

Contrasting Lifestyles in Commercial and Heavy Civil Construction

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Abstract

The construction industry has different sectors that students can apply for when it comes to acquiring the chance for an internship or a full-time job. The two main sectors many students from the construction management department apply for are commercial construction and heavy civil construction. Information about each sector is provided in each lab, such as what type of projects each sector builds, the type of environment the project can be in and the magnitude in scale of each project. One thing that seems to be a high influence on which industry the students decide to work for is the salary. It is more likely that someone who works in heavy civil construction makes more money in their lifetime. Something that is not part of the lab's curriculum in commercial and heavy civil is the employee's lifestyles. A qualitative survey was sent out to employees from commercial and heavy civil construction companies to gather information to see the difference and similarities in employee's lifestyle. The survey is aimed to analyze employee's lifestyle for commercial construction and heavy civil construction with an emphasis on employees who held the same position graduates can hold throughout their careers.

Key Words: Heavy Civil, Commercial, Construction, lifestyle, survey.

Introduction

The world of construction has many opportunities for students to join such as consulting, residential, commercial, and heavy civil. Each year students enter the construction industry by either internships or a full-time job. Many know what to expect once they step on the construction site thanks to the labs taught by instructors from the construction management department at Cal Poly. The return students gain from an internship consist of experiences in their field of interest, a better understanding of the responsibilities in the construction industry, and the opportunity for employment after graduation among other things (mnstate 2013).

The goal of this research project is to determine if there is contrasting lifestyle in the two sectors of commercial construction and heavy civil construction. This was achieved by sending out a survey to employees who hold a position in the company that students are likely the hold in their careers. The questions asked were based on information that the surveyor would be willing to answer and will

achieve the goal. The Commercial industry and heavy civil industry have different characteristics that make students lean toward one more than the other. Commercial construction is the field that most Cal Poly construction management students tend to do their internship in and apply for a full-time job. Commercial construction seems to be what most students select to go into which can sway most answers making commercial construction favorable out of the two. But it will be interesting to see if heavy civil can obtain the best responses because heavy civil is the better paying industry. This will be useful information for students to find out what a lifestyle of the field they are inserted in could be like. The objective of this research is to find if there are any discrepancies in lifestyle between commercial construction and heavy civil construction.

Literature Review

Employment of construction managers is projected to grow 10 percent over the next ten years, faster than the average for all occupations (CollegeGrad 2020). Employment of construction managers is growing but it is becoming mandatory to have a bachelor's degree. Prior to obtaining the degree, students learn what type of divisions they can go into which are but not limited to residential construction, commercial construction, specialties construction and heavy civil construction. The two main sector students tend to pursue for a full-time job, or an internship, is commercial construction and heavy civil construction.

The Heavy and Civil Engineering Construction subsector comprises establishments whose primary activity is the construction of entire engineering projects (e.g., highways and dams), and specialty trade contractors, whose primary activity is the production of a specific component for such projects (Naics 2012). Someone looking to go into heavy civil construction can expect large scale jobs that can be in remote areas or projects such as highways. Heavy civil construction provides high paying positions as well as great benefits. Compare to commercial construction heavy civil can operate at different hours such as when building highways, the hours can be during nighttime. Heavy civil construction offers great opportunities for any student who is interesting in joining.

Commercial construction involves building projects that can be leased or sold in the private sector. These spaces can be anything from offices and manufacturing plants to medical centers and retail shopping centers. Each commercial construction project varies in size and effort and is unique (Hojati 2018). Someone looking to go into commercial construction can expect vertical construction which means buildings that are built up. Commercial construction can have projects of every size any schedule length and any cost. Commercial construction projects are located in, but not limited to, urban areas. Commercial construction provides competitive pay and great benefits.

Throughout labs, classes, and internships students can get a sense of what work consist of. It all depends on the industry the student decided to enter., Projects can be small, large, can have schedules of months to years, and can be in the price range of thousands to millions of dollars. In class and labs students learn about responsibilities and task that can be found in the work site. Internships are seen as one of the most important elements because it provides something that the classroom cannot duplicate which is real world experience. The following is what the Minnesota state university construction management department states that student obtained from an internship:

- Students will have gained practical experience in the construction industry of his/her interest.
- Students will have a deeper appreciation for the construction process and what it takes to manage and complete a project.

