Big Dreams, Small Paychecks?

A study investigating the salary expectations of Lund University's engineering students

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Abstract

This thesis investigates the entry salary expectations of engineering students at Lund University's Faculty of Engineering (LTH) and compares them to actual mean entry salaries based on labour statistics. The first aim of the study is to determine if the students' expectations align with the actual entry salaries. The second aim of the study is to explore which potential causes could explain any observed discrepancies. To gather data on salary expectations, a survey was conducted among students enrolled in Industrial Engineering and Management (IE) and Civil Engineering (CE) programs. The survey amounted to 103 participants. Data on actual entry salary statistics were gathered from The Confederation of Professional Associations (SACO). Expected and actual mean salaries were compared, and regressions analysis was conducted to determine potential specific effects which could have an impact on students' expectations. The analysis reveals a substantial gap between expected and actual entry salaries. Factors such as gender, program enrolment, job prospects, and market wage awareness significantly influence salary expectations. Additionally, the gap decreases as students progress through their academic years. Moreover, variables like previous work experience, completing internships or degree projects, university GPA, and higher parental education were not statistically significant in shaping salary expectations, according to this study. The findings highlight the importance of providing accurate salary information and addressing student overconfidence to foster realistic entry salary expectations, which could otherwise lead to disappointment, prolonged job searched and job mismatches. The robustness of the results and conclusions would increase with a larger sample size, possibly providing more accuracy to the study.

Keywords

Entry salary expectations, Engineering students, Lund University, Regression analysis, Salary discrepancies.

Contents

1 Introduction

The decision to pursue a university education is a pivotal moment in a young adult's life. Higher education can serve as a cornerstone, laying the groundwork for a professional career. A prominent choice for university education in Sweden is pursuing a five-year degree in engineering. These programs combine a three-year bachelor's degree with a two-year master's degree. This investment in education could instil expectations of substantial salaries upon graduation. However, many students tend to misestimate the salary returns of various degrees (Arcidiacono, Hotz, & Kang, 2010; Betts, 1996). Unmet salary expectations can lead to job mismatches, which in turn could lead to disappointment and prolonged job searches. In the long run it could make it harder for graduates to find employment that aligns with their perceived qualifications and expectations (Kim & Choi, 2018).

This thesis investigates the entry salary expectations of engineering students at Lund University Faculty of Engineering (hereafter "LTH"), based on a survey we conducted, comparing them to mean entry salaries based on labour statistics.

In its simplest form, salaries can be explained by supply and demand. The demand for certain engineering specialisations could be higher than for others, and demand from students graduating from certain universities may likewise be higher than from others (Browning & Zupan, 2020). This extends to an individual level. The demand for some graduates can be higher because they have demonstrated sets of abilities and skills that make them highly productive. These sets of skills and abilities can be acquired by formal education or by qualified work experience, but can also be dependent on inherent abilities that give certain students advantages in their productivity. The variation between students' skills and abilities can be large (Borjas, 2020).

Numerous factors could help explain why some graduates expect entry salaries that differ from what mean entry salaries based on statistics suggest. Inherited abilities, previous work experience, gender, poor market information and psychological factors such as overconfidence are some examples of these.

By exploring this subject, we aim to uncover potential underlying factors that could contribute to the deviation of salary expectations from the labour market realities. This will

be done by capturing students' entry salary expectations via a study and comparing them to mean entry salaries derived from data provided by The Confederation of Professional Associations (hereafter "SACO"). To complement the comparison and to further analyse the relationship, regression analysis will be performed. Concerning these aims, the ambition of the thesis is to answer the following two research questions.

1. Do the expected entry salaries of LTH engineering students align with the mean entry salaries based on labour statistics?

2. If a difference exists, what factors might explain the gap between student expectations and actual salaries?

The scope of the paper will concentrate on examining the expected entry salaries among students at LTH, and only targeting students enrolled in the programs Master of Science in Engineering, Industrial Engineering and Management (hereafter "IE students") and Master of Science in Engineering, Civil Engineering (hereafter "CE students"). Only students who have not yet completed their education and thereby have not started their first post-graduation employment will be considered in the study. In addition to this, the data that will be used for comparison will be limited to salary data collected from SACO. Lastly, the analysis will only focus on current labour market conditions, and any future economic changes are outside of the purview of the scope of this paper.

Per the purpose of this thesis, some demographic variables will be used in the analysis such as gender, individual characteristics, and whether they have parents who have attained higher education, among others. This is done to further capture variability and explain differences in salary expectations. However, the paper will not extend to analysing personal networks, negotiation skills, or other broader socioeconomic factors not specified in the study.

The paper will be structured as follows; Chapter 2 will introduce the theoretical framework and previous research that the paper is based upon. Chapter 3 will detail the collection and processing of secondary data. In Chapter 4, we will outline the methodology utilised in this paper. Chapter 5 will present descriptive statistics and the findings of our analysis. Our discussion and an exploration of the study's limitations will be provided in Chapter 6, followed by our conclusions in Chapter 7.

2 Theoretical Framework and Previous Research

This chapter begins by introducing the theories that the paper is based upon. Thereafter, previous research will be presented to expand upon the theoretical framework.

2.1 Theoretical Framework

2.1.1 Human Capital Theory and Signalling Theory

Human capital is a broad term which captures various elements contributing to an individual's total productivity. According to *human capital theory*, higher productivity among workers rationalises higher expected salaries. A portion of a worker's human capital stems from innate disparities in abilities influenced by genetic and environmental factors, such as upbringing. For instance, having parents with a higher educational background, or coming from a higher income family could be factors that influence a student's human capital positively (Borjas, 2020). In contrast, other components of human capital are attributes to acquired skills such as formal education or on-the-job training (Muehlemann & Wolter, 2020).

Human capital theory provides insights into why graduates with the same degree might receive different starting salaries. While education is undeniably important, it represents just one part of the equation. Some students may have inherent advantages, like higher cognitive ability, which could translate into stronger academic performance and overall productivity. Additionally, prior work experience, even outside the field of study, can enhance a graduate's skill set and marketability. Even among students, there is variation in the amount of human capital a student possess. Having relatively lower human capital compared to other students while simultaneously expecting a high entry salary, could indicate different levels of potential misjudgement in one's productivity (Cohen & Soto, 2007).

In contrast to the principles of human capital theory, *signalling theory* suggests how certain behaviours, traits and accomplishments can reveal insights about an individual's attributes or potential. According to signalling theory, the knowledge gained when acquiring a degree will not make someone more productive, but having the degree itself signals potential productivity (Borjas, 2020).

In the context of education, graduating from a high-ranking university serves as a powerful signal of potential productivity. Attending and successfully completing a program at a prestigious institution implies a certain level of intelligence and perseverance. Admissions to such universities are highly competitive, and those who gain acceptance have typically demonstrated exceptional academic abilities and ambition, which could translate into high productivity in a later career. Having a degree from a prestigious university, an excellent academic record and relevant work experience could contribute to shaping students' expectations of future salaries (Borjas, 2020; Connelly, Certo, Ireland, & Reutzel, 2011).

The engineering programs at LTH are among the most esteemed in Sweden and have higher admissions standards compared to other similar programs at other Swedish universities. Table 1 below presents the four-year average admission standards based on high school grades at five of the top-ranking technical universities in Sweden. Students from higher ranking institutions could have positively influenced salary expectations, as they assume that employers recognise their high academic performance.

Table 1: Admissions scores for engineering programs at Swedish Universities.

University	**Industrial Engineering**	**Civil Engineering**
Lunds Tekn. Högskola (LTH)	21.95	18.91
Kungliga Tekn. Högskolan (KTH)	21.66	18.92
Chalmers Tekn. Högskola (CTH)	21.66	19.07
Linköping Tekn. Högskola (LITH)	20.76	16.73
Luleå Tekn. Universitet (LTU)	17.41	*

Source: Universitets- och högskolerådet (UHR). * Indicates that all applying students were admitted all four years.

Ultimately, human capital and signalling theory can explain how different factors make up a worker's total productivity. The theories can also explain variations in students' salary expectations by linking them to personal skills, educational achievements, and the perceived prestige of academic achievements. All these factors could contribute to shaping students' salary expectations.

2.1.2 Rational Behavior and Overconfidence Bias

Building upon the insights provided by human capital theory and signalling theory, traditional economics introduces *rational choice theory* and *rational expectations theory* as fundamental theoretical frameworks. These theories state that rational actors in the market are expected to make decisions based on rational calculations derived from all available information (Bergh, 2022; Sheffrin, 1996). According to these theories, students entering the labour market should possess an awareness of their own productivity levels and the corresponding market wage, thus shaping their salary expectations based on informed and rational forecasts.

However, the assumption of perfect rationality encounters challenges when confronted with real-world observations. Researchers have been documenting systematic deviations from the rational behaviour in market agents that the classical models assume. These deviations are often attributed to factors such as information asymmetry or emotional influences (The Royal Swedish Academy of Science, 2017).

One prominent deviation from the classical model is *overconfidence bias*. People tend to be overly confident in their abilities, knowledge, reasoning, and cognitive abilities. For example, 93 percent of American drivers see themselves as being better drivers than the median driver. For Swedish men, 69 percent believe they are better drivers than the median driver (Svensson, 1981). This, of course, is not statistically possible. These results have been recreated in various forms in different studies throughout the years[1].

Particularly relevant to students at LTH, overconfidence bias can substantially impact students' salary expectations, potentially leading them to overestimate their own productivity which could shape inaccurate salary expectations. The phenomenon of overconfidence bias has been observed in regard to salary expectations in previous research, a topic that will be explored further in Section 2.2.2 below.

[1]Odean (1999) presents evidence on excessive stock market trading due to investors' overconfidence. Malmendier & Tate (2004) provides evidence that CEOs tend to be overconfident in regarding their ability to manage a company.

