

Industry Perspectives on the 40-hour Work Week as it Relates to Overtime in the Pacific Northwest

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The construction industry has a stigma for construction projects often being behind schedule, delayed, or delivered late. Many projects that find themselves in this predicament will utilize overtime to make up for the loss in schedule. However, a number of published studies shows evidence that extended overtime produces a decrease in labor productivity. Does the structure of the 40-hour work week have an affect on this loss of production with overtime? This paper will examine the structure of the 40-hour work week with an emphasis on a 4-day, 10-hour day schedule as well as overtime productivity. This study explores the perspectives of industry professionals, working in commercial construction in the Northwest, on the 40-hour workweek structure and overtime. A survey was created to analyze what the industry believes to be the best structure of the 40-hour work week with regards to working overtime. As a result of the survey, 50% of industry professionals considered a five 8-hour days workweek structure is the most productive schedule, while the other 44% of industry professionals considered a 4 10-hour days workweek structure to be more productive.

Key Words: 40-hour workweek, Overtime, Overtime Productivity, Construction Management

Introduction

The 40-hour workweek has existed ever since Congress amended the Fair Labor Standards Act in 1940, which reduced the workweek from 44 hours to 40 hours (Mayer, 2013). The FLSA, however, does not classify how the 40 hours should be structured within the workweek which allows employers to structure it to there liking. The common 5-day work week was adopted in 1926 when Ford Motor Company first introduced it (Brinkley, 2003). While the construction industry generally follows the 5/40 work schedule construction projects are often under pressure from the owner and clients to complete the project as quickly as is practical. In order to achieve this, a common method is to increase construction working hours using overtime. The Associated General Contractors of America (AGC) reports that 47% of general contracting firms have increased overtime hours over the past year (Associated General Contractors of America, 2017). According to the United States Bureau of Labor Statistics, the average weekly hours for all employees in the construction industry was 39.5 hours by the end of 2017 (US Bureau of Labor Statistics, 2018). These numbers are up from previous years which may be supported by the increase in overtime hours reported by the AGC. Recent studies have shown evidence that working overtime for an extended period can reduce labor productivity. With the negative attributes already affiliated with overtime, construction firms may begin to explore options that will limit the amount of overtime needed.

The Northwest has recently become a hub for construction, with a large influx of projects located between Seattle and Portland. According to a count conducted by Rider Levett Bucknell, a firm that tracks cranes around the world, Seattle had the most erect tower cranes of any city in North America while Portland had the fifth most as of July 2017 (RLB Crane Index, 2017). Because of this large growth in construction in the region, this study will be focusing on the Northwest. The study will be identifying the individual perspectives of the 40-hour workweek structure of industry professionals and analyzing how overtime may affect this structure.

Four Day Workweek

Hartman and Weaver (1977) state that “it is only since 1970 that the current rapid increase in the interest within both the public and private sectors toward the idea of a shortened workweek has emerged.” The reasons for this increase

in the 1970s may include “potential improvements in employee productivity, job satisfaction and recruitment as well as potential reductions in absenteeism, turnover and labor costs. While there have been a wide variety of four-day plans, the most common has been four 10-hour days totaling the usual forty-hour workweek (4/40) (Fottler 1977).” In 1979, a study was done in Gladstone, Missouri on a plumbing company doing water and waste-water piping work. The company transitioned from the traditional 5/40 workweek schedule to a 10-hour day, 4-day week schedule (4/40). The results of the study state that overtime work decreased by 25%, sick leave was 96% less than in similar periods in the 2 years prior to the schedule change, and transportation costs were expected to be reduced by 10-15% per year (Anderson, 1980).