- Students will gain a better understanding of resources, people, project management, and their future responsibilities in the construction industry.
- Students will gain a greater sense of responsibility, maturity, and self-confidence through interaction with co-workers and by performing competent work.
- Students will learn the value of working well with co-workers.
- Students will gain an awareness of ethical issues facing construction professional.
- Students will gain an awareness and appreciation of different cultures as they interact with others in new environments.
- Students will have a better understand why they must complete the required coursework.
- Students have the opportunity to earn money and/or academic credit.
- Students may have the opportunity for employment after graduation or to make professional contacts that may lead to future employment. (mnstate 2013)

Something that is not thought by an internship, or by the class curriculum, is the lifestyle of employee in construction management. In order learn about worker's lifestyle, the need to do research is required such as having conversations with someone who is part of the field. Each sector provides different challenges such as working environment and requirements and relocation to keep being employed. Which will/should lead to workers having different lifestyles? The research conducted will provide students with the information if there are any differences in lifestyle among commercial construction and heavy civil construction.

Methodology

The research aspect of this senior project was survey based. A survey of twelve questions was sent out to obtain qualitative responses. Due to the situation the world was facing due to covid-19, responses were collected within 3 weeks. The survey's main goal was to gather data to analyze the responses of workers from the commercial industry and the heavy civil industry. The following question were part of the survey:

1. What construction company do you work for?
2. What construction industry do you work in?
3. How long have you been working for your current company?
4. How long have you been working in the construction industry?
5. How long did it take you to feel comfortable at work?
6. What construction industry did you first start in?
7. What workday would you consider to be most hectic?
8. How safe do you feel about job security?
9. What position did you start in when you started your first job?
10. If you could work in any of the four major construction types which one would it be?
11. Do you plan to work for your current company until you retire?
12. If you could give someone just one piece of advice that works in the construction industry, what would it be?

The goals of this senior project are to provide the student with a comparison on how the commercial worker defers from a heavy civil worker. Do to the fact that certain information is unlikely to be provided, the questions asked were the ones that the surveyor should feel comfortable answering.

Survey analysis/results

Questions were designed to gather information on surveyor by learning about their experience and information about the company they work for. The questions were designed to gain research to examine if indeed there is a difference in lifestyles within commercial and heavy construction. I am hoping to gather different information from workers from both commercial and heavy civil and also obtain a variety of experiences, sex, and age within the surveyors.

Question #1 is set to establish what industry the surveyor is part of. A hypothesis was made that I would gather more responses from commercial construction due to most companies that come to the Cal Poly Construction Management info sessions are commercial companies. Surprisingly, it was much closer than I thought. This is essential in the research because it shows that the research has variety from each sector. The results that came in were 40 percent of surveyors were part of the heavy civil industry and 60 percent were from the commercial industry.

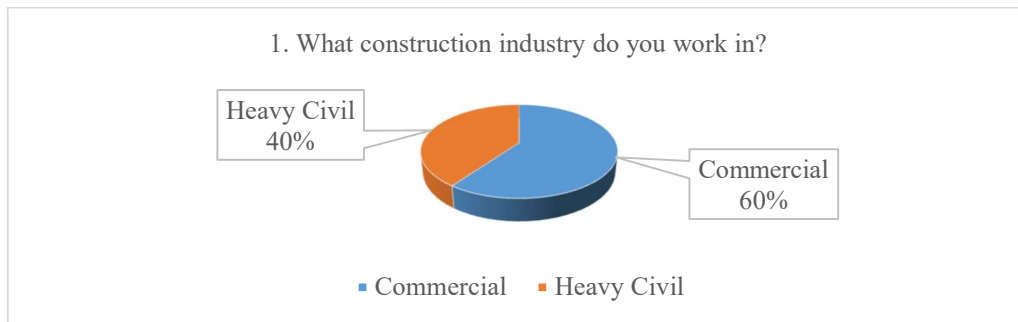


Figure 1 response to question 1 what construction industry do for you work in?

Question #2 was set to know how long they have been with their current company. I hoped to gather a variety of years to see how responses change as the years increased while working in a single company. I was only able to gather a variety of years when it comes to commercial industry compared to the heavy civil industry where most were recent employees or employees that have been with the company plus 10 years. Most had an average of 15 years with their company. With this information it is interesting how their answers to the following questions varies.