2.1.3 Intergenerational mobility

To broaden the understanding of what influences salary expectations, it is important to consider not only individual factors but also other economic indicators. *Intergenerational mobility* is an economic measure that examines how the financial status of one generation, often represented by parents, can influence the next generation's economic outcomes. It is based on the concept that wage disparities in one generation can often carry over to the next. For example, parents' investments in their children's education and skill development, constituting human capital, can significantly influence the future earnings potential of that child, which in turn could influence future salary expectations. While parents will typically maximise this investment, the ability to do so varies with high-income families being more likely to be able to contribute more than low-income families (Borjas, 2020).

Salon's (1992) findings further shows the impact of intergenerational mobility on children's' future income, presenting results of a higher impact than previously shown. However, Salon also highlights that there is high variability in results, indicating that intergenerational mobility is not the sole determinant for future economic status.

This subsection ends the theoretical framework. The theories previously mentioned in this section provide complementary perspectives into the complexities influencing students' salary expectations. In the upcoming section, previous research will be presented to build upon the theoretical framework, providing practical implications of student's salary expectations.

2.2 Previous Research

2.2.1 Salary expectations among engineering students

In the context of understanding students' salary expectations, Taylor (2007) conducted a study focusing on the salary expectations of Science and Engineering students (hereafter "S&E students"). Using data from a comprehensive national survey, Taylor aimed to illustrate the potential the relationship between S&E students' desired workplace attributes, salary expectations and the prevailing market conditions.

The survey spanned over two years and included 1,219 respondents from 185 colleges and universities in the United States. While Taylor's findings did not reveal a significant overall

discrepancy between S&E students' expected salaries and the prevailing market averages at the time, they uncovered differences within specific student groups. Fifty-one percent of students were willing to accept a annual salary of less than $40,000, which was in line with market rates at the time. However, Environmental engineering students, the only group of engineering students in Taylor's study, stood out and expected the highest wages compared to other departments, with a lowest acceptable annual starting salary of just over $50,000. This salary expectation was noticeably higher than that of other S&E students, and represented the largest deviation from the current market wage at the time.

2.2.2 General overconfidence in salary expectations

Schnusenberg (2020) provides a study with insights into the biases that influence finance students' salary expectations post-graduation, demonstrating a phenomenon not limited to the engineering student groups. The motivation behind the study was the persistence of career prospects among finance students, despite the market becoming volatile and over-saturated after the 2008 financial crisis. Schnusenberg bases the paper on a survey conducted in 2011, which involved surveying undergraduate business school students at a regional school in Florida, USA. The questionnaire asked students to estimate their expected earnings percentile in different years preceding graduation. Additional questions regarding socioeconomic status and perceived ability to find a job post-graduation were also included.

Schnusenberg revealed pronounced overconfidence among students. After one year of experience, students expected to earn in the 50th percentile, which they expected to soar to the 81st percentile after ten years. Furthermore, Schnusenberg introduces additional overconfidence measures, showing how students expect their salaries to change from one year to five years, and finally to ten years of working experience. For example, students on average expect their salaries to jump 35 percentile points after ten years of working experience. More signs of overconfidence were shown as 25 percent of respondents expected to be in the 100th percentile of earnings after ten years in the field. Looking at the demographic differences, only a marginally significant explanation for the overconfidence could be found.

Schnusenberg's (2020) findings on finance students align with those of Taylor (2007), where an overestimation of expected salaries where observed among engineering students.

While Taylor focused on S&E students, Schnusenberg's examinations of expected salaries over one, five and ten years revealed a similar pattern of overestimation in salary expectations. This alignment between the two studies suggests that this may be indicative of a broader trend of salary overestimation among certain student groups.

2.2.3 Overconfidence and gender

Building upon the previous research of overconfidence in salary expectations, this section of the thesis investigates previous research on the gender dynamics of salary expectations among university students. The National Mediation Office (2022) found that the raw salary difference, commonly known as "pay gap", between men and women in Sweden was around 10 percent as of 2022 in terms of monthly pay. When accounting for factors such as profession, age, education, and working hours, the difference was 4.7 percent. This is the part of the pay gap that can't be explained by statistical methods.

The Swedish labour union Engineers of Sweden (2023) found similar results regarding the general salary difference between male and female engineers in Sweden. Furthermore, the union also investigated differences in expected entry salaries among engineering students. The union found that in 2022 male engineering students on average expected an entry salary of 37,100 SEK immediately after graduation, whereas their female counterparts expected to get a lower average entry salary of 35,700 SEK immediately after graduation. Given these values, we calculated the disparity to highlight the ongoing difference, amounting to a disparity of 1,400 SEK between male and female engineering students, or approximately 3.91 percent.

The actual statistics of engineering students' entry salaries also confirmed a difference in entry salaries between male and female engineering students. Male engineering students did on average get an entry salary of 37,000 SEK and female engineering students got an entry salary of 36,000 SEK, a difference of 1,000 SEK, or approximately a 2.78 percent difference. The actual pay gap regarding entry salaries between male and female engineering students was therefore smaller than the pay gap based on the engineering students' own entry salary expectations. Engineers of Sweden (2023) also found that the actual gender pay gap among engineers was more pronounced in the private sector, where it stood at around 12

percent, compared to approximately 4 percent in the public sector. Moreover, irrespective of gender, the salary was on average higher in the private sector compared to the public sector (Engineers of Sweden, 2023). Engineering students pursuing a career in the private sector could therefore on average expect a higher salary than those wanting to pursue a career in the public sector, according to the report.

Taylor (2007) found similar results in their study where they could conclude that female engineering students on average would accept lower minimum salaries than male engineering students. The average minimum wage that female engineering students would accept was just over $38,000, compared to the lowest accepted starting salary of male engineering students, being just over $41,000, almost an 8 percent difference. The sum of these findings could be indicative of a broader gender-based discrepancy in salary expectations.

Beyond entry salary expectations, general male overconfidence on the labour market has been documented in numerous studies. For example, one study found men were more likely to choose competitive pay structures than women due to their inclination for competition (Niederle & Vesterlund, 2007). Bastani, Giebe, & Gürtler (2023) analysed how male overconfidence combined with competitive workplace incentives could affect gender equality regarding fairness in job promotions. The research team found that overconfident workers generally put in more effort to get promoted. This often leads to these overconfident workers to get promoted more often and thus, earn more money as they accumulate more human capital through learning-by-doing, making them more productive (Bastani et al. 2023). Estimates have suggested that overconfidence in males could explain 5-11 percent of the difference in the gender gap for leadership positions (Adamecz-Volgyi & Shure, 2022).

In the context of overconfidence, the distinction between general confidence and overconfidence is important. Confidence is defined as a trait associated with self-assurance and belief in one's abilities. Confidence involves having a realistic understanding of one's strengths and weaknesses, and acting in accordance with that. Overconfidence involves an exaggerated belief in one's abilities and a tendency to overestimate one's skills or knowledge (Moore & Healy, 2008).

For example, if men and women are equally qualified for a certain position, and men in general apply for the position to a larger degree than women, that could be attributed to higher confidence. If in the same scenario, men were much less qualified for the position than women and still applied to a higher degree, that could be because of overconfidence (Coffman, Collis, & Kulkarni, 2017).

2.2.4 Factors enhancing earnings potential

To conclude this section on previous research, this subsection presents findings on specific factors potentially enhancing earnings potential and salary expectations among university students. Kunal and John (2023) investigated factors influencing employment decisions in graduate students. Their research identified several key influences to employment and earnings potential. Employers value personal attributes like self-efficacy, resilience, and motivation in graduates. Additionally, strong academic performance, relevant work experience, and demonstrably valuable skills all contribute to a graduate's attractiveness to potential employers and their earnings potential.

Furthermore, the United States National Centre for Education Statistics (2019) provides a study that confirms the importance of education for earnings potential, demonstrating that individuals with higher levels of education and qualifications enjoy better job prospects and earning potential.

Additionally, Rudakov and Roshchin (2018) investigated how academic performance, measured by Grade Point Average (hereafter "GPA"), influences future salaries among graduates. The study was conducted at a Russian university, analysing data from graduate surveys which were conducted in 2014 and 2015. Rudakov and Roshchin found that having a better GPA could lead to an entry-wage premium of 9-12 percent per additional GPA point for bachelor students. Rudakov and Roshchin also found that combining high grades with relevant work experience could result in an entry-wage premium of as high as 30 percent. The combination of strong academic performance and work experience therefore emerged as a key positive factor impacting graduates' earnings.

These findings are in line with an additional study by the United States Bureau of Labour Statistics (2020), which found a clear advantage for individuals with work experience, who

tend to have better job prospects and higher earning potential compared to those without it. This underscores the importance of seeking opportunities to gain relevant experience, whether through internships, part-time jobs, or volunteer work. Students with good grades and relevant work experience could therefore expect a higher entry wage than those students who lack these qualifications.

Furthermore, Zafar (2011) demonstrated that how far a student has progressed through their university education effects salary expectations. The findings suggest that the further students progress in their education, the more their salary expectations align with actual market wages.

Together, the studies put forth in these sections on previous research provides insights into some of the potential factors influencing students' salary expectations, highlighting overconfidence biases, gender disparities, and the potential impact of education and previous work experience in shaping a students salary expectations.

3 Data

In this chapter, we explain from where the secondary data was sourced and present the parts of the data set that we will use for the analysis.

3.1 SACO Data Set Description

The study utilised secondary data from the Swedish Confederation of Professional Associations (SACO). Specifically, data was drawn from SACO's salary database, SACO Lönesök. The dataset, which is updated annually, provides a detailed breakdown of salaries by factors such as graduation program, graduation year, geographical location, and sector. The statistics are based on both survey results and employer-gathered data with observations added from new graduates. Although SACO can be seen as a valuable and reliable tool for salary information, it is worth noting the potential bias that can arise from self-reported salary surveys.

