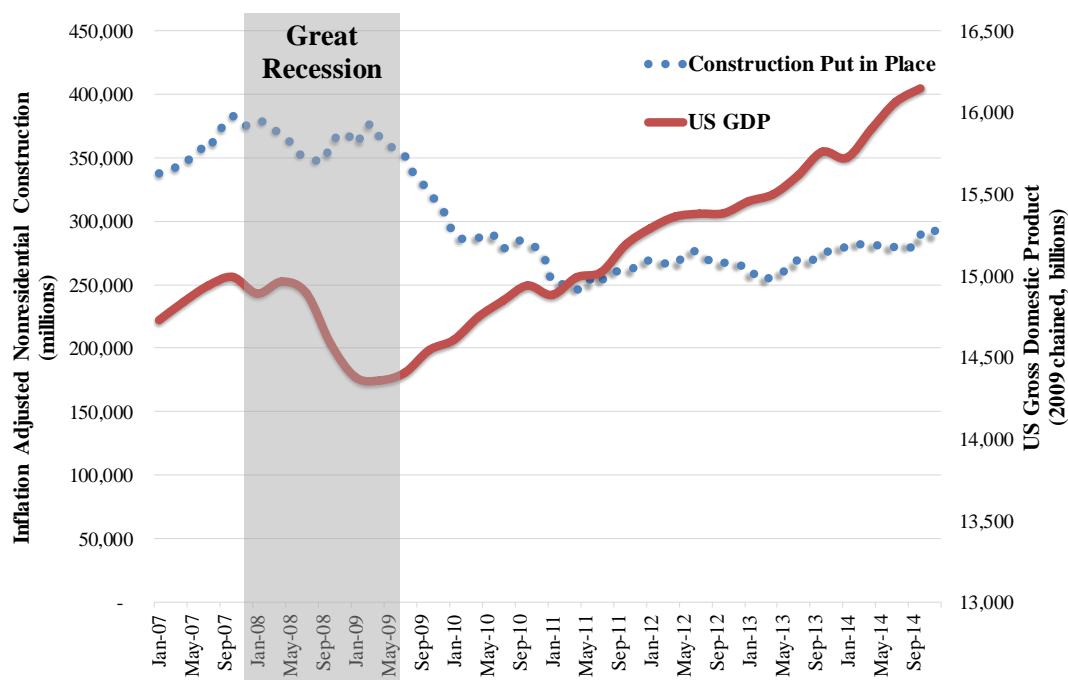


Figure 1. U.S. GDP and Construction Put in Place

During the Great Recession, construction put in place remained largely unaffected, with a mean value of approximately \$364B. The recession ended, per NBER's definition, once GDP started increasing. Almost at the same time, construction put in place begins losing substantial value, reaching a low of about \$246B in April 2011, a

32 percent reduction. Construction spending remained close to this level, slowly increasing. Figure 1 highlights the lagging and extended impact of decreased construction spending (with respect to GDP).

Unemployment

Because of the significant decrease in construction spending, the unemployment rate during this same time frame increased to about 20 percent, from 8 percent, right before the recession. Figure 2 presents the National and Construction mean annual unemployment rates. The authors averaged monthly raw employment levels (seasonally adjusted data was not available) as provided by the BLS. The unemployment rate is the number of unemployed individuals as a percentage of the labor force (for both the national unemployment rate, and the construction unemployment rate).