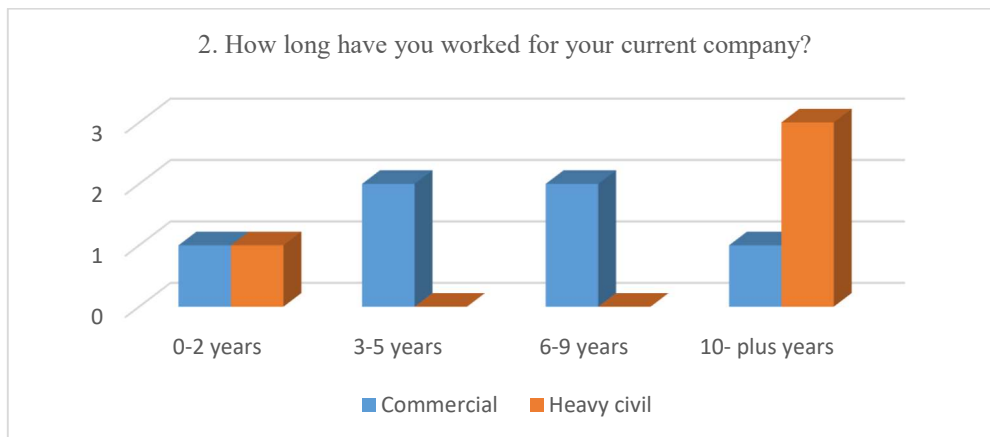


Figure 2 reasons to how long have you worked for, your current company?

Question #3 was asked to find the experience the surveyor has in the industry. An assumption can be made that the longer time in the industry they will have wiser answers compared to someone who just started their career. Another assumption is that with time, their position in the company changes as well as their income. Question 3 main goal was to compare the rest of the responses with their experience in the industry.

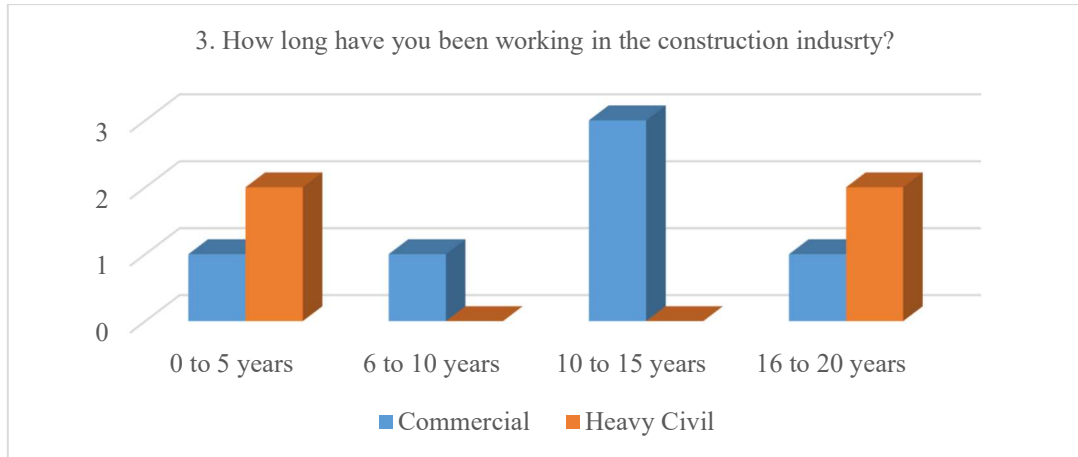


Figure 3 response to the question how long have you been working in the construction industry?

Question #4 determined how long it took the surveyors to feel comfortable at work. An assumption was made that it would have taken employees from heavy civil a longer period to feel comfortable. This assumption was made because heavy civil construction tends to deal with larger scale projects which can require the worker to move locations. Most responses had the statement that they had an internship with the company they are employee by. This demonstrates how important internships are, not only do they provide experience for students, but they also make students feel comfortable if they are given the opportunity to work for the company they intern for.

