

**Uber harmful? Estimating the effect of ride-sharing on the perceived
employability of Romanian taxi drivers**

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2. Abstract

This bachelor thesis takes an unorthodox approach regarding research in the platform economy. This paper focuses on Romanian taxi drivers and how perceived employability shapes the perception of the threat of ridesharing. Perceived employability is an individual's perceived ability of getting into new, better or equal employment (Berntson, 2008). The main research question can be summarized as : *“Is there a relationship between the threat of ride-sharing and level the perceived employability of taxi drivers in Romania?”* The main hypothesis of this research was that there is a negative relationship between the level of perceived employability and the perceived threat of ridesharing. In other words, it was hypothesized that as the level of perceived employability goes up, the perception of the threat of ridesharing goes down.

This bachelor thesis follows a cross-sectional research design. Data was collected through an online survey aimed at Romanian taxi drivers. To this extent, an independent data-collection effort was set-up. Statistical analysis was undertaken, through correlation analysis, independent samples t-tests, as well as regression analysis.

Results confirmed the main hypothesis. There is a statistically significant negative relationship between the perceived threat of ridesharing and the level of perceived employability.

3. Introduction

We live in an increasingly technologized world. In 1981, IBM would go to launch the world's first PC: the IBM Personal Computer, which proved to be the foundational basis of modern PC's. Nowadays, personal computers are no longer a novelty, but rather a common household item for most people in the developed world. Wide-spread internet access and a vast availability of devices with computational power (i.e: laptops, smartphones, smart TV's etc.) not only changed the rule of the game, it also paved the way for the emergence of the so called "platform economy". Facebook and Amazon, for example, are digital platforms that facilitate social and economic activity. Amazon's Mechanical Turk (MTurk) matches clients with a global workforce of human intelligence workers. Such tech-giants are so successful that the Amazon CEO, Jeff Bezos, was recently crowned by CNN as the world's richest person of all time, with a Bloomberg estimated net worth of \$105.1 billion (Chris Isidore, 2018). A core characteristic of internet platforms is versatility: whichever industry it is, it can be organized online. It is only a matter of developing the operational capabilities to do so. This is the reason why companies such as AirBnb and Uber already cemented themselves as disruptive forces in their respective industries.

Uber, the most famous ride-sharing service, has been such a disruptive force in the taxi industry that it may even lose its licence to operate in London, after a court decision earlier this year (Ben Morgan, 2018). This success has been largely attributed to, among other factors, Uber's more efficient driver-passenger matching technology, the larger scale of Uber than taxi companies as well as inefficient taxi regulations (Cramer and Krueger, 2016). Indeed, empirical analysis has shown that UberX drivers are substantially more efficient than their counterparts in the taxi industry, due to Uber's surge-pricing system, which more carefully matches the supply of drivers with the amount of demand for rides at any given time during the day (Chen and Sheldon, 2015). Further research has shown that in certain regional markets in the U.S, there has been a 10% increase in self-employed driver revenue, together with a 10% decrease in taxi driver revenue, which strengthens the argument that ride-sharing has a visible effect on the taxi industry with regards to income (Berger, Chen & Frey, 2017).

The advantage of ride-sharing companies over taxi companies is not only given by the fact that their cloud and algorithmic technology is simply superior to what the traditional

industry is using. Uber, for example, also does not formally employ its drivers. Instead, a “Uber partner” is a self-employed, mini-entrepreneur which offers transportation services through the Uber platform. By operating in the “grey area” of law, the company has achieved a plethora of things. First of all, because Uber Partners are not *per se* employed, the company does not have to cover the traditional employment benefits. As an example, Uber requires partners to pay for their own car insurance, while providing supplementary insurance only as *long as the app is running* (Torr Leonard, 2015). Furthermore, by not being forced to follow transportation laws, the company has achieved notoriety as well as impending bans in countries such as Italy for being disloyal competition to taxi drivers (Romain Dillet, 2017). However, certain voices within academia pinpoint the fact that the success of ride-sharing can be attributed to the fact that the taxi industry is over-regulated and is suffering from a long overdue regulatory reform (Matt Blackbourn and Holly Raiborn, 2017).

Ride-sharing does not come without negative spillover, and, as it was outlined earlier, the most affected group of the population are taxi drivers and, by extent, taxi companies. This especially holds true in the case of Romania, where Uber has already achieved mainstream notoriety. Not only did hundreds of Romanian taxi drivers protest against the ride-sharing industry (Ana Maria Luca, 2017), the Mayor of Bucharest announced in the same year that the municipality is considering banning Uber altogether (Irina Marica, 2017).