3.2 SACO Data Set Processing

For the purpose of the thesis, data was extracted on the mean starting salaries for graduates who graduated from five-year Industrial Engineering and Civil Engineering programs at Swedish universities in or after the year 2023. This reflects the most recent available figures. Table 2 shows the mean entry salaries of IE students and CE students in Sweden as of 2023. There was no option to filter by gender. Therefore the actual mean entry salaries were applies to all students within the specific IE or CE programs. Both these salaries are lower than what Engineers of Sweden (2024) suggests that a graduate student should demand as an entry salary in 2024[2].

Table 2: Actual mean entry salaries based on labour statistics for IE and CE students.

Program	**Mean Salary (SEK)**
Industrial Engineering	39,541
Civil Engineering	35,656

Source: SACO Lönesök

[2]Engineers of Sweden recommends all graduates, regardless of specific five-year engineering degree, to demand 40,200 SEK during 2024

4 Method

This chapter introduces the choice of quantitative method in the paper, as well as the challenges that can arise from collecting first-hand data. Furthermore, the method of regression analysis is explained as to how it will tie into the comparison of the secondary data.

4.1 Quantitative Method

There are three integral parts to the methodology of this paper. 1) Collecting data via the survey, 2) Presenting descriptive statistics on the self-gathered data and the secondary data and, 3) Performing regression analysis and presenting results of findings. The primary method involves gathering data through the survey, designed to capture relevant information from the sample. Upon data collection, descriptive statistics will be used to provide an overview of both the self-gathered data and the secondary data. Finally, regression analysis will be conducted to explore relationships between variables and derive meaningful insights from the data.

The quantitative research method is known as the norm in economic research and it opens up the possibility of gathering information from the chosen population sample through pre-coded questions and getting answers that are conveniently composed for further analysis.

4.1.1 Pros and Cons of Collecting First-hand Data

Collecting first-hand data through questionnaires is a fundamental approach to quantitative research. This approach provides several advantages. Firstly, it allows direct control over the data collection process, ensuring that the information gathered is directly relevant to the research questions, as well as to the targeted population. Secondly, the quantitative qualities of the data collected make it suitable for statistical analysis, allowing for clear comparisons between different groups or variables within the study. Lastly, when proper sampling methods are used, the findings from the study can potentially be generalised to a broader population, enhancing the study's applicability and impact (Bell, Bryman & Harley, 2022).

However, there are also drawbacks to consider. Questionnaires can introduce various

biases, such as respondent bias or biases stemming from how questions are framed. The structured nature of questionnaires may also limit the depth of information collected, potentially overlooking some aspects of respondents' behaviours. Another notable challenge in collecting first-hand data is ensuring the accuracy of what is measured. There can be significant variability in how respondents interpret the questionnaire items. This variability can lead to responses that do not accurately reflect the intended end goal. Finally, achieving a high response rate can be challenging, and low response rates may compromise the representatives of the data (Bell et al. 2022).

4.2 The Survey

A survey of students enrolled in engineering programs at LTH was conducted to collect data to answer the research questions. The participants for the study were selected through a convenience sampling method, where students enrolled in the specific programs were targeted. Before sending out the final version to potential respondents, a pilot study was conducted on five targeted students. The pilot study resulted in a revision of some of the questions to increase the interpretability of the survey (Appendix 1). Following this, the final version of the study was completed. In practice, this meant that we went out and physically engaged with students on campus. This was done by going to key locations at the LTH campus where the targeted students were having classes and having them scan a QR code that was linked to the digital survey.

All answers were collected digitally, using Google Forms, to make it as accessible as possible. This also meant that answers were automatically transported to a spreadsheet which simplified data management. The window for when the survey accepted answers was from 2024-03-25 to 2024-04-26. The survey was designed to accept only one response per student. Students were required to sign in using their designated Lund University email account. Once they submitted the form, the same email account could not be used to access the survey again. Since each student only has one unique Lund University email address, the risk of collecting multiple responses from the same student was considered low.

The questions in the study did not obtain any sensitive information. This was further confirmed by the pilot study. All participants were informed of the purpose of the study

and their contribution to it and were ensured anonymity. Consent was obtained before participation and the respondents were free to withdraw at any time.

4.2.1 Survey Structure

The survey was initiated with a short introduction to inform the participants of who conducted the survey and why it was done, while also thanking the respondents for their participation. The study follows a structured questionnaire design, meaning that every question was pre-planned and not dependent on the respondent's previous answer to a question. Furthermore, the questions were constructed in such a way that they are easy to understand and quick to answer, to ensure that all respondents actually complete the survey, increasing the response rate.

The survey included questions regarding demographic information, their academic background, their insight on and perceptions of the current state of the labour market, as well as their expectations regarding entry-level salaries. In total 14 questions were asked. Three of these were open-text questions where respondents freely filled in the answers. These questions regarded age, high school GPA, and expected entry salary post-graduation. This allowed for precise answers which is a key component for these questions. Nine questions had closed answer options, which were used for questions where there were no other answers than the ones provided, such as gender or which program they were enrolled in. However, some questions gave more options, such as which sector they expected to work in, and the preferred geographical location for their future workplace. Closed-answer questions were used for efficiency purposes. Finally, the remaining two questions were on a scale from 1 to 10, where students had to self-assess their knowledge of current market-level salaries and their chances of finding a job immediately after graduation in a preferred field.

4.2.2 Selection and Validity

A concern with convenience sampling is the potential for sampling bias, as it might not present a representative sample of the entire population, thereby risking the validity of the findings (Bell et al, 2022). To mitigate this, we actively sought students across different academic years. By engaging with students in various classes and academic levels, we aimed to

balance the sample and reduce the risk of over-representing any specific group. Furthermore, potential response bias was not seen as a major issue for the survey, as the questions were deemed to be non-sensitive. A straightforward questionnaire is less prone to misreading, enhancing the clarity and reliability of the responses. However, we could not be entirely certain of the sincerity of all responses. Despite these concerns, we believe that the nature of the questionnaire and the fact that we engaged in the students directly promoted honest answers. Lastly, the sample size and response rate are crucial aspects of all survey-based research (Bell et al, 2022). To ensure a robust response rate, we only collected answers physically. While a larger sample size is always preferable, the steps we took to diversify our sample and refine our questions were aimed at maximising the quality and reliability of the data.

4.3 Regression Analysis

The main part of our findings will be based on multi-linear regression analysis performed on the collected data from our study as well as the secondary data. The analysis was performed using IBM SPSS, which allows for widespread and comprehensive analysis of the material. To estimate the linear relationship, the Ordinary Least Squares method was used. Tests will be performed to check for normality. If there are signs of non-normality, logarithmic transformation could be used on the dependent variable, making it a log-linear model. However, the data needed to be further processed so that the material was interpreted correctly. This included coding the variables correctly, assigning them the correct scale, as well as transforming them to be useful for the regression. Additional diagnostic tests accompanied the main regression analysis to ensure the robustness of the model.

This was tested on our initial baseline model (Appendix 5). In this model, the dependent variable is the difference between expected and mean entry salaries and all other variables were used as control variables. This included the dummy variables for geographical location, and sector.

4.3.1 Dependent Variable

The dependent variable used for the regression analysis is the difference between each observation's expected salary and the actual mean salary based on labour statistics. This difference is calculated by subtracting the expected mean entry salary the respondents provided with the actual mean entry salary for each respective program, provided by data from SACO. We used the absolute difference between the expected salaries and the actual mean salaries. The absolute difference provides a measure of how much the expected salaries deviate from the actual mean, regardless of whether the deviation is positive or negative. This approach ensures that we account for the magnitude of the deviations without biasing the analysis towards over- or underestimations. By using the absolute values, we can better understand the extent of salary misalignment across all observations.

Therefore, in our analysis, we treat positive and negative deviations from the mean entry salary based on labour statistics equally. This measurement allows us to assess the overall difference in salary expectations among the respondents, providing a more robust insight into their alignment with actual market salaries.

4.3.2 Independent Variables

Listed below are the independent variables that have been used to explain the relationship with the dependent variable.

Variable	Description
Age	The age of the respondent. Coded as a continuous variable.
Gender	The gender of the respondent. The question has a closed answer and is coded as a dummy variable that assumes 1 for men and 0 for women. While there were more response alternatives, respondents only selected man or woman, allowing us to code it in this way.
Program	The variable captures which program the respondent is enrolled in, in other words, Industrial Engineering or Civil Engineering. The variable is a dummy variable with IE students assuming a value of 1 and CE students assuming a value of 0.
High school GPA	The respondent's high school GPA when finishing high school. Coded as a continuous variable, but the highest value for a Swedish high school GPA is 22.5.
Year	The year in the enrolled program the respondent is studying. Coded as a nominal scale and assumes values from 1 to 5, representing years for the respective engineering programs.
Internship or degree project	This variable shows if the student has or is planning to carry out an internship or complete their master's thesis in collaboration with an external company. Coded as a dummy variable where "yes" (have or is planning on completing) equals 1 and "no" (not planning on completing either) equals 0.

Variable	Description
Prior experience	A dummy variable capturing if the respondent has prior working experience within an engineering sector, such as a summer internship. "Yes" equals 1 and "no" equals 0.
University GPA	LTH uses a grading scale of 3, 4 and 5. The variable is divided where the respondent answers "yes" if their average grade is equal to or greater than 4 and "no" if it is less than 4. It is then coded as a dummy variable where "yes" equals 1 and "no" equals 0. Since the grade 4 is the midpoint, a result above 4 indicates a above average performance, and a results below 4 indicates a below average performance.
Estimated job prospects	The variable represents the respondents' self-assessed probability of finding a job directly after completing their enrolled program. It is coded as an ordinal scale between 1 and 10, where a higher value indicates a better chance of finding a job.
Market wage awareness	The variable represents the respondent's self-assessed knowledge of the current market wage. It is coded as an ordinal scale between 1 and 10, where a higher value indicates better knowledge of the market rates.
Higher parental education	A dummy variable that describes if at least one of the respondent's parents has a higher education, where higher education means a master's degree or higher. "Yes" equals 1 and "no" equals 0.