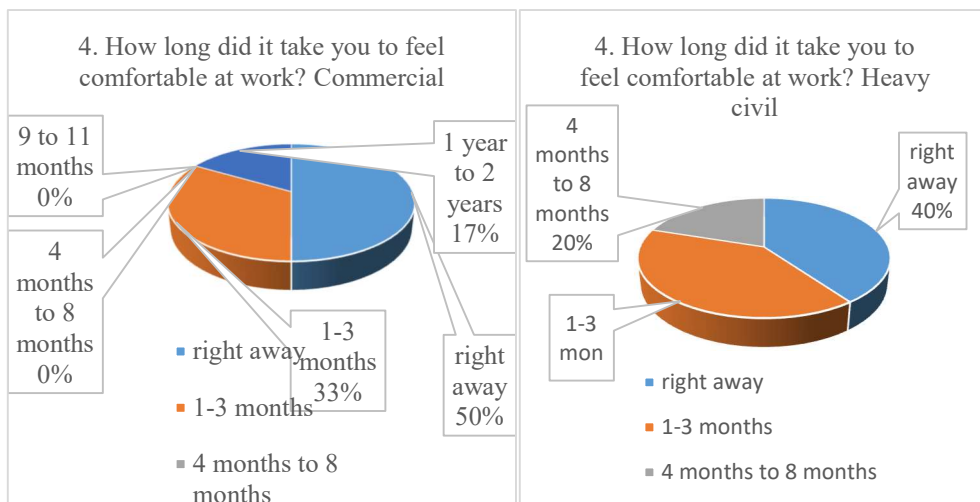


Figure 4 and 5 responses to how long did it take you to feel comfortable at work?

Question #5 was set up to determine the total amount of time the surveyor has been part of the construction industry. It is likely that people with experience change jobs which leads to changing companies and sectors in their lifetime. Most surveyors can be considered veterans in the construction industry with most heaving plus ten years of experience. I was not able to gather information on workers that just started their career. I feel that this is going to have an impact on my conclusion.

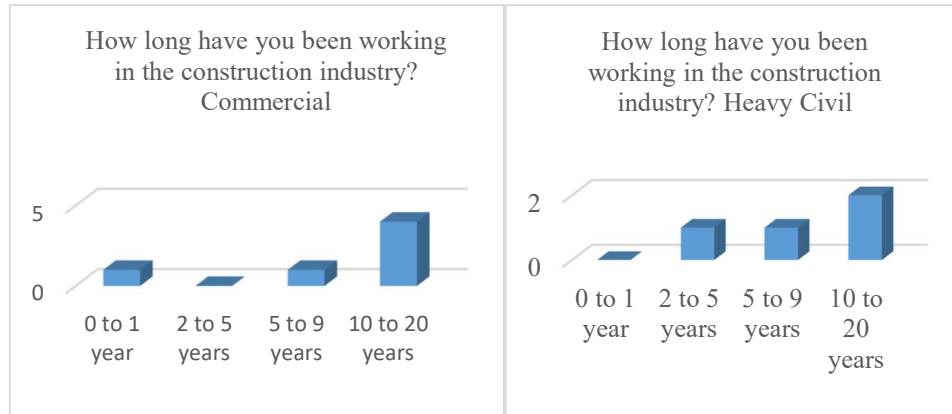


Figure 6 and 7 responses to how long have you been working in the construction industry?

Question #6 covers what day from the workweek does the surveyor consider to be the most hectic. An assumption was made that both commercial and heavy civil construction will have Monday as the hectic day. The Monday assumption was made because everyone is coming back to work. An Additional assumption is that it could be midweek because that is the time accidents are more likely to transpire. Results show that commercial tends to have different days as the most hectic compared to heavy civil.