This paper theorizes that ride-sharing has an effect on the perceived employability of the most vulnerable group, which is, in this case, taxi drivers. Perceived employability is defined as the perceived ability of getting into new, equal or better employment (Berntson, 2008). Previous research on the employability of low-skilled workers also describes employability as being two-fold: firm-internal employability and external employability (A. Rothwell & J. Arnold, 2007) and (J. Sanders & A. de Grip, 2004). It seems that low-skilled workers are more concerned with firm-internal employability mainly due to the fact that the opportunities of internal promotion generally outweighs the external opportunities of new employment. (A. Rothwell & J. Arnold, 2007). This thesis is mainly focused on external employability. This is due to the fact that ride-sharing is conceptualized as being a threat not only to employment, but also perhaps to the profession *per se*. Furthermore, taxi drivers may feel the pressure which is exercised by ride-sharing on the taxi industry and decide to work as self-employed Uber partners. Therefore, the

act of looking for employment outside the firm can be considered to capture external employability, even though it refers to reaching a state of self-employment.

The Romanian case is interesting for a plethora of reasons. Firstly, Romania is a big and valuable market for Uber. Indeed, Uber recently announced that it reached the milepoint of 1 million users in the country, a little over three years after it was first introduced into the Romanian market (Bianca Ciocotisan, 2018). However, this does not mean that Uber is thriving within Romania. Among a plethora of taxi union protests against Uber, the Romanian government released a draft emergency ordinance which effectively regulates the activity of ride-sharing services (Alexandra Sandru, 2018). At the time of writing the emergency ordinance remains a draft and is subject to public consultations. Research on the subject of ride-sharing is distinctly lacking within the Romanian setting. Carmen Balan (2016) published an exploratory article outlining the options potential Romanian users of ride-sharing have within the country, ultimately ranking the Uber service, among other similar ventures as “*for-profit on-demand ride-sharing*”. However, to the extent of my knowledge, there is no other relevant research which tackles ride-sharing in Romania.

Consequently, the pressure put on ride-sharing by Romanian taxi unions does not come from nowhere. This thesis is based on the hypothesis that such backlash is a direct consequence of the negative effects that ride-sharing has on the Romanian taxi industry. As such, the main question asked by this thesis is: **“Is there a relationship between the threat of ride-sharing and level the perceived employability of taxi drivers in Romania?”**

4. Theory

4.1 From Employability to Perceived Employability

The concept of employability has been widely discussed within academia. Ghoshal (1997) defined the concept of employability as the continuous ability to learn. While such a definition captures the broad concept of employability, it is inadequate for application in highly specific empirical studies. However, different conceptualizations and applications of employability can be found throughout academic literature. Lee Harvey (2010), proposes the notion that employability is best analysed in the context of higher education. In this scenario, the prime target population consists of either enrolled students or graduates. Harvey (2010) argues

that employability is a by-product of higher education, as it can only develop as a characteristic if the subject is put into an environment in which there is higher-level learning. In other words, employability can be also defined as a process of learning.

In general, employability is not one specific skill, but rather a set of skills. Fugate et. al (2004) designed employability as an aggregate multidimensional construct (MDC), consisting of: a) career identity, b) social and human capital and personal adaptability. In other words, employability is designed to be captured by three variables which can very well stand out on their own as independent constructs, each observing a different aspect of reality. By combining these three constructs, employability is effectively captured, as an aggregate MDC. This goes against the definition of the latent multidimensional construct, which recognizes that its dimensions lie on a different level than the MDC and as such, cannot exist as independent constructs. Furthermore, Van der Heidje et. al (2006, p.454) reinforces the decision of designing employability as an aggregate MDC. The paper proposed a competence-based operationalization of employability, which captured dimensions such as “occupational expertise”, “anticipation and optimization” as well as “personal flexibility”.

Furthermore, within employability, two distinct facets can be observed. Berntson (2008) argues that there are two main facets of employability: actual (objective) employability on the one hand and perceived employability on the other hand. It is safe to assume that ranking employability via an objective, third-party assessment would yield observably different results than self-assessment. As such, Berntson (2008, p.1), defines perceived employability as an “individual’s belief about their possibilities of finding new, equal, or better employment”

This thesis recognizes that, while there are different possible applications of employability as an MDC, the construct requires a case-by-case operationalization. This is because different jobs entail different skills and as such, a person that is highly employable as an attorney may not be as highly employable in the position of surgeon. In other words, this thesis further defines employability as being occupation-bound. Of course, the same principle applies in operationalizing perceived employability.