Variable	Description
Location	This variable encompasses the preferred geographical location of the respondent's first job post-graduation. Respondents could choose between "unsure", "locally", "nationally", or "internationally". The responses were coded with one location being equal to 1 and the others equal to 0.
Sector	This variable is regarding the preferred sector of the respondent's first job post-graduation. Respondents could choose between "private", "public", or "unsure". Since all respondents answered either "private" or "public", the responses were coded with "private" response being equal to 1 and the "public" equal to 0.

A general depiction of how the regression equation will look like is provided below:

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \varepsilon$$

Here, y represents the dependent variable in the model. β_0 is the intercept of the model, and $\beta_1, \beta_2, \ldots, \beta_n$ are the coefficients for the independent variables $X_1, X_2, \ldots, X_n$ presented above. The error term, ε accounts for unexplained variation.

4.4 Diagnostic checks

To ensure the validity and reliability of the regression results, it is necessary to perform diagnostic checks. These checks are useful to confirm that the data adheres to the underlying assumptions of the linear regression model. *Multicollinearity* occurs when the independent variables are highly correlated with one another, which affects the estimates of the regression coefficients giving higher mean errors and less robust results (Körner & Wahlgren, 2015). This was checked by looking at the Variance Inflation Factor for each independent variable. *Heteroscedasticity* is necessary to check for, in order to ensure that the error terms have constant variance (Körner & Wahlgren, 2015). This can be checked in several ways. In our case it was checked for by plotting residuals against the fitted values. Finally, the *normality of residuals* was checked, as normality in the residuals is another assumption of linear regression (Körner & Wahlgren, 2015). This was checked by visually inspecting the residuals with a Q-Q plot and using the Shapiro-Wilks test. Any evidence of multicollinearity, heteroscedasticity, or non-normal residuals would require transformation of the variables or removing independent variables.

5 Results

In this chapter, we provide descriptive statistics based on our self-gathered data. This is followed by the results of the performed diagnostic checks, and ending with presenting the results from our regression analysis.

5.1 Participants

A total of 103 participants completed the survey, with 52 being CE students and 51 being IE students, resulting in an almost equal distribution between the programs. The gender distribution was also nearly balanced, with 53 male and 50 female participants. Within each program, 26 IE students were male, 25 were female, 27 CE students were male, and 25 were female.

Participants from all five years of the engineering programs were represented, with the second year being the most represented. There was a decline in representation in years four and five. All respondents were included in the analysis. These results can be viewed in Table 4 below.

With the fundamental data on the survey participants presented, the next sections will present the salary expectations results of the participating students.

Table 4: Distribution of Participants by Gender and University Year.

	Total		**Industrial Engineering Students**		**Civil Engineering Students**	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**
Gender						
Total	53 *(100.00%)*	50 *(100.00%)*	26 *(100.00%)*	25 *(100.00%)*	27 *(100.00%)*	25 *(100.00%)*
University year						
First year	13 *(24.53%)*	15 *(30.00%)*	2 *(7.69%)*	10 *(40.00%)*	11 *(40.74%)*	5 *(20.00%)*
Second year	14 *(26.42%)*	17 *(34.00%)*	9 *(34.62%)*	9 *(36.00%)*	5 *(18.52%)*	8 *(32.00%)*
Third year	13 *(24.53%)*	9 *(18.00%)*	7 *(26.92%)*	1 *(4.00%)*	6 *(22.22%)*	8 *(32.00%)*
Fourth year	8 *(15.09%)*	9 *(18.00%)*	4 *(15.38%)*	5 *(20.00%)*	4 *(14.81%)*	4 *(16.00%)*
Fifth year	5 *(9.43%)*	0 *(0.00%)*	4 *(15.38%)*	0 *(0.00%)*	1 *(3.70%)*	0 *(0.00%)*
Total	53 *(100.00%)*	50 *(100.00%)*	26 *(100.00%)*	25 *(100.00%)*	27 *(100.00%)*	25 *(100.00%)*

5.2 Salary Statistics

In this section of the thesis, the data on salary statistics, self assessed job prospects and self assessed market wage awareness is presented. The data is compiled directly below in Table 5.

Table 5: Comparative Analysis of Expected Salaries, Job Prospects, and Market Wage Awareness among IE and CE students.

	Total		**Industrial Engineering Students**		**Civil Engineering Students**	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**
Expected salary (SEK)						
Mean	44,379.23	40,381.00	49,807.69	45,408.70	39,152.00	35,756.00
Median	40,000.00	40,000.00	45,000.00	45,000.00	39,999.00	39,000.00
Minimum	34,000.00	32,000.00	36,000.00	35,000.00	34,000.00	32,000.00
Maximum	70,000.00	60,000.00	70,000.00	60,000.00	41,700.00	45,000.00
SD (σ)	8,115.39	7,142.16	8,588.45	7,052.14	1,717.00	2,793.00
Avg. dev. from mean salary (Δ)	*	*	10,226.69	5,867.70	3,495.81	100.00
Avg. dev. from mean salary (%)	*	*	25.94%	15.85%	9.80%	0.28%
Abs. avg. dev. from mean salary $\lvert\Delta\rvert$	*	*	$\lvert 10,776.15\rvert$	$\lvert 7,546.39\rvert$	$\lvert 3,667.07\rvert$	$\lvert 1,954.72\rvert$
Abs. avg. dev. from mean salary (%)	*	*	27.25%	19.08%	10.28%	5.48%
Estimated job prospects						
Mean	7.49	7.14	8.42	8.00	6.59	6.32
Median	8.00	7.00	8.00	8.00	7.00	6.00
Minimum	2.00	3.00	6.00	5.00	2.00	3.00
Maximum	10.00	10.00	10.00	10.00	10.00	9.00
SD (σ)	1.91	1.70	1.06	2.00	2.12	1.44
Market wage awareness						
Mean	6.55	6.10	6.50	6.00	6.59	6.68
Median	7.00	6.00	6.00	5.00	7.00	7.00
Minimum	1.00	1.00	1.00	1.00	2.00	4.00
Maximum	10.00	10.00	10.00	10.00	9.00	10.00
SD (σ)	1.87	2.05	1.98	2.00	1.78	1.68

The data illustrates substantial differences in expected salaries among engineering students, both across genders and within the programs themselves. Male students expect higher entry salaries and perceive better job prospects compared to their female counterparts. This holds true for both IE students and for CE students. Additionally, male students demonstrate slightly higher market wage awareness than female students, even though both the IE and CE male student groups simultaneously also have a larger difference between their own respective expected entry salaries and their mean entry salary based on statistics.

The collected data revealed that all student groups, except for female CE students, overestimated their expected salary compared to the mean salary based on statistics. The male IE student group overestimated the amount the most, with students expecting an entry salary of 49,807.69 SEK, compared to the mean entry salary for IE students, previously shown in Table 2, of 39,541.00 SEK, representing almost a 26 percent difference. On the other hand, the female CE student group overestimated their expected entry salary the least, with an overestimation of only 100.00 SEK, amounting to a minor difference of 0.28 percent[3].

To ensure comprehensive analysis, we utilised the absolute difference between expected and actual mean salaries. This approach allows us to account for the magnitude of deviations without biasing the analysis towards overestimation's or underestimations, treating positive and negative deviations equivalently[4].

In terms of deviation from the mean entry salary in absolute values, male IE students had the largest deviation, which was also similar to the mean average difference. This indicates consistency in both the magnitude and direction of their deviation from the mean salary. The same pattern is observed for male CE students. However, the larger standard deviation for male IE students compared to male CE students suggests greater variability in their reported salary expectations. Additionally, the minimum reported expectations for both groups differ by only 2,000 SEK, while the maximum values differ by 28,300 SEK. This implies a common baseline expectation among the lowest earners in both programs and a greater perceived earning potential or optimism among male IE students compared to male CE students.

For the female students, the deviation from the mean in absolute numbers was greater than the difference in mean value. This is especially true for female CE students, who had an average mean difference between expected entry salary and actual mean salary based on statistics of 100.00

[3]As shown in Table 2 above in Section 3.2, the actual mean entry salary is 35,656 SEK for CE students.
[4]A more thorough explanation is provided in Section 4.3.1

SEK, but a deviation in absolute numbers of 1,954.72 SEK. A small mean difference with a large absolute deviation suggests high variability. This indicates that female CE students, to a larger extent than the other student groups, both over- and underestimated their future entry salaries. This is especially evident compared to both male IE and CE students, for whom these different values are almost equal.

The median expected salary for both male and female students overall is 40,000 SEK. However, both male and female IE students have a higher median expected salary of 45,000 SEK, while male and female CE students report slightly lower medians of 39,999 SEK and 39,000 SEK, respectively.

Regarding estimated job prospects, male and female IE students have higher mean scores (8.42 for males and 8.00 for females) compared to CE students (6.59 for males and 6.32 for females), indicating a more self-assessed positive outlook on future job opportunities. This holds true regardless of gender. Male students generally estimate better self-assessed job opportunities than their female counterparts within their own engineering programs. The higher standard deviation for CE students indicates larger variability among CE students compared to IE students in terms of estimated job prospects.

Finally, the data on market wage awareness showcases that the mean scores for market wage awareness are relatively consistent across both genders and educational programs. Female CE students demonstrate the highest mean value of 6.68, while female IE students have the lowest mean value of 6.00. The standard deviations also show greater variability among both female IE and CE students compared to their male counterparts. Minimum and maximum values for market wage awareness range from 1 to 10 for most groups, highlighting the broad range of awareness among students.

To summarise the salary statistics results, the data suggests that male engineering students expect higher salaries and better job prospects than female students. Male and female IE students overestimate their entry salaries the most, followed by male CE students, who also overestimate their entry salaries. On average, female CE students do not overestimate their entry salaries in a meaningful way. Lastly, the awareness of market wages is relatively similar across genders and programs, though with slight variations.

5.3 Demographic and academic characteristics

In this section of the thesis, the demographic and academic characteristics of the participating students is presented. The data on demographic and academic characteristics is compiled directly below in Table 6.

Table 6: Demographic and Academic Characteristics of IE and CE students.