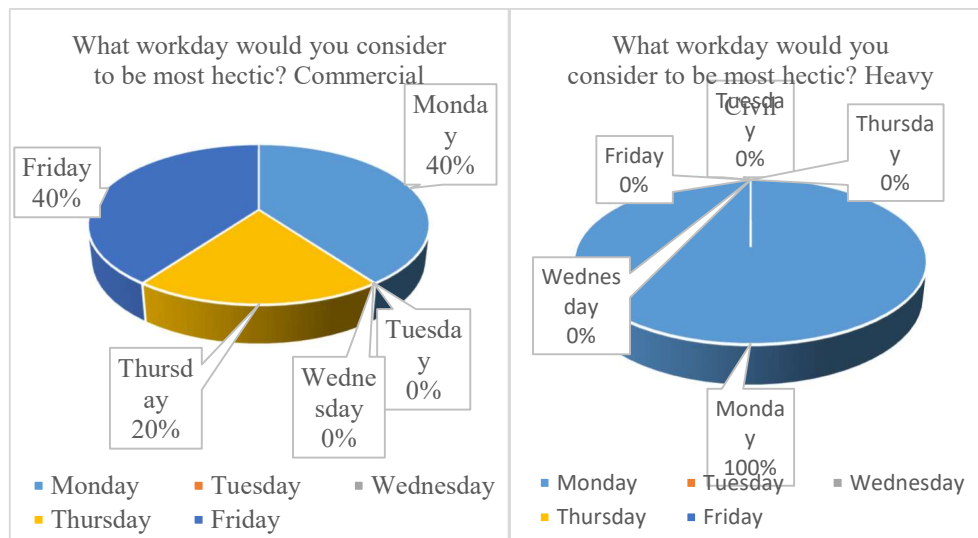
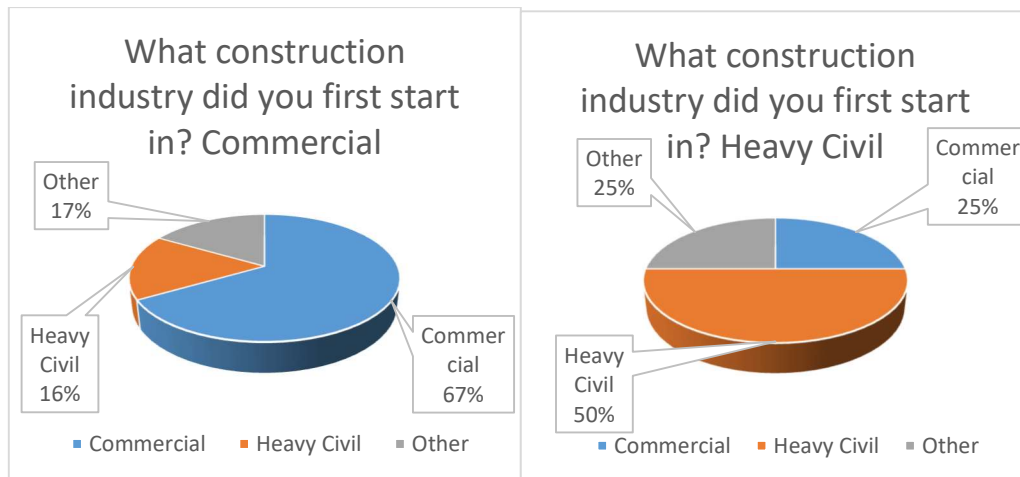


Figure 8 and 9 responses to what workday would you consider to be most hectic?

Question #7 question seven was designed to see which industry is more likely to change sector. Overall, each sector seems to stick to the industry they started in. Not every industry is correct for every person. So, changing is not uncommon. Both commercial and heavy civil have similar percentages to those who switched.



Figures 10 and 11 response to what construction industry did you first start in?

Question #8 question eight was to inform the students which sector gives better job security. There is information that heavy civil job tends to keep going even when the economy is not doing well because of the type of projects they build. Giving that, an assumption was made that heavy civil should have better job security compared to commercial construction. As the result demonstrate, heavy civil does provide better job security for their workers.

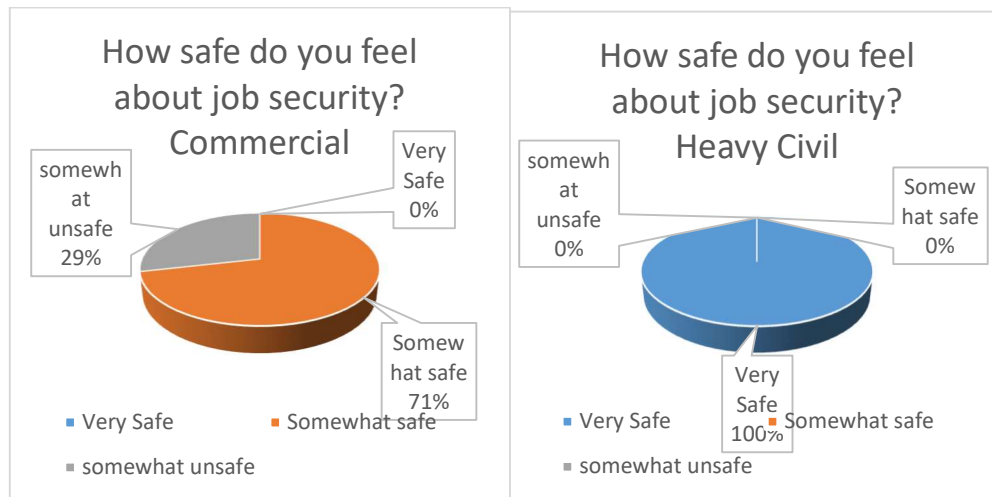


Figure 12 and 13 responses to how safe do you feel about job security?