Drew Berman wrote his master’s thesis for the University of Florida on the Cost-Benefit Analysis of a Four 10-hour Day Work Week in Construction (2009). In his research, Berman conducts three case-studies on construction firms, all differing in size and scope. The size of the firms was as follows: less than 20 employees, 20-100 employees, and greater than 100 employees. The other variables that changed as a result of size of company between each case study were hourly cost of employees, number of concurrent projects, and average travel distance. Each case study results in a cost-benefit savings which leads Berman (2009) to conclude “After completing this study on 4/40 work schedules, the researcher determined that 4/40 work schedules are feasible in construction. [...] The feasibility of 4/40 work schedules is greatest for firms of small or specialized capacity and small trade firms with specific work that can be completed within the compressed workweek format.”

Overtime Productivity

Productivity is defined as the measure of output per unit of input. In construction, labor productivity can be measured as output per labor-hour of input. There are many studies on overtime productivity each of which different than the previous one. In all studies, the productivity of a typical 40-hour workweek is assumed to be 100% (Brunies and Emir (2001) comprised a graph that compares the reported labor efficiency from various reliable studies for the 50-hour, 60-hour, and 70-hour work weeks with most of them based on 10-hour workdays and an overtime schedule of a minimum of four consecutive weeks. The graph can be seen in Figure 1 below. The graph clearly shows that there is a decrease in productivity for each additional ten hours per week.

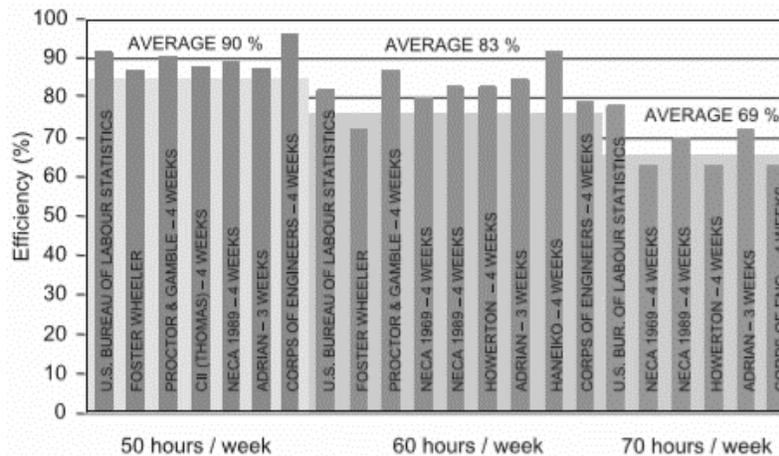


Figure 1: Reported efficiencies from numerous studies for the 50, 60, and 70-hour work weeks with the majority based on 10-hour days and four consecutive weeks of an overtime schedule. (Brunies and Emir, 2001)

The Construction Industry Institute (CII) released “Effects of Scheduled Overtime on Labour Productivity: A Quantitative Analysis” in 1994 (Thomas and Raynar, 1997). The study is based on 151 weeks of data collection from four active industrial construction projects from 1989 to 1992. The focus of the study centered around observations of piping and electrical crews because this represented the bulk of the work across the four projects. The performance of a crew on an overtime schedule was compared to the same crew on a straight time schedule. It is important to note that there was no data for 5-8-hour days, so a 4-10-hour day was used as the baseline for this

study. Another important note is that over 90% of the work days were 10-hour days. Thomas and Raynar (1997) report that “The loss of efficiency for the 5- and 6-day work week was in the range of 10 to 15 percent with very little difference between the 5- and 6-day work week.” The results are shown in Figure 2 below.

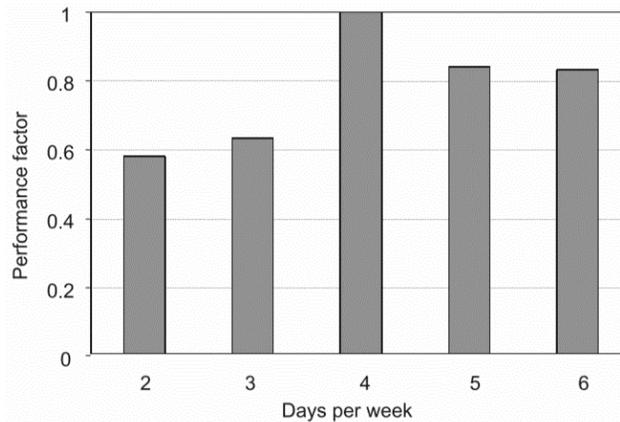


Figure 2: Overtime efficiency (3 - 4 week duration) as a function of the number of days worked per week.