	Total		**Industrial Engineering Students**		**Civil Engineering Students**	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**
Internship and/or degree project						
Yes	48 *(90.57%)*	46 *(92.00%)*	26 *(100.00%)*	24 *(96.00%)*	22 *(81.48%)*	22 *(88.00%)*
No	5 *(9.43%)*	4 *(8.00%)*	0 *(0.00%)*	1 *(4.00%)*	5 *(18.52%)*	3 *(12.00%)*
Total	53 *(100.00%)*	50 *(100.00%)*	26 *(100.00%)*	25 *(100.00%)*	27 *(100.00%)*	25 *(100.00%)*
Prior Experience						
Yes	24 *(45.28%)*	19 *(38.00%)*	15 *(57.69%)*	9 *(36.00%)*	9 *(33.33%)*	10 *(40.00%)*
No	29 *(54.72%)*	31 *(62.00%)*	11 *(42.31%)*	16 *(64.00%)*	18 *(66.67%)*	15 *(60.00%)*
Total	53 *(100.00%)*	50 *(100.00%)*	26 *(100.00%)*	25 *(100.00%)*	27 *(100.00%)*	25 *(100.00%)*
University Grades						
High	27 *(50.94%)*	32 *(64.00%)*	17 *(65.38%)*	18 *(72.00%)*	10 *(37.04%)*	14 *(56.00%)*
Low	26 *(49.06%)*	18 *(36.00%)*	9 *(34.62%)*	7 *(28.00%)*	17 *(62.96%)*	11 *(44.00%)*
Total	53 *(100.00%)*	50 *(100.00%)*	26 *(100.00%)*	25 *(100.00%)*	27 *(100.00%)*	25 *(100.00%)*
Expected Sector						
Private	50 *(94.34%)*	37 *(74.00%)*	26 *(100.00%)*	22 *(88.00%)*	24 *(88.89%)*	15 *(60.00%)*
Public	1 *(1.89%)*	10 *(20.00%)*	0 *(0.00%)*	1 *(4.00%)*	1 *(3.70%)*	9 *(36.00%)*
Unsure	2 *(3.77%)*	3 *(6.00%)*	0 *(0.00%)*	2 *(8.00%)*	2 *(7.41%)*	1 *(4.00%)*
Total	53 *(100.00%)*	50 *(100.00%)*	26 *(100.00%)*	25 *(100.00%)*	27 *(100.00%)*	25 *(100.00%)*
Future Workplace						
Local	7 *(13.21%)*	11 *(22.00%)*	0 *(0.00%)*	0 *(0.00%)*	7 *(25.93%)*	11 *(44.00%)*
National	33 *(62.26%)*	31 *(62.00%)*	17 *(65.38%)*	18 *(72.00%)*	16 *(59.26%)*	13 *(52.00%)*
International	7 *(13.21%)*	6 *(12.00%)*	7 *(26.92%)*	6 *(24.00%)*	0 *(0.00%)*	0 *(0.00%)*
Unsure	6 *(11.32%)*	2 *(4.00%)*	2 *(7.69%)*	1 *(4.00%)*	4 *(14.81%)*	1 *(4.00%)*
Total	53 *(100.00%)*	50 *(100.00%)*	26 *(100.00%)*	25 *(100.00%)*	27 *(100.00%)*	25 *(100.00%)*
Higher parental education						
Yes	32 (*60.38%*)	41 (*82.00%*)	16 (*61.54%*)	23 (*92.00%*)	16 (*59.26%*)	18 (*72.00%*)
No	21 (*39.62%*)	9 (*18.00%*)	10 (*38.46%*)	2 (*8.00%*)	11 (*40.74%*)	7 (*28.00%*)
Total	53 (*100.00%*)	50 (*100.00%*)	26 (*100.00%*)	25 (*100.00%*)	27 (*100.00%*)	25 (*100.00%*)

Firstly, the collected data showcases a strong inclination among students, irrespective of gender or academic program, towards acquiring practical experience. The data presents a high participation rate, with over 90 percent of both male and female engineering students either having engaged in internships and/or degree projects, or expressing intentions to do so in the future. Furthermore, in terms of prior experience, the distribution of is relatively balanced between CE and IE students across genders. However, a disparity emerges among IE students as a higher proportion of males report having prior experience compared to their female counterparts. Male IE students were the only group where a majority of students reporting having prior experience.

Furthermore, the data revealed that the majority of students expected to work in the private sector. Slight differences were however observed between the genders, particularly for CE students, where 36.00 percent of female students reported expecting to work in the public sector. Comparatively, only 3.70 percent of male CE students, 4.00 percent of female IE students and zero percent of male IE students reported similar expectations.

Moreover, in terms of expected future geographical workplace, only IE students expected to work internationally and only CE students expected to work locally. There was no substantial difference between the genders in the distribution, indicating that the difference stems from the programs themselves.

Additionally, the distribution of high and low grades showed that female students reported higher academic grades compared to their male counterparts. IE students also reported having higher grades compared to CE students. Furthermore, a higher prevalence of higher parental education is observed among female students across both academic programs, signifying a potential correlation between familial educational backgrounds and academic pursuits.

This section ends the descriptive statistics. The following sections will build upon the findings of the survey by presenting the results from our diagnostic checks, and the regression analysis.

5.4 Diagnostic checks

To be able to run the regressions and gather insightful information, the robustness of the model and data needed to be checked. We began by checking the normality of the residuals using a Q-Q plot as well as the Shapiro-Wilks test. Following this, the dependent variable was log-transformed to examine the possibility of making it somewhat normally distributed.

Table 7: Shapiro-Wilks Test Results

Shapiro-Wilks-test	**Statistic**	**Sig.**
Difference	0.829	< 0.001
ln(Difference)	0.966	0.010

Table 7 shows the results of the Shapiro-Wilks test, which is used to assess the normality of the residuals of our baseline model, which is a key assumption when performing linear regression analysis. The non-transformed dependent variable shows strong signs of not being normally distributed, with a significance far lower (<0.001) than the test-level of 0.05. An effort to mitigate these effects were made by log-transforming the variable. Logarithmic transformation compresses the scale and values, which stabilises variance thereby minimising effects of outliers. In turn, this helps to achieve a distribution closer to normality, making the relationship between variables more linear (Benoit, 2011). The log-transformed dependent variable showed better values for both the statistic and significance level, with a the value of the statistic (0.966) being closer to 1 and the significance being much higher than the non-transformed variable. The variable still does not show perfect signs of normality. Based on this, a log-linear model will be used for the regression. The results of the Q-Q plots were in line with the Shapiro-Wilks test, where the log-transformed model had residuals much more in line with a normal distribution with less outliers (Appendix 3).

Furthermore, we tested for heteroscedasticity by plotting the predicted values against the residuals in a scatter plot and visually examining it. The scatter plot showed that the residuals displayed a random scattered distribution across the range of predicted values with no obvious signs of trends such as a funnel shape or systematic widening/narrowing of the spread. This made us confident that the assumption of homoscedasticity was upheld (Appendix 4).

Finally, tests for multicollinearity were done by examining the VIF-values of the control variables in the regression. This was done by performing the regression to obtain the values. In our baseline-model, relatively high VIF-values could be seen for variables “Age”, “Program”, “High School

GPA", and "Year". All had VIF-values higher than 3 and some being close to 5, and had low collinearity tolerance values (Appendix 5). This indicates that the baseline could be reworked by changing the control variables to find a more suitable fit, with variables that do not correlate with each other as much.

The final model that was used for the regression analysis is presented in Section 5.5.

5.5 Regression

The final model used for the regression can be seen in Table 8:

Table 8: Regression Analysis of IE and CE students expected mean entry salaries.

Variable	**Unstandardized Coefficient (B)**	**t-value**	**Significance (p-value)**	**Tolerance**	**VIF**
(Constant)	6.039	9.601	< 0.001	-	-
Gender	0.366	1.997	0.049	0.846	1.182
Program	0.741	3.105	0.003	0.499	2.005
Year	-0.317	-3.568	< 0.001	0.640	1.562
Internship and/or Degree Project	-0.125	-0.368	0.714	0.778	1.286
Prior Experience	0.224	1.032	0.305	0.619	1.616
High/Low GPA	0.298	1.576	0.118	0.815	1.227
Estimated Job Prospects	0.160	2.828	0.007	0.685	1.460
Market Wage Awareness	0.181	2.241	0.027	0.681	1.467
Geographical Location (International)	0.447	1.590	0.115	0.815	1.227
Geographical Location (Local)	-0.003	-0.010	0.992	0.624	1.603
Geographical Location (Unsure)	0.579	1.172	0.244	0.631	1.582
Sector	0.417	1.292	0.200	0.521	1.920

The variables "Age" and "High school GPA" were removed from the regression due the high VIF-values and low tolerance. In addition, the age of the respondents was very similar for all students and did not add much to the model. Furthermore, "High School GPA" was deemed as redundant and removed as the question of college GPA was seen as being more relevant and better fit to the model. This resulted in a more robust model with more significant results.

5.6 Regression results

In Table 8 the results from the final regression model are presented. The model produced findings which include a mix of significant and non-significant predictors. It is important to note the implications of using a log-transformed dependent variable in a regression model. The coefficients represent the percentage change in the dependent variable for a one-unit change in the independent

variable. This expected change in the dependent variable is calculated by taking the exponent of the coefficient (B), e^B (Benoit, 2011). Furthermore, as the dependent variable measures the difference in absolute terms, the results from the model are telling of a potential difference from the actual mean salary, irrespective of the direction of the discrepancy. Among the independent variables analysed, "Gender", "Program", "Year", "Estimated Job Prospects", and "Market Wage Awareness" all show a statistically significant relationship in the model.