Question #9 was to analyze the difference in starting positions of both industries. The two main starting positions are estimator and project engineer for a student with a construction management degree. Both heavy civil and commercial have project engineer as one of their main starting position.

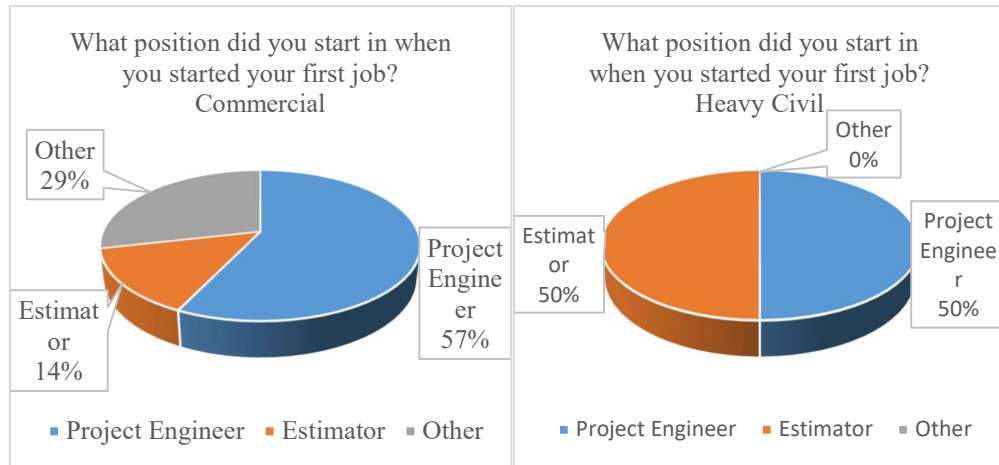


Figure 14 and 15 responses to what position did you start in when you started your first job?

Question #10 was to check if they really like the industry they are in. An assumption was made that both industries will have percentages that are comparable. From all the responses from heavy civil, one hundred percent would stick with heavy civil. Many aspects can come into this decision such as paid and job security.

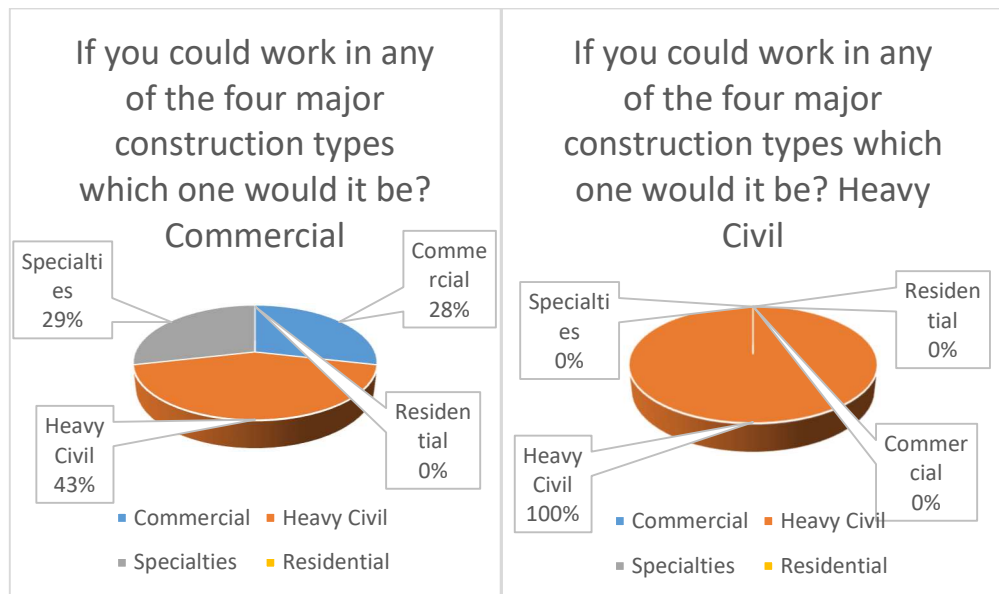


Figure 16 and 17 responses to if you could work in any of the four major construction types which one would it be?