Methodology

The methodology chosen for this study is a survey that will provide both quantitative and qualitative data. The survey was sent to industry professionals from four different general contractor companies whose markets are primarily commercial construction and based in the Pacific Northwest between Seattle, Washington and Portland, Oregon. The companies included are Abbott Construction Inc., Andersen Construction Company, Korsmo Construction, and Lease Crutcher Lewis. Survey Monkey was used as a platform to quickly and efficiently distribute the survey as well as view the results in generated graphs and diagrams.

Questions included in the survey:

1. What is your job title?
2. How long have you been working in the construction industry?
3. What company do you currently work for?
4. What is your ideal 40-hour work week for a construction project?
5. Please provide your reasoning for your answer to the previous question.
6. Knowing that an overtime schedule could be implemented, does your ideal 40-hour work week for a construction project change? Please provide reasoning.
7. Based upon your experience, when transitioning to an overtime schedule, which option would be more productive? (i.e. what option would the trades be more inclined to choose?)
8. Does your employer have policy about working overtime?
9. What is your employer's policy on overtime work?
10. In your opinion, would working overtime for an extended number of weeks increase or decrease productivity on the construction project?
11. In your opinion, when is overtime work acceptable? (Check all that apply.)
12. Do you have any other thoughts on the 40-hour work week and/or overtime?

The first three questions are used to help identify a variety of viewpoints between responses as well as establish potential correlations between these responses and responses to later questions. The following nine questions are the meat of the research; these questions (4-12) are utilized to provide the information and analysis to achieve the project's objectives.

Results and Discussion

After sending out the survey to the four companies established in the methodology section, 36 responses were received with a large variety of responses and opinions on the 40-hour work week and overtime in construction. The following is a summary of the survey results question by question.

Q1 – Job Title. Breaking down the responses to the first question—which pertained to job title—there were 10 Project Engineers (27.8%), 13 Project Managers (36.1%), 9 Superintendents (25%), and the remaining 4 are a variety of different professions within the construction industry (11.1%). This final grouping contains outlier responses indicating their job title as Safety Director, Project Executive, General Foreman, and Vice-President. These four responses will be grouped together and referred to as Outliers in future analysis. The responses to this question will help determine if there are any common themes or correlation between job title and views on the 40-hour work week and overtime.

Q2 – Construction Experience. The second question asked about years of construction experience and was much more evenly distributed between the three categories provided. Of the 36 individuals who responded to the survey, 12 had 1-10 years of experience (33.3%), 10 had 11-20 years of experience (27.8%), and 14 responses indicated that they had 20+ years of experience (38.9%) working in the construction industry. As with the responses to the first question, these responses will help to determine any common themes or correlation between results of the succeeding questions and years of experience.

Q3 – Company. Question three asks for the individuals employer. Abbott Construction was responsible for 19.4% of the returned surveys (7 responses), Andersen Construction had 22.2% of the responses (8 responses), Korsmo Construction owns 25% of the returned surveys (9 responses), and Lease Crutcher Lewis provided 33.3% of the returned surveys (12 responses). While this question and its responses were initially intended to assure that there was a larger variety of viewpoints and opinions among the responses, the results will come up again when analyzing company policies on overtime.

Q4&5 – Ideal 40-hour Work Week. These questions ask the participant what their ideal 40-hour work week for a construction project would be and to provide their reasoning. Their options were: A. 4 – 10-hour days, B. 5 – 8-hour days, and C. Other (please specify). The results are shown below in Figure 3. The results are evenly split with 50% of respondents choosing a 5-day work week and 44% of respondents choosing the 4-day work week, a separation of only two respondents (two respondents chose Other).