4.2 Threat of technological development and ridesharing

The concept of ride-sharing (together with other ventures within the platform economy) are effectively enabled by technological advancement. By definition, algorithmic technologies

such as Uber's surge-pricing are ultimately a step towards demand-based labor supply automation. Therefore, it is plausible to theorize that such changes can have effects on employment. However, previous research has shown that there have been a number of technological revolutions that convinced academics to hastily adopt concepts such as "post-work". (David Spencer, 2018). However, Spencer argues, we already know that the utopian society built around "post-work" has not been fully realised in the past and there are no reasons to believe that this time around it will be different: the economy has proven time and time again that technological revolutions always enable the respecialization of the individual. While technological innovation may lead to unemployment in the short term, it has been shown that the compensation mechanism via wage-decrease ensures that unemployed workers will find jobs easier, as lower wages means that companies are more inclined to hire (Mario Pinata, 2003).

Of course, ride-sharing is not an attempt at completely substituting the taxi service. Indeed, the number of taxi drivers in certain American cities have either remained at the same level or increased since Uber entered the market (Cramer & Krueger, 2015). It seems that ride-sharing is not only taking a part of the market-share which was usually assigned to taxi companies but is also complementing the lack of supply for transportation services, relative to the demand. In other words, ride-sharing seems to be mainly successful because of the under-supply of taxis in a given market. Uber's success at "stealing" a piece of the pie seems to be attributed to Uber's algorithmic technologies.

Previous empirical research shows that there is some basis for these theoretical assumptions. Ride-sharing caused an uproar in the taxi industry due to the efficiency of their services, which is indeed vastly superior to what taxi companies are currently using (Cramer & Krueger, 2015). Uber, for example, has been using its famous "surge pricing" system, which tries to more nearly match the supply of uber drivers with the demand for uber rides at any given time during the day. Indeed, the algorithmic technology employed by Uber is a significant factor in explaining the efficiency of the service vis-a-vis the traditional taxi, by providing incentives for partners to work when demand is high (Chen & Sheldon, 2015). Newfound competition on the market means that the taxi industry (or the workers within the industry) will react to it in one form or another. However, the taxi industry is notoriously highly regulated. Consequently, there is empirical research which infers that there is an observable competitive effect that Uber has on the taxi industry, regardless of how highly regulated the industry is. Consumer complaints of taxi

services in American cities that have Uber present on the market proved to decline prior to the entrance of ride-sharing on the market (Scott Wallsten, 2015). Furthermore, it seems that in markets where Uber is present, general revenue of taxi drivers goes down, whereas the general revenue of self-employed drivers goes up, indicating some form of relationship between the two trends (Berger, Chen & Frey, 2017).

The main hypothesis of this thesis is directly related to the concepts of perceived employability and the threat of ridesharing, which were explained in the above section of this paper. Perceived employability is the extent to which an individual perceives itself as capable of getting into new, equal or better employment (Berntson, 2008). If this is the case, then an individual with a high level of perceived employability will perceive the threat of ridesharing less intensely than a person with a lower level of perceived employability. This is because an individual with a high level of perceived employability is naturally less concerned with a hypothetical loss of employment and therefore less concerned with external threats to job security, such as the threat of ridesharing. Therefore, the main hypothesis (**H1**) of this thesis is: *“The higher the perceived employability of a taxi driver, the lower the perceived threat of ridesharing”*.

4.3 Theoretical expectations and determinants of (perceived) employability

This thesis is based on a number of theoretical expectations, which are mostly aimed at providing a clear and concise theoretical basis for the operationalization of perceived employability. It can be quite easily assumed that the expected relationship between the threat of Uber and the level of perceived employability is not one-way. In other words, while the perceived threat of Uber may have an effect on the level of perceived employability of any given taxi driver, the perceived level of employability can also shape the way any given individual sees the threat of Uber. Therefore, it is plausible to assume that a taxi driver with poor employment perspectives (and by extension, a relatively poor level of perceived employability) may fear Uber more than a driver with better employment perspectives.

Other variables that are expected to be main determinants of perceived employability are: Age, level of education, employment status and employment experience. For a more nuanced and comprehensive discussion of the determinants, this thesis provides a discussion sub-section for each.

4.3.1 Age - why simple demographics are important determinants

Age is a fairly simple variable which carries a lot of weight in determining the level of perceived employability. There are many reasons for this. Older taxi drivers are effectively closer to retirement age as younger taxi drivers. Therefore, older taxi drivers are expected to have a different perception of the threat of Uber than younger taxi drivers, who may feel compelled to look at alternatives on the labor market. The Romanian pension law states that the standard retirement age is 65 years for men and 63 years for women (Art. 53, p. 1).