"Gender" has a coefficient of 0.366 which indicates a substantial difference in salary expectation based on gender, where according to our findings, men expect a salary difference that is approximately 43 percent higher compared to women. Following this, we can see that "Program" also significantly influences the salary differences, with a coefficient of 0.741, meaning that IE students expect a salary difference of almost a 109 percent higher compared to CE students. Looking further in the regression, the variable "Year" has a coefficient of -0.317, showing that as students progress through their education, the difference between their expected and actual salaries decreases, with about 27 percent per year. Finally, both "Estimated Job Prospects" (coefficient: 0.160) and "Market Wage Awareness" (coefficient: 0.181) are found to significantly influence salary expectations. It shows that students who rate their job prospects higher tend to have salary expectations which differ from mean salaries, approximately 17 percent higher for each unit increase in their rating. Similarly, the self perceived knowledge of market wages is associated with an approximate 19 percent difference in salary expectations.

The "Geographical Location" (International, Local or Unsure) variables represent dummy variables where the answer "National" served as the reference variable, and therefore is not seen in the table. The coefficients for these dummy variables represent the change in the dependent variable relative to the "National" category. The variable "National" was chosen as the reference variable as this was the most common answer. However, along with the variables "Internship and/or Degree Project", "Prior Experience", "High/Low GPA", and "Sector", non of them showed a statistically significant impact on the regression model. This suggests that they might not influence salary expectations within the confines of this study, possibly due to them being overshadowed by the other variables or that the variables receiving uniform answers.

Additionally, we ran the regression multiple times using each "Geographical Location" answer as the reference variable. Non of the location variables showed statistical significance. These additional regression results can be seen in Appendix 6-8.

Included in the regression results are the values explaining multicollinearity in the model. For

all variables, independent of them being significant and non-significant, their VIF-values indicate the absence of multicollinearity.

6 Discussion and Limitations

This chapter discusses the outcomes of our research. Our findings are presented and discussed in relation to previous research. The chapter ends with presenting the limitations of the paper.

6.1 Discussion

Our research uncovered that there was a notable disparity between students' expected entry salaries and actual mean entry salaries based on statistics which gives us a conclusive, empirical answer to our first research question.

The findings resonate with previous research on university students' salary expectations (Taylor 2007; Schnusenberg 2020). Our findings point to a general overestimation of entry salaries across both the IE and CE programs and across both genders, with the exception of female CE students. Taylor (2007) observed discrepancies in salary expectations in the subgroup of environmental engineering students. Our results for IE and CE students, along with Taylor's (2007) results, could suggest a possible general trend across engineering programs.

Moreover, the data shows that all surveyed engineering student groups expected an entry salary higher than the mean average entry salary based on statistics. These findings are in line with signalling theory (Borjas, 2020; Connelly et al. 2011). Admission standards at LTH are higher than at other Swedish technical universities. The higher admission scores could themselves signal that admitted students are more productive on average than students admitted to engineering programs at other Swedish Universities with less stringent admission requirements. Students graduating from LTH are aware that employers recognise their high academic performance, which could positively influence their salary expectations (Borjan, 2020; Connelly et al. 2011).

Given the confirmation of a gap between expected and actual salaries, our analysis now shifts towards understanding the potential causes behind this disparity. The next part of this discussion aims to explain these causes by investigating the main variables analysed in the regression model.

Our findings on gender dynamics resonate with previous research by Engineers of Sweden (2023). According to Engineers of Sweden's report, men on average expected an entry salary 3.91 percent higher than what their female counterparts expected, whereas we found a difference of 9.9 percent.

Furthermore, these results also align with previous findings presented by Taylor (2007), where female engineering students would accept lower minimum salaries than male engineering students. Gender disparities regarding salary expectations is a deep subject with many potential factors standing as possible explanations for the phenomena. Previous research suggests that overconfidence in males could be a defining characteristic in differing salary expectations (Bastani et al. 2023; Moore & Healy 2008; Niederle & Vesterlund 2007). Overconfidence in men could be an effect of physiological traits but also a reflection of social norms which reinforce this behaviour further. Male students in both programs could be socially conditioned to assert their worth, which could translate into higher salary expectations. This could explain that men are more likely than women to expect higher salaries from the get go, even when such expectations may not align with the market salaries or their own productivity.

However, the distinction between confidence and overconfidence is important to have in mind. Could it just be that the men in our study are more confident than women and that their demands are entirely justifiable? This would be true if make students demonstrated superior attributes, such as more extensive previous experience, which would justify higher salary expectations. Nonetheless, our findings indicate that such factors do not significantly account for the differences in salary expectations observed. Furthermore, our study is based on men and women with the same educational background, both groups are pursuing the same level of education at a prestigious university and are exposed to similar experiences and learning environments. This baseline implies that some of the differences in salary expectations are not due to differing variables, but a reflection of male overconfidence (Coffman et al, 2017).

Moving beyond gender dynamics, our study highlights that all student groups demonstrated similar self assessed market wage awareness. And in terms of their expectations of finding a job in a preferred field, IE students exhibited more optimism compared to CE students. Both factors significantly correlate positively with deviation in students' salary expectations. These findings suggest a disconnect between the engineering students' perceptions and the mean entry wage based on statistics, which have been observed in previous research (Taylor, 2007; Schnusenberg, 2020). These results could be explained by the students having inaccurate information or by them being overconfident in their own productivity. Either way, providing students with more accurate information could help align the students expectations closer with the actual mean expected entry salary. The result would be having more rational students and a more efficient marketplace, as rational choice and rational expectations theory proposes (Bergh, 2022; Sheffrin, 1996).

Furthermore, students in the later years of their engineering programs showed smaller deviations from the mean entry salary based on statistics. These results are align with previous research (Zafar, 2011), suggesting that these students had more time to develop more realistic wage expectations compared to those students in earlier years of their studies (Bergh, 2022; Sheffrin, 1996). Given the importance of future salary expectations in the job matching process, it is crucial to provide accurate salary information to students throughout their education. This practice can help foster realistic entry salary expectations. Additionally, sharing this information with prospective students can also mitigate the tendency of early-year students to have overly high salary expectations.

Examining the disparity between expected and actual entry salaries reveal that IE students generally have higher salary expectations than CE students. This discrepancy is more pronounced between female students, with female IE students expecting significantly higher salaries than female CE students. This could partially be interpreted by signalling theory, in the sense that the program itself might serve as a strong signal of high competence. However, due to the degree of discrepancy observed it suggests that other theories, such as overconfidence, plays a more dominant role. IE students might have a perception of higher marketability and thereby greater salary prospects compared to CE students. This would be inline with the previous research, where IE students are greatly overestimating their attributes, linking their higher self-assessment with their inflated salary expectations.

Not all results from our analysis were statistically significant. Previous work experience, having completed or planning on completing an internship/and or degree project, and having high versus low grades showed no significant impact on salary expectations. These results contradicts human capital theory (Borjas, 2020) and previous research (Kunal & John, 2023; NCES, 2019; Rudakov & Roshchin, 2018), which suggests that a strong academic record should lead to a greater entry wage premium and that relevant work experience is an important factor in terms of individuals productivity. This discrepancy indicates that students may not fully recognise the value of these factors provided by theory and previous research when shaping their salary expectations.

Additionally, the variable “Higher Parental Education” was not significant in explaining differences in salary expectations. This challenges the expectations set by theory, specifically Human Capital Theory and Intergenerational Mobility (Borjas, 2020; Salon, 1992). The lack of significance may be due to the uniformity of responses and/or the small sample size, which could also explain the insignificance of ”Sector” and ”Location”.

6.2 Limitations

To conclude this chapter, we want to acknowledge the potential limitations of our research.

Firstly, our analysis is based on a relatively small number of participants, initially limiting the robustness of our findings. This could also lead to issues with outliers, as they can be particularly pronounced in smaller datasets and potentially skew results. Additionally, a smaller sample may not adequately represent the entire population, and it could lead to greater variability in the data. This variability makes it difficult to detect small but significant effects, which typically require larger sample sizes to identify. By having a larger sample size, for example, 500 to 1000 respondents, the study could achieve a higher statistical impact and enhance the reliability of the conclusions as well as the ability to generalise the results.

Another limitation stems from the duration over which the study was conducted, spanning for two months in 2024. This relatively short time frame may not capture the differences in salary expectations that could occur over time. For a more accurate depiction of the engineering students salary expectations, it would be beneficial to extend the duration of the research to a span of several years. This could more accurately catch how expectations change with fluctuating economic cycles, and as students progress through their education.

Finally, the research focused solely on two engineering programs at Lund University. This allowed for a detailed analysis and comparison, but it limits the applicability of our findings to all engineering students at LTH. Conducting the study across all engineering programs at LTH, or at several different universities, would allow for a more general understanding of salary expectations and would allow for a more dynamic comparison.

7 Conclusion

This study aimed at determining if the expected entry salaries among LTH engineering students aligned with the actual mean entry salaries based on labour statistics, and to explore which potential factors might explain any discrepancies observed.

There is an observed difference between students' expected entry salaries and actual mean entry salaries. The most significant positive effect originated from program enrolment, with the discrepancy being more pronounced for IE students than CE students. The second largest positive effect was gender, with the gap being more pronounced among male students. Additionally, the difference decreased with each progressing academic year. This effect had the largest negative effect, and was the effect with the most statistical significance. The observed deviation was greater among students who had a more optimistic, self-perceived estimated job prospects. The final significant result showed that higher market wage awareness was correlated with a larger gap in salary expectations. These findings are largely inline with the theoretical frameworks and previous research. The misalignment between expected and actual salaries suggest an issue in students' understanding of the labour market and current market wages, emphasising the need for accurate information. Gender disparities and program-related differences highlight the importance of addressing gender biases and overconfidence. Lastly, the reduced discrepancy with academic progression underlines the value of experience in shaping accurate salary expectations.

Several variables showed no statistical significance, which could be mitigated with a larger sample size. In turn, a larger sample size could increase the validity of the conclusions drawn from this study.

Lastly, we encourage further investigation into researching if the deviation from mean entry salary observed in our study persists at other engineering programs at LTH. We also encourage further research investigating if deviations can be observed at other technical universities in Sweden. And if such deviations exist, if the magnitude of the deviation differs compared to the results from this study.