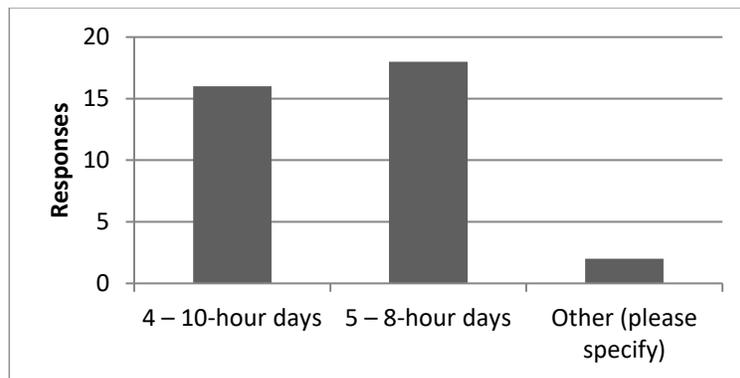


Figure 3: What is your ideal 40-hour work week for a construction project?

One of the common themes among those that chose the 4 – 10-hour day option is the prospect of the longer weekend. Many respondents speculate that having a 3-day weekend would increase motivation, production, and worker morale on the jobsite. One respondent even makes the point that a 4-day week could save the project money, “If it takes a half hour each day to roll out and pick up the required tools and equipment for the various tasks, it seems that the average company could save 1/2 hour of crew time each week by shortening the work week

by one day. This could be a significant cost savings depending on the size of the company and total personnel.” Another respondent suggests that the fifth day (Friday) could be used to make up additional hours from weather delays or from being behind schedule.

On the other side, for the advocates of the 5-day work week, the most common theme is that a 5-day work week is the industry standard. To summarize some of the respondent’s answers; crews are already adjusted to a 5-day work week, 5 – 8-hour work days usually line up with the client’s business hours, keeps consistency across all mediums from subcontractor availability to material delivery to other jobsites starting and stopping at the same time each day. Another common theme among respondent’s reasonings is the argument that 4 – 10-hour days is less productive than the standard 5-day work week. One respondent gives the example of how union workers are given two 10-minute breaks during a 10-hour work day which can add up over time with large crews. They also mention that workers tend to slow down during the last 2 hours of the day.

The two respondents that chose Other are outliers and did not seem to fully understand the question. For their specification for choosing Other they wrote: “Working only 40 hours” and “There are no 40-hour work weeks in construction”. After looking at their reasonings, it can be concluded that they assumed the question only pertained to them and their job position and not the field crews and the project.

Q6 – Change in Work Week with Overtime Addition. To discover if overtime would affect the structuring of a 40-hour work week, this question asks the respondent if the potential addition of overtime would affect their answer to the previous questions of their ideal 40-hour work week for a construction project. The results can be seen below in Figure 4.

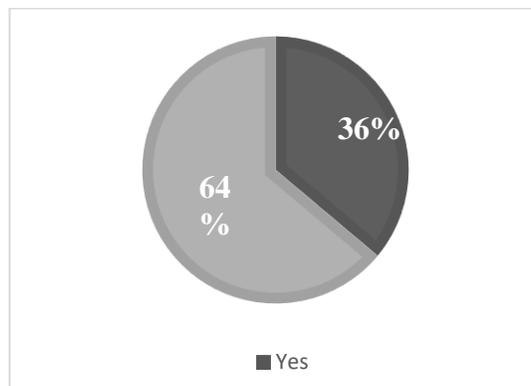


Figure 4: Knowing that an overtime schedule could be implemented, does your ideal 40-hour work week for a construction project change?