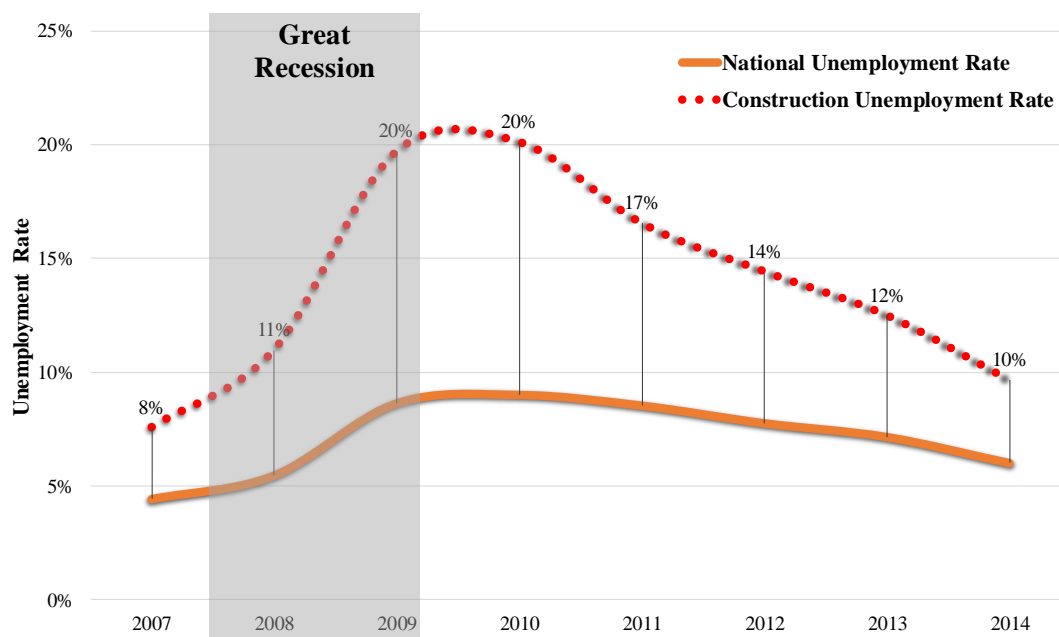


Figure 2. Annual National and Construction Unemployment Rates.

While the United States has experienced several periods of relatively high unemployment in the past, the changes to the labor markets during the Great Recession were the most dramatic since the 1940s (Elsby *et al.*, 2010). In fact, the peak national unemployment level in October 2009 was the largest increase (about 5.7 percentage points) since World War II. Compare this to the most recent recessions (1990 and 2001), which each had unemployment increases of about 2.5 percentages points. Furthermore, Elsby *et al.* (2010) identify young males were substantially affected by the Great Recession (as in other downturns), more so than other demographics. The reason is that people in these demographics (younger males) tend to work in industries that are highly cyclical in nature – such as construction (Şahin *et al.*, 2010). As contractors laid off workers, these individuals attempted to find work elsewhere in the industry, but generally to no avail. Şahin *et al.* (2010) identify these people eventually find work in another industry, but at a significant loss in household income – which further perpetuates the recession. This also further reduces the available labor pool in construction once the market picks back up.

Responding to Challenging Economic Conditions: Overhead Reduction

While not shown in Figures 1 and 2, the construction industry regularly experiences periods of highs and lows. As less work becomes available, one option contractors have is to reduce their internal overhead requirements (Schleifer 2009; Schleifer *et al.* 2014). Overhead expenses are those items which cannot be allocated to the production of one particular item, and are not embedded in the actual finished construction product (Cilensek 1991; Fultz 1980). For instance, overhead may include costs such as bonuses, travel, business development, charity, and so on.

One of the main challenges with overhead is that once it is “put on”, many companies see the expense as a permanent part of their normal operating costs (Dale & Bevington 1989). Thus, overhead rarely decreases which therefore eliminates any potential retained earnings (Snodgrass 1991). Said in another way, unchecked overhead expenses represent the opportunity cost of funds that could have otherwise been invested in the business’s core functions. However, not all overhead is the same. Some companies are highly bureaucratic and slow to change, while others have some level of flexibility built into their overhead structure. One study looking at manufacturing overhead found that companies can move to more ‘robust’ structures that allow rapid response to changing market conditions (Blaxill & Hout 1991). These changes, however, are not a quick fix: it requires a fundamental shift in behavior and organizational culture.

There are several ways that construction companies can appropriately manage their internal overhead. One approach is to bring on up to 25 percent of overhead staff and office space as temporary (Schleifer 2014). Under this method, companies would be able to quickly reduce their overhead when less work becomes available and therefore allowing the company to maintain profitability. Another tactic is maintaining high performance in the “soft” aspect the company’s profile (Assaf *et al.* 2001). These might include maintaining a safe working environment (reduces insurance rates), closely monitor internal accounting practices (understand how much money is being spent on overhead), and maintain a positive relationship with the banks (more favorable loan terms).

Research Objective

The research objective of this paper was to collect information from general contractors about how the Great Recession reduced their internal overhead expenses. The authors conducted a survey that solicited information about the magnitude of overhead cuts (if any) according to a set of different expense categories.