Previous research on aging workers has shown that aging has an impact on both the physical and mental efficiency of employees, such as reduced attention spans and reduced capabilities of handling physical stress (Juhani E. Ilmarinen, 2001). This not only means that aging workers are less efficient than their younger counterparts, but also that age is very well taken into account by prospective employers that are looking to hire. It is wise to assume, then, that age itself can also explain the variance in perceived employability between different age groups, with older workers expected to perform less, on average, than younger workers. Younger taxi drivers may see the rise of Uber as an opportunity. Not only are younger taxi drivers theorized to look for alternatives on the labor market, it is assumed that they are also more willing to work for Uber, as it can imply both a short-term and a long-term increase in income. Ridesharing, then, is quite possibly a possible alternative. Therefore, the following hypotheses can be inferred:

H2a: *“Older taxi drivers in Romania are less concerned with the threat of Uber than younger taxi drivers in Romania ;*

and

H2b: *“Older taxi drivers in Romania have a higher level of perceived employability than younger taxi drivers in Romania”*

4.3.2 Level of education as an employability determinant

Level of education directly measures employability. Many job offers on the labor market require the applicant to have some form of previous education which can fit the required skills for the respective job. While it is true that low-wage work such as taxi driving does not require

much obligatory previous education (other than having finished a driving school). A taxi driver that holds a high level degree (say, for example, a BA) has, by definition, better employment prospects than a taxi driver with perhaps more working experience but with a high-school degree. In this sense, education is a determinant of both employability and perceived employability, which additionally cuts across industries. A taxi driver with a degree in hospitality may simply be using the current employment form of taxi driving as a means of generating enough capital to further venture into the industry of choice. Previous research suggested, for example, that higher education actively builds on the employability of students by promoting work experience through internships, career advice, etc. (Peter T. Knight & M. Yorke, 2003). I theorize that level of education is another determinant of both perceived and actual employability. Furthermore, the level of education can also shape the way the threat of Uber is perceived. This is because Uber's disruptive force is partly assigned to their superior algorithmic technologies. A person that is educationally trained within a high-level education institution can see such technological advancements as opportunity, rather than threat. Therefore, the following hypotheses can be described:

H3a: *“Taxi drivers with a level of education of bachelor or higher have a higher level of perceived employability than taxi drivers with a level of education of high school or lower”* and

H3b: *“Taxi drivers with a level of education of bachelor or higher perceive ridesharing as less of a threat than taxi drivers with a level of education of high school or lower.”*

4.3.3 Employment status and the nature of employment contracts

Employment status is defined, in this research as part-time vs full-time vs on-call employment. This decision was made for a couple of reasons, which are now discussed. First of all, this survey is aimed at already employed taxi drivers, which means that a discussion on the status of employment actually implies a discussion on the nature of the employment contract. It is widely known that, in order to be a recipient of employment benefits, one requires to have the status of an employee. Therefore, employee risk and illegal employment practices liability falls within the hands of the employer (K. Cunningham-Parmeter, 2016, p.1674). It is possible to assume that at least a slight proportion of the data-set will contain respondents which operate in a similar self-employment status in the taxi industry, perhaps even comparable to the employment

status of traditional Uber partners. On-call (otherwise known as on-demand) work best fits this criteria, as it allows for a high degree of working flexibility which can be assumed to be similar to the one of the Uber driver.

It can be assumed that job flexibility is still higher in the case of Uber as opposed to the traditional taxi. However, previous federal court decisions in the U.S seem to highlight that ride-sharing services exercise a similar amount of uni-directional control on their drivers as a standard taxi company would do, effectively questioning whether or not the status of “independent contractor” is suitable for such workers. (K. Cunningham-Parmeter, 2016, p.1714-1717).