As shown in Figure #, almost two-thirds of the respondents said that overtime would not have an affect on their ideal 40-hour work week, 23 of 36 respondents answered No. Analyzing this information further, of those that answered ‘Yes’, they would change their 40-hour structure, nine respondents were advocates of the 4-day option and twelve were advocates of the 5-day option. On the other side, for the other thirteen respondents that did want to change their 40-hour work week with the potential implementation of overtime, seven were advocates of the 4-day option and six were advocates of the 5-day option. This information can be seen in Table 1 below.

Table 1

Does Overtime change your 40-hour workweek structure?			
Ideal 40-hour Work Week	Change (Yes)	Would Not Change (No)	Total
4 – 10-hour days	7	9	16
5 – 8-hour days	6	12	18
Total	13	21	34

Note: Respondents that chose Other for Q4 not included in this table.

Q7 – Transitioning to an Overtime Schedule. Question seven analyzes how overtime production is perceived based on the structure of the 40-hour work week. The question asks what the respondent thinks would be more productive transition into overtime for the crews and project. The options were: A. Adding an additional day of work (i.e. transitioning from four 10s to five 10s) and B. Adding additional hours to each work day (i.e. transitioning from five 8s to five 10s). The results were an even 50/50 split, which is consistent to the results of the fourth question on the ideal 40-hour work week which was also essentially even. The consistency with the results from question 4 also strengthens the results from question 6 about changing the ideal work week if overtime was implemented, which was a majority no. Based on these results and consistency it can be concluded that overtime does not have an affect on how a 40-hour work week should be scheduled.

Q8&9 – Company Overtime Policies. Questions eight and nine both referenced overtime policy, if the company had an overtime policy and what their policy was. This question provided another even 50/50 split from respondents on whether their company had an overtime policy. Andersen Construction was the only company that seemed to agree that their company had a policy on overtime, with 6 of 8 respondents responding positively to this question. Of the other three companies, Abbott Construction, Korsmo Construction, and Lease Crutcher Lewis, none had a significant difference between policy or no policy answers. For Andersen Construction and many of the other respondents who indicated their company had a policy on overtime, the policy is that no overtime is to be worked from the trades unless approval from a project manager is given. Reasonings that were given from those who expressed that their company did not have an overtime policy were that overtime is only used when needed and necessary or that the company follows the policies that are set forth by the trade unions.

Q10 – Overtime and Productivity. This question brings in the research discussed earlier in this paper. Respondents were asked if they believe that overtime would increase or decrease production in the long run. As was discussed earlier, prior studies and research have provided evidence to conclude that working overtime in the long run does decrease productivity. The distribution of answers to this question are shown in Figure 5 below.

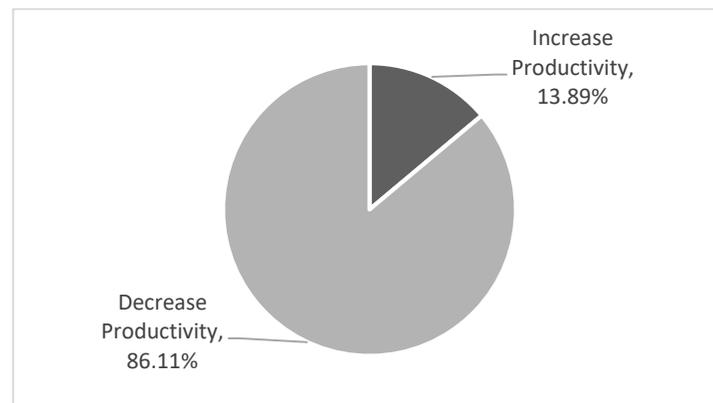


Figure 5: In your opinion, would working overtime for an extended number of weeks increase or decrease productivity on the construction project?

As shown in Figure 5 above, 31 of 36 (86.1%) industry professionals agree that working overtime in the long run will decrease productivity of the jobsite. This leads into the next question pertaining to when overtime is deemed acceptable.