Methodology

The authors developed a two-part online survey which was distributed through the national and local chapters of the Associated General Contractors, various LinkedIn groups, and numerous personal contacts of the authors. The first part of the survey requested the respondent to classify their company’s percentage reduction from a set of typical overhead categories. The second part of the survey collected demographic information about the respondents, including estimated annual revenue, number of full-time employees, and business sector. The wording of these demographic questions as well as their categorical values came from AGC’s 2014 National Construction Outlook Survey and the US Census of Businesses (see The Associated General Contractors of America 2014).

Data Collection

The survey was first piloted with 12 companies, who helped develop the list of corporate overhead categories to measure. The original survey had four categories of overhead expenditures, but at the recommendation of the pilot respondents, six categories were identified for the final survey (0%, 1 – 10%, 11 – 25%, 26 – 50%, 51 – 75%, and more than 75%). Respondents were asked to identify any overhead reductions from their perspective within the

company (i.e., local, region, corporate). While each question was optional, nearly 100 percent of the respondents provided an answer on all questions. See Appendix 1 for a copy of the online survey. Once the survey was finalized, it was emailed out to the various contacts. A total of two reminder emails were sent before ending the data collection.

Results and Data Analysis

The authors conducted an analysis to test the strength of association between two different relationships. The Overall Overhead Reduction is the mode of a respondent’s overhead reduction cost categories.

1. Overhead Category and Percentage Reduction
2. Firm’s Annual Revenue and Overall Overhead Reduction *and* Firm’s Number of Employees and Overall Overhead Reduction

A total of 140 general contractors returned surveys for this study. Figure 3 shows the respondents’ frequency of overhead reduction by category – that is, it shows the magnitude of overhead reduction across several major corporate overhead expenses. Home office overhead had the fewest reductions (70 percent of respondents did not make a change) while bonuses, contributions to retirement plans, and company functions had the highest reductions (about 23 percent of respondents reduced them by more than 75 percent).

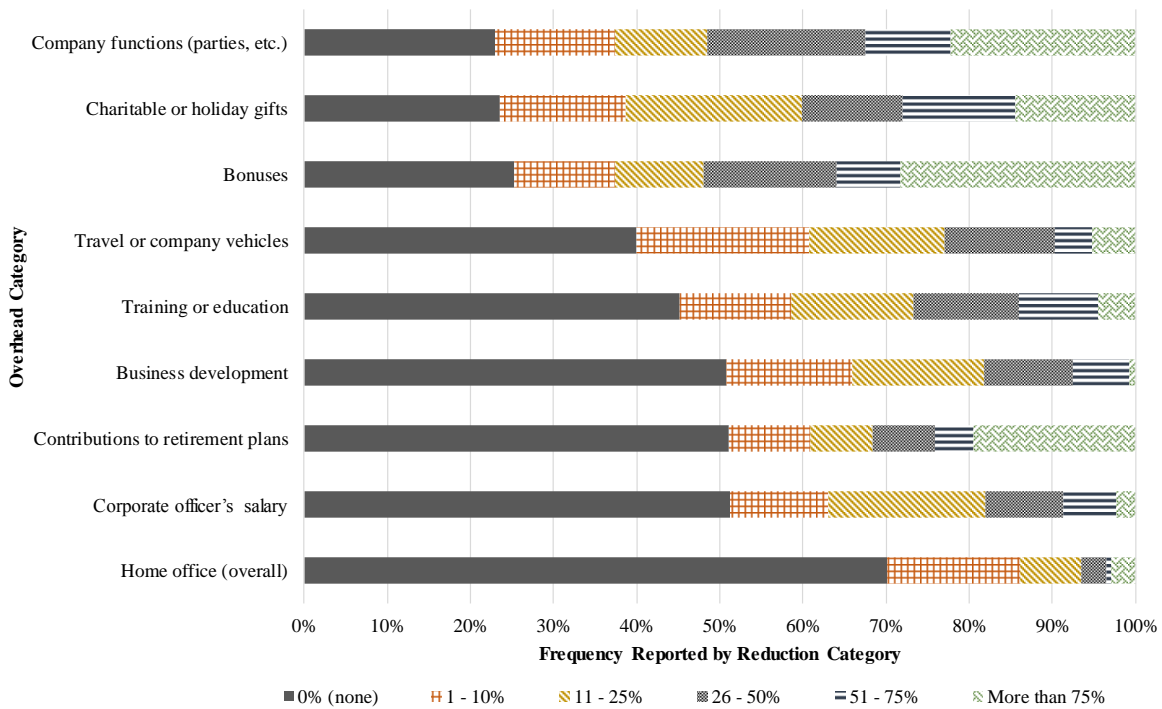


Figure 3. Frequency of Respondents Overhead Reduction by Category

Note that while the data shown in Figure 3 is based on the response frequency from all respondents, it does not indicate company behavior in terms of overall overhead reduction. The authors then identified which companies made any overhead cuts, regardless of magnitude. The data shows that nearly 95 percent of all respondents cut overhead in at least one category, with most companies reduced overhead in five different categories. Pearson’s