References

1. Adamecz-Volgyi, A., & Shure, N. (2022). The gender gap in top jobs – the role of overconfidence. *Labour Economics*, vol. 79, pp. 1-29. https://www.sciencedirect.com/science/article/pii/S0927537122001737

2. Arcidiacono, P., Hotz, V. J., & Kang, S. (2010). Modeling college major choices using elicited measures of expectations and counterfactuals. National Bureau of Economic Research, working paper, no 15729.

3. Bastani, S., Giebe, T., & Gürtler, O. (n.d.). Overconfidence and gender equality in the labor market, Linnéuniversitetet, Retrieved from https://urn.kb.se/resolve?urn=urn:nbn:se:lnu:diva-119640

4. Bell, E., Bryman, A., & Harley, B. (2019). Business Research Methods, 5th edn, Oxford University Press.

5. Benoit, K. (2011). Linear regression Models with Logarithmic Transformations [pdf],https://kenbenoit.net/assets/courses/ME104/logmodels2.pdf

6. Bergh, A. & Jakobsson, N. (2022). Modern mikroekonomi - Marknad, politik och välfärd 5th edn, Lund: Studentlitteratur AB

7. Betts, J. R. (1996). What do students know about wages? Evidence from a survey of undergraduates. *Journal of Human Resources*, vol. 31, no. 1, pp. 27–56. https://www.jstor.org/stable/146042

8. Borjas, George J. (2020). Labor Economics, 8th edn, New York: McGraw Hill

9. Browning, Edgar K & Zupan, Mark A. (2020). Microeconomics: Theory and Applications, 13th edn, John Wiley & Sons.

10. Bureau of Labor Statistics. (2020). "Labor Force Statistics from the Current Population Survey." Retrieved from: https://www.bls.gov/cps/cps_over.htm

11. Coffman, K. B., Collis, M.R., & Kulkarni, L. (2023). Whether to Apply.*Management Science*, vol. 0, pp. 2-19, https://pubsonline.informs.org/doi/epdf/10.1287/mnsc.2023.4907

12. Cohen, D., & Soto, M. (2007). Growth and human capital: Good data, good results. *Journal of Economic Growth*, vol. 12, pp. 51-76. Cohen,D.,&Soto,M.(2007).Growthandhumancapital: Gooddata,goodresults.\protect\unhbox\voidb@x\bgroup\edef,{JournalofEconomicGrowth}\ let\futurelet\@let@token\let\itshapeJournalofEconomicGrowth\egroup

13. Connelly, B., Certo, T., Ireland, R., & Reutzel, C. (2011). Signaling Theory: A Review and Assessment. *Journal of Management*, vol. 37, no. 1, pp. 39-67, https://journals.sagepub.com/doi/10.1177/0149206310388419

14. Kim, S.J., & Sang O.C. (2018). "The Effects of Job Mismatch on Pay, Job Satisfaction, and Performance". *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 4, no. 4, https://doi.org/10.3390/joitmc4040049

15. Kunal, D., & John, E. P. (2023). Study on factors influencing employment decisions in graduate students. *International Journal of Novel Research and Development*, vol. 8, no.4, pp. 483-493.

16. Körner, S., & Wahlgren, L. (2015). Statistisk Dataanalys, 5th edn, Lund: Studentlitteratur

17. Malmendier, U. & G. Tate (2004). CEO Overconfidence and Corporate Investment *Journal of Finance*, vol. 60, no 6., pp. 2661–2700, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=601109

18. Moore, D., & Healy, P. (2008). The Trouble With Overconfidence. *Psychological Review*, vol. 115, no. 2, pp. 502-517. https://healy.econ.ohio-state.edu/papers/Moore_Healy-TroubleWithOverconfidence.pdf

19. Muehlemann, S., & Wolter, S.C. (2020). The economics of vocational training. *The Economics of Education*, 2nd ed., Academic Press, pp. 543-554, https://www.sciencedirect.com/science/article/abs/pii/B9780128153918000409

20. National Center for Education Statistics. (2019). "Education and Employment Outcomes of Bachelor's Degree Holders in the United States." [pdf] https://nces.ed.gov/programs/coe/pdf/coe_sbc.pdf

21. Niederle, M., & Vesterlund, L. (2007). Do women shy away from competition? Do men compete too much? *Quarterly Journal of Economics*, vol. 122, no. 3, pp. 1067–1101. https://doi.org/10.1162/qjec.122.3.1067

22. Odean, T. (1999). Do Investors Trade Too Much *American Economic Review*, vol. 89, no. 5, pp. 1279–1298. https://www.aeaweb.org/articles?id=10.1257/aer.89.5.1279

23. Rudakov, V., & Roshchin, S. (2019). The impact of student academic achievement on graduate salaries: the case of a leading Russian university. *Journal of Education and Work*, vol. 32, no. 2, pp. 156–180, https://economics.hse.ru/data/2019/06/11/1501293047/ANNEX%20-%20The%20impact%20of%20student%20academic%20a..of%20a%20leading%20Russian%20university.pdf

24. Schnusenberg, Oliver. (2020). Overconfidence in salary expectations after graduation. *Journal of Education for Business*, vol. 95, no. 8, pp. 513-518. https://eric.ed.gov/?id=EJ1268869

25. Sheffrin, Steven M. (1996). Rational expectations 2th edn. Cambridge University Press, Cambridge.

26. Solon, G. (1992). Intergenerational Income Mobility in the United States. *The American Economic Review*, vol. 82, no. 3, pp. 393–408, http://www.jstor.org/stable/2117312

27. Svenson, Ola. (1981). Are We All Less Risky and More Skillful than our Fellow Drivers? *Acta Psychologica*, vol. 47, pp. 143-148, https://www.sciencedirect.com/science/article/pii/0001691881900056

28. Sweden Engineers. (2024). Din ingångslön. Hur mycket ska jag begära i ingångslön 2024? https://www.sverigesingenjorer.se/lon/lonestatistik/ingangslon/ [Accessed 20 April 2024]

29. Sweden Engineers. (2023). Rön om lön och kön 2023 [pdf], https://www.sverigesingenjorer.se/globalassets/ron-om-lon-och-kon-2023.pdf

30. Taylor, D. (2007). Employment Preferences and Salary Expectations of Students in Science and Engineering. *BioScience*, vol. 57 no. 2, pp. 175-185. https://doi.org/10.1641/B570212

31. The National Mediation Office. (2022). Löneskillnader mellan kvinnor och män 2022 - Vad säger den officiella lönestatistiken? [pdf], https://www.mi.se/app/uploads/loneskillnaden-2022.pdf

32. The Royal Swedish Academy Of Science. (2017). Richard H. Thaler: Integrating Economics with Psychology [pdf], https://www.nobelprize.org/uploads/2018/06/advanced-economicsciences20
pdf

33. van Veldhuizen, R. (2022). Gender differences in tournament choices: Risk preferences, overconfidence or competitiveness? *Journal of the European Economic Association*, vol. 20, no. 4 pp. 1595–1618. https://academic.oup.com/jeea/article/20/4/1595/6603818

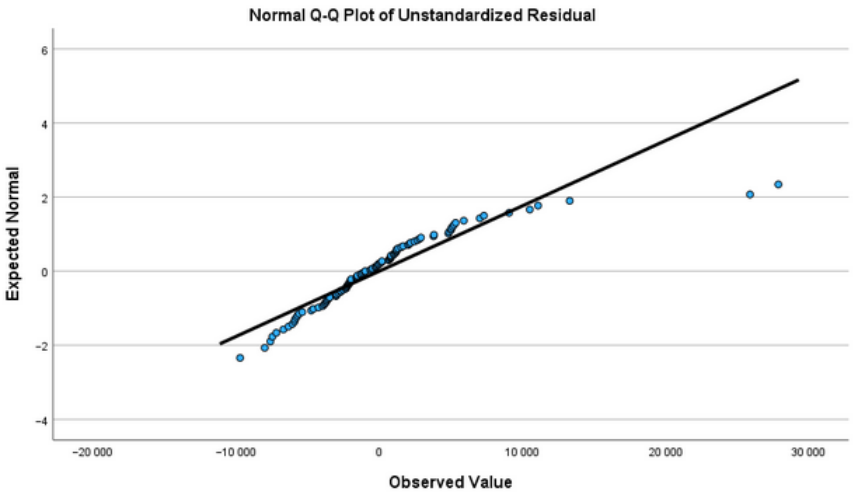
34. Zafar, B. (2011). How do college students form expectations? *Journal of Labor Economics*, vol. 29, no. 2, pp. 301–348, https://www.jstor.org/stable/10.1086/658091

Appendix

Appendix 1

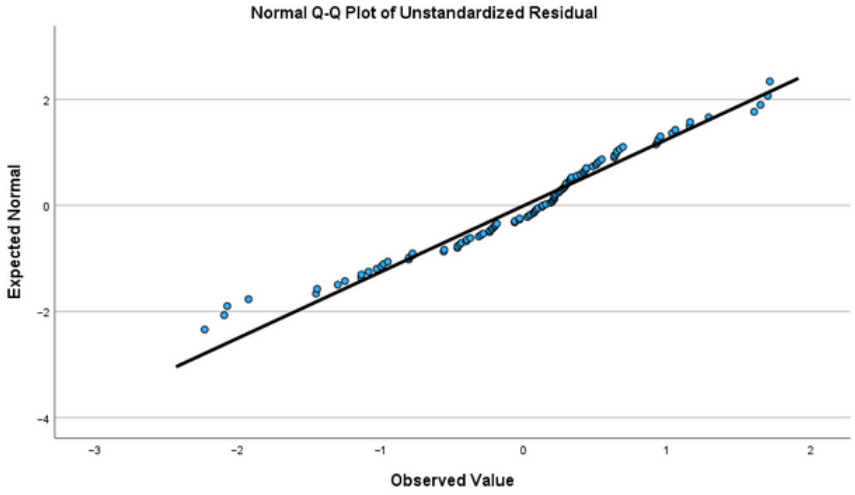
A pilot study was conducted on the preliminary questionnaire to determine the relevance of the questions and if they were comprehensible. The survey was sent out digitally to five students who fit the target population, i.e., students enrolled in the target programs at LTH. Their feedback can be concluded as the following. For question six, options regarding whether the student had concluded their master's dissertation in collaboration with a company or if they had completed an internship were added. These measures were added as they were seen to give more context to the student's insight into the labour market. Question 13 was revised to include more precise options for the student's preferred geographical location of their first post-graduate employment, as location is a factor concerning salary. Finally, the feedback concluded that the last question of the survey was to be re-stated and broadened, by turning it into a "yes-or-no" question.