Q11 – When is overtime acceptable? This question is asked to understand why the industry is working overtime and what the reasoning might be for working overtime. There were five options given for this question with the ability to select all five, if deemed applicable; the choices were: A) When the project is behind schedule, B) To finish a task, C) To crash the schedule, D) When necessary to keep the critical path on schedule, and E) Other, this option allowed the respondent to give their own input. As you can see in Figure 6 below, every respondent felt that keeping the critical path on schedule was an acceptable reason to implement overtime on a project. Most respondents also chose the options To Finish a Task (20 of 36) and When the Project is Behind Schedule (28 of 36) as acceptable reasons for overtime work for the project.

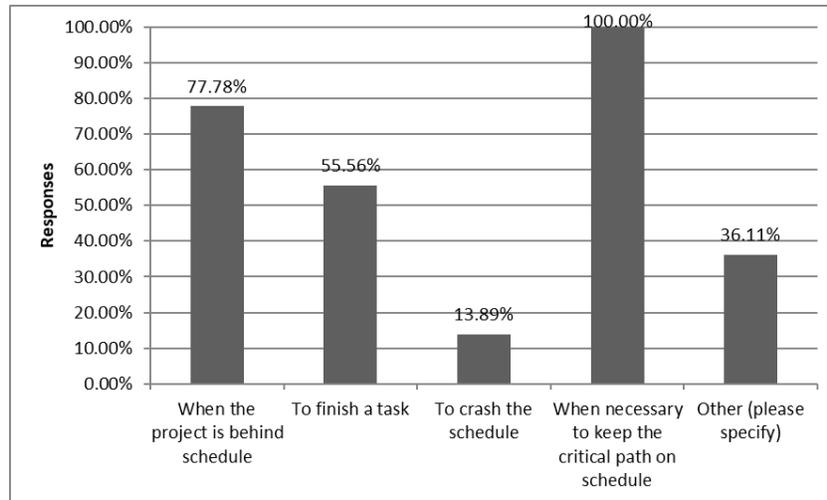


Figure 6: In your opinion, when is overtime work acceptable? (Check all that apply)

Crashing the schedule was not a popular acceptable reason to implement overtime work (5 of 36); an assumption may be that there are potentially cheaper ways to crash the schedule than using overtime. The “Other” category was also very interesting, more than one third of respondents provided additional reasoning for acceptable overtime. Of these responses the most popular answer involved the weather and using good weather events during winter and rainy months to get ahead or stay ahead of schedule. This is insightful information as the Northwest is known for bad and rainy weather during certain seasons and typically many “weather days” are worked into the schedule. Utilizing overtime during good weather periods in these seasons would certainly help to maintain project schedule.

Q12 – Additional views on 40-hour work weeks and Overtime. This question is an open-ended question that allows the respondent to provide any additional information on the topic of the 40-hour work week and overtime. There are many differing views on the 40-hour work week and overtime. To summarize, some respondents feel that overtime is only worked because there was a problem in scheduling and/or poor management, others suggest that a 40-hour work week is becoming less of the norm, and some say that adding an additional shift could be a better option than working overtime. Individual responses can be found in the Notes/Other section.

Conclusion

The results from this case study do not provide enough evidence to conclude that the industry in the Northwest believes there is a better way to structure the 40-hour work week with regards to overtime than the standard 5/40 structure. The construction industry is very traditional and while one might expect to see results that align with the current structure, the results were split and nearly half the respondents felt that a 4/40 work schedule is a viable option. “When any kind of movement takes place, it takes awhile for it to first become significant and then to become part of formal procedure” (Newman 1989). There are many viable and practicable reasons for a 4/40 work schedule but because the construction industry is slow to adapt to new methods it would be safe to assume that a 4/40 work schedule will not be utilized by large commercial general contractors in the foreseeable future. Implementation of a 4/40 work schedule would be advisable on a project-to-project basis and depend on specific project schedule and duration conditions.

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