product-moment correlations were calculated between two sets of relationships: (1) the firm's annual revenue and any cuts in the various overhead categories (ignoring magnitude), and (2) the firm's count of full-time employees (FTE Count) and these same overhead categories. Table 1 presents these correlation coefficients. The only statistically significant relationship was between the firm's annual revenue and reductions to the corporate officer's salary [$r(73) = -.244, p < .05$].

Table 1

Pearson Correlations between Revenue / FTE Count and Overhead Category

Overhead Category	Annual Revenue	FTE Count
Bonuses	-.201	-.160
Company functions (parties, etc.)	.003	-.046
Charitable or holiday gifts	.028	-.034
Training or education	-.076	-.131
Contributions to retirement plans, etc.	-.114	-.142
Corporate officer's salary	-.244*	-.178
Business development or accounting staff	-.033	-.083
Travel or company vehicles	.055	.100
Home office (overall)	-.217	-.227

* $p < .05$

Discussion and Conclusion

Nearly every firm surveyed for this study reported that they cut overhead because of the Great Recession. It is likely that many of these firm's overhead expenses were seen as a permanent part of their corporate financial structure (Schleifer et al. 2014; Snodgrass 1991). That fact that the large majority of firms reported cutting some level of overhead indicates that much of this cost may have been excess in the first place, much as the literature suggests.

While the Recession had a negative impact on many people, and especially those in construction, the authors propose that it also presents a fresh opportunity for organizations to reconsider how they manage their overhead expenses. As the market continues to improve, companies will need to begin bringing back these overhead costs (people, assets, and so on). The challenge, then, is restructuring organizations to become more agile, rapidly responding to changing market conditions through a flexible internal financial structure.

Recommendations for Future Research

Future research is recommended to expand the study of how different types of companies outside of general construction (specialties / subcontractors) adjusted their internal overhead costs because of the Recession. Further analysis could also examine the relationship between different types of companies, market sectors, and overhead changes. Additional research is also recommended on the potential organizational culture aspects of the construction industry as they relate to creating flexible organizations. This research may provide a deeper understanding of the cultural norms that lead to the creation "permanent" overhead expenses within the construction industry. Finally, this research has applicability in construction education, both at the graduate level and other advanced educational settings. Strategic management of overhead can help companies achieve sustained profit margins, which would be of interest to construction students.

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APPENDIX 1

Part One

Overhead Expenses

The researchers request your assistance conducting research to understand how the construction industry has reduced various overhead expenses over the last several years. This brief survey will take **less than five minutes** to complete. Please answer the questions from your relative perspective in your organization (i.e., local, region, corporate). Your responses will be kept completely confidential.

By roughly what percentage of general and administrative (overhead) expenses did your company **REDUCE** as a result, and since the beginning, of the recent construction market slow-down (2008 - 2013)? If you're unsure for a particular expense, please leave it blank.

DID YOU REDUCE...

	0% (none)	1 - 10%	11 - 25%	26 - 50%	51 - 75%	More than 75%
Bonuses?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Company functions (parties, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Charitable or holiday gifts?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training or education?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contributions to retirement plans, etc.?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Corporate officer's salary?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business development or accounting staff?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel or company vehicles?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home office: space (i.e., rent)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home office: benefits paid by company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home office: number of hours worked?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home office: staff salary?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home office: various insurance costs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: <input style="width: 50px;" type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: <input style="width: 50px;" type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: <input style="width: 50px;" type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part Two

Background Information

Would you be kind enough to complete the following four optional questions? It will provide some additional baseline information for our survey. Or, just click "Finish!" and the survey is complete.

Please estimate your firm's annual revenue.

Approximately how many full-time employees (including field & office staff) does your firm have?

What is your firm's primary sector of business?

If you'd like a copy of the final survey results, please provide your contact information below.

First and Last Name

Email Address

Phone Number