Appendix 2



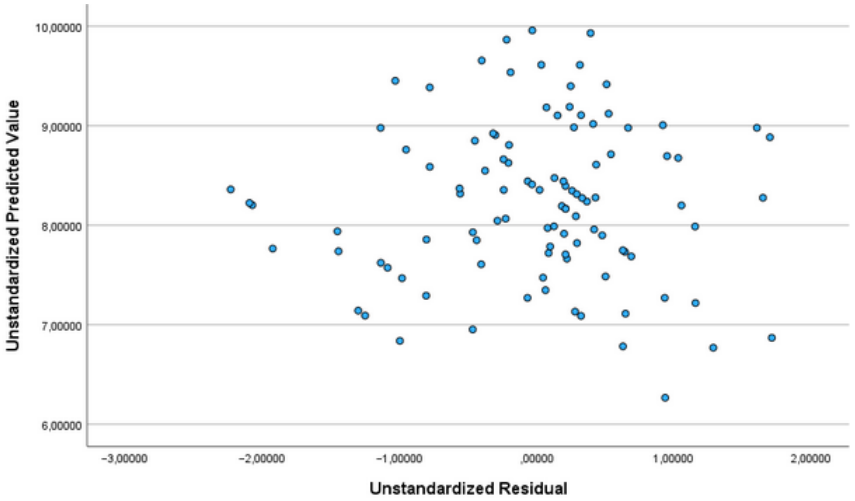
Description: The results of creating the Q-Q plot of the non log-transformed dependent variable.

Appendix 3



Description: The results of creating the Q-Q plot of the log-transformed dependent variable.

Appendix 4



Description: The results of a Scatter Plot, checking for heteroscedasticity

Appendix 5

Variable	Unstandardized Coefficient (B)	t-value	Significance (p-value)	Tolerance	VIF
(Constant)	7.848	2.716	0.008	-	-
Age	−0.094	−0.850	0.397	0.207	4.842
Gender	0.402	2.107	0.038	0.793	1.262
Program	0.754	2.171	0.033	0.239	4.179
Highschool GPA	−0.003	−0.042	0.967	0.283	3.521
Year	−0.216	−1.474	0.144	0.238	4.204
Internship and/or Degree Project	−0.013	−0.384	0.702	0.227	4.287
Prior Experience	0.245	1.099	0.275	0.593	1.671
High/Low GPA	0.297	1.390	0.164	0.781	1.281
Estimated Job Prospects	0.171	2.916	0.004	0.647	1.546
Market Wage Awareness	0.109	2.299	0.024	0.838	1.193
Geographical Location (Local)	0.047	0.272	0.777	0.321	3.119
Geographical Location (International)	0.455	1.600	0.113	0.807	1.239
Geographical Location (Unsure)	0.546	1.092	0.278	0.624	1.602
Sector	0.349	1.044	0.299	0.493	2.030

Description: Regression analysis, Baseline model with "National" as reference

Appendix 6

Variable	Unstandardized Coefficient (B)	t-value	Significance (p-value)	Tolerance	VIF
(Constant)	6.238	9.533	< 0.001	-	-
Gender	0.351	1.885	0.063	0.834	1.199
Program	0.795	3.370	0.001	0.519	1.928
Year	-0.301	-3.292	0.001	0.611	1.631
Internship and/or Degree Project	-0.102	-0.299	0.766	0.780	1.281
Prior experience	0.190	0.866	0.389	0.615	1.625
High/Low GPA	0.300	1.562	0.118	0.813	1.230
Estimated Job Prospects	0.165	2.909	0.004	0.687	1.455
Market Wage Awareness	0.099	2.115	0.037	0.856	1.169
Geographical Location (Local)	-0.227	-0.661	0.510	0.425	2.350
Geographical Location (National)	-0.257	-1.102	0.274	0.563	1.776
Geographical Location (Unsure)	0.455	0.919	0.361	0.637	1.571
Sector	0.406	1.250	0.215	0.521	1.919

Description: Regression analysis, International location reference group

Appendix 7

Variable	Unstandardized Coefficient (B)	t-value	Significance (p-value)	Tolerance	VIF
(Constant)	6.030	9.813	< 0.001	-	-
Gender	0.368	1.999	0.049	0.838	1.193
Program	0.736	3.146	0.002	0.520	1.924
Year	-0.319	-3.517	< 0.001	0.614	1.628
Internship and/or Degree Project	-0.119	-0.357	0.722	0.802	1.247
Prior Experience	0.227	1.038	0.302	0.612	1.634
High/Low GPA	0.296	1.566	0.121	0.813	1.230
Estimated Job Prospects	0.159	2.804	0.006	0.657	1.466
Market Wage Awareness	0.127	2.148	0.032	0.857	1.467
Geographical Location (Unsure)	0.579	1.206	0.231	0.667	1.499
Geographical Location (National)	0.027	0.112	0.911	0.515	1.943
Geographical Location (International)	0.472	1.324	0.189	0.508	1.968
Sector	0.409	1.294	0.199	0.543	1.841

Description: Regression analysis, Local location reference group

Appendix 8

Variable	Unstandardized Coefficient (B)	t-value	Significance (p-value)	Tolerance	VIF
(Constant)	6.321	10.044	< 0.001	-	-
Gender	0.395	2.126	0.036	0.837	1.194
Program	0.765	3.192	0.002	0.502	1.991
Year	-0.314	-3.380	< 0.001	0.593	1.687
Internship and/or Degree Project	-0.095	-0.278	0.781	0.782	1.279
Prior Experiance	0.199	0.899	0.371	0.609	1.642
High/Low GPA	0.313	1.638	0.105	0.806	1.241
Estimated Job Prospects	0.151	2.659	0.009	0.692	1.445
Market Wage Awareness	0.101	2.154	0.034	0.859	1.164
Geographical Location (National)	-0.041	-0.117	0.907	0.251	3.989
Geographical Location (International)	0.374	0.884	0.379	0.366	2.736
Geographical Location (Local)	-0.112	-0.283	0.778	0.321	3.119
Sector	0.211	0.771	0.443	0.734	1.363

Description: Regression analysis - Unsure location reference group

Appendix 9

Undersökning av LTH-Studenters förväntade ingångslöner

Tack för att du deltar i vår enkät.

Vi som samlar in data heter Nicklas och Oskar och studerar vid ekonomihögskolan i Lund. Insamlingen utgör dataunderlag till vår kandidatuppsats inom arbetsmarknadsekonomi. Målet med uppsatsen är att förstå LTH-studenters egna förväntningar på ingångslöner efter examen i jämförelse med branschstandard.

Enkäten tar mindre än 5 minuter att svara på och är helt anonym.

Din medverkan bidrar direkt till vårt arbete. Tack för din hjälp!

* Indicates required question

1. Hur gammal är du? *

2. Vilket kön identifierar du dig som? *

Mark only one oval.

- Man
- Kvinna
- Annat
- Föredrar att ej svara

3. Vilket program läser du? *

Mark only one oval.

- ◯ Civilingenjör i väg- och vattenbyggnad
- ◯ Civilingenjör i industriell ekonomi

4. Vilket meritvärde/snittbetyg sökte du in på programmet med? (Ej högeskoleprov) *

5. Vilket år är du på din utbildning? *

Mark only one oval.

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5

6. Har du, eller planerar du att genomföra antingen praktik eller exjobb i samarbete med ett företag? *

Mark only one oval.

- ◯ Ja, jag har eller planerar att genomföra antingen praktik eller exjobb i samarbete med ett företag.
- ◯ Nej, jag planerar inte att genomföra antingen praktik eller exjobb i samarbete med ett företag.

7. Har du tidigare arbetslivserfarenhet inom ingenjörsrelaterat arbete? *T.ex. sommarjobb.* *

Mark only one oval.

- ◯ Ja
- ◯ Nej

8. Är ditt snittbetyg under eller ≥ fyra? *T.ex. är ditt snittbetyg lika med exakt fyra eller högre än fyra svarar du **ja**. Är ditt snittbetyg under fyra (t.ex. 3.99) svarar du **nej**.* *

Mark only one oval.

- ◯ Ja
- ◯ Nej

9. Vilken ingångslön (före skatt) förväntar du dig att få på ditt första jobb efter examen? *

_____

10. Hur bedömer du dina chanser att hitta ett jobb inom ditt önskade fält direkt efter examen? *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Inte	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Mycket goda

11. Hur väl informerad anser du dig vara om det aktuella löneläget inom din framtida bransch? *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Inte	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Mycket väl informerad

12. Inom vilken sektor förväntar du dig att arbeta inom efter avslutad examen? *

Mark only one oval.

- ◯ Privat sektor
- ◯ Offentlig sektor
- ◯ Egenföretagare
- ◯ Vet ej

13. Vilken framtida geografiska plats förväntar du dig att ditt första arbete befinner sig inom? *

Mark only one oval.

- ◯ Lokalt (Lund/Malmö eller annan plats i närområdet, inom Skåne län)
- ◯ Nationellt
- ◯ Internationellt (Utanför Sveriges gränser)
- ◯ Vet ej

14. Är någon av dina föräldrar utbildade civilingenjörer eller har en annan jämförbar högre utbildning? *Med högre utbildning avses en universitetsutbildning på mastersnivå eller högre.* *

Mark only one oval.

- ◯ Ja
- ◯ Nej