Question #11 was asked to see which sector is more likely to retire in their company. An assumption was that those taking the survey that have plus ten years in the industry are more likely to stick with their company until retirement. Results demonstrate almost identical percentages on if they will, will not, or maybe.

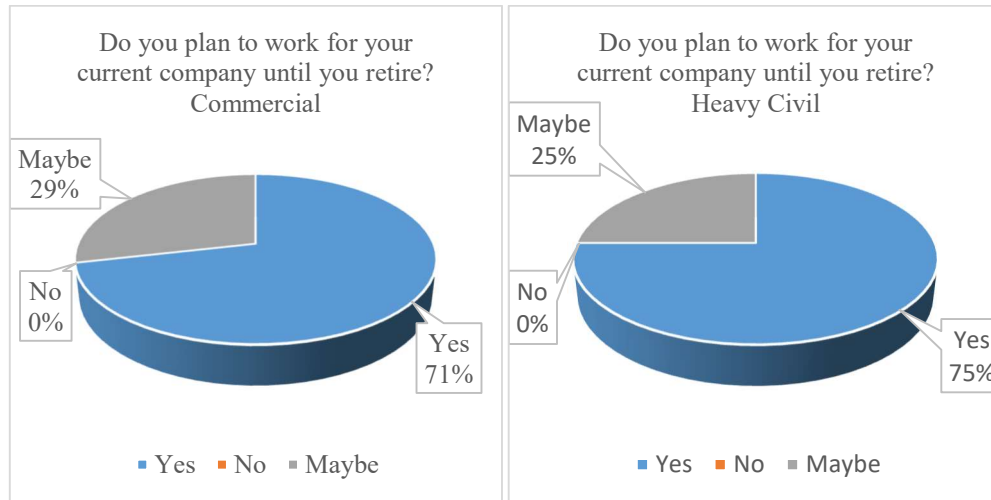


Figure 18 and 19 do you plan to work for your current company until you retire?

Question #12 If you could give someone just one piece of advice that works in the construction industry, what would it be? I had a few statements that should be included for students that are going into an internship or full-time job to hear. A statement was made for a woman that I feel is a strong statement because I have notice in last two years that women have had a resurgence in construction management. The following statement came from a surveyor that is part of the heavy civil sector and goes as follow “if you are a woman do not let anything stop you from pursuing a career in construction, is up to us to show the world we can do everything a man can do.” Over all this statement has a huge impact because not only is construction management, at the moment a field were the majority are male, but heavy civil is a field where you are likely to find fewer woman compared to commercial. A statement that came from a surveyor from the commercial sector is as follow “try to work on as many projects or industries as possible especially when you are starting out. This will give you a lot of opportunities to learn about different types of projects.” This statement is important for students to hear because it motivates you to take on challenges that you could not be comfortable with. But what better time to try different things but when you are starting out? Because at the end of the day, no matter what sector of construction you go into, the more you learn the better worker and person you will become.

Conclusion

The research on this project was impacted by the epidemic of covid-19 during the spring quarter of 2020. From the personal information, most surveyors have been in the industry for more than 3 years. A goal from the research was to obtained information to inform students of their future perspective lifestyle as soon as they begin their career. This was not attained. But the research does demonstrate what can be their perspective from work when they have more than five years in the industry. From the responses, heavy civil construction provides a better lifestyle. A hypothesis was made that salary

would play a role in heavy civil being the better out of the two when it came to lifestyle. But the reality is that the no question included anything to do with salary out of respect. From the following two questions heavy civil position themselves as a better provider for worker lifestyle. Question number eight was how safe you feel about job security Job security is something important to anyone especially in the construction industry. Heavy civil projects tend to be large scale projects that are needed no matter the situation with the economy compared to commercial construction which only happens if the situation is correct. The second question was question number ten, if you could work in any of the 4 major industries which one would I be, one hundred percent of the people that are currently in the heavy civil field decided that they would stay in heavy civil. Interesting about question ten was that forty three percent of those who are in commercial would change to heavy civil. An assumption is made that due to the current situation that we are all facing it is more likely that heavy civil construction is deemed as essential and work has continued. It could be the case that commercial construction has stopped for some and that is the reason why heavy civil has better job security and has people in commercial whiling to change to heavy civil. Going into heavy civil is something students from the construction management department should consider more. From the results it demonstrates that it provides a better lifestyle to workers.

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