Considering the earlier examples, there are a lot of hypotheses which can be inferred here. I theorize that Uber drivers which are self-employed or have an on-demand contract perceive Uber as less of a threat than fully employed drivers, due to the similarities in the nature of their employment status. Furthermore, fully-employed taxi drivers are expected to be more wary of working through ride-sharing companies due to the implied forfeit of employment benefits. Nevertheless, the main hypothesis derived here is:

H4: *“Taxi drivers which are self-employed perceive ridesharing as less of a threat than taxi drivers under full or part-time employment”*

4.3.4 Does work experience shape perception?

This thesis maintains that a simple discussion on employment status and the nature of the employment contract does not display the overall picture. There is a missing link. Employment experience is defined, as far as this thesis is concerned, as the total work experience of a person in the given activity field. In the case of this thesis, employment experience is measured as the amount of time (in years) that the individual has spent working as a taxi driver. Previous empirical research has shown that such experience is an important indicator that captured even the attention of higher-education institutions, which are putting and increasing amount of focus in developing relevant work experience for their students (R. Heyler & D. Lee, 2014). Therefore, work experience can be a good indicator of perceived employability. Therefore, I propose the following hypotheses:

H5a: *“Taxi drivers with a higher amount of work experience perceive themselves as more employable”*

H5b: *“Taxi drivers with a higher amount of work experience perceive ridesharing services as less of a threat than taxi drivers with a lower amount work experience”*

5. Methodology

5.1 Research design

This thesis follows the research design of a cross-sectional study. This approach effectively means that the data is collected from the target population at a very specific point in time. In other words, this research methodology aims at collecting cross-sectional data. Due to the fact that the main research question is inherently a descriptive question, there is no need to determine cause and effect. Therefore, this inherently negates one of the disadvantages of cross-sectional data which further explains the decision of using a cross-sectional research design.

5.2 Data collection and subject sampling

Research in the ridesharing industry is by all means a rather new venture and, as was outlined earlier in this thesis, there is only one previous exploratory research article on the topic with the Romanian setting. Therefore, an independent data collection was undertaken, following the format of a survey. The University of Twente offers BMS students the option of using the fairly user-friendly Qualtrics survey tool, via the campus license. Therefore, the survey was designed using this tool. Furthermore, the survey was online for one month, between 7th of May, 2018 and 7th of June, 2018. Considering the nature of the cross-sectional research design, the data is considered to be representative for the Romanian setting for the year 2018.

The survey was distributed via an anonymous link and it was designed in such a way that no metadata was captured, since it would have been of no practical use to the thesis. There were two main strategies for the survey distribution. The first strategy involved sending the survey in a mail format to taxi drivers employed at a medium-sized taxi company which is headquartered in Bucharest, Romania. The second main strategy was sampling through taxi-oriented Romanian facebook groups. This was done as an attempt to increase the amount of respondents towards the target of at least 100 entries and, while it did not yield the desired results, it increased the

respondents to a maximum of 69 entries. Throughout both strategies, prospective participants were notified that participation is entirely voluntary, as well as the fact that responses were anonymised. A small introduction to the topic and the overall goals of the survey was presented prior to the access link. A small reward for completing the survey would have been preferable, as it seems that many prospective participants decided to not complete the survey, perhaps due to the seemingly rewardless time investment. Furthermore, participants were given the option to sign-up to a mailing list in order to receive the main results of the research. To this extent, a summary of this thesis will be created and translated in order to be sent to the participants who did sign up for the mailing list.

Further anonymity was guaranteed by the fact that both distribution strategies used the same anonymised link as access route to the survey. Due to this, it is not possible to describe the exact amount of respondents yielded by each strategy. However, this decision achieved optimal anonymization of responses, which was indeed the desired result.

Due to the nature of the distribution, it can be quite well understood that the sample is biased, mainly due to the sampling strategy. The main sampling strategies were voluntary sampling and opportunity sampling. Ideally, probability sampling would have been used as the preferred option. However, it is worth to take into account that probability sampling implies both access to a rather large sample of the target population, as well as the logistical capabilities of carrying out the sampling strategy, which is not feasible in the context of a 10-week bachelor thesis. Therefore, the logical decision was to use both voluntary and opportunity sampling as main strategies. This was done for the following reasons: a) the option of gathering enough respondents within a very limited time-frame considering the logistical difficulties of researching the Romanian taxi-industry from the Netherlands and b) this thesis was written with no financial investment, heavily limiting its scope and caliber. However, as will be seen later, it seems that the sampled group is at least somewhat representative for the general population.

In the end, there were 69 respondents to the survey. However, a rather large number of the surveys were either sent in empty or incomplete. For example, while there are 61 valid entries for employment status, the important dimensions captured by the likert scales have only 44 entries, where age has 32 entries. Furthermore, there are queries in which age is displayed whereas the likert scales are not answered. The best decision that is made here is to keep the

highest amount of valid entries. To this extent, the data set has a sample size of 44 which can be readily used for data analysis. In turn, **H3a** and **H3b** will be tested with a smaller sample size.

6. Survey design and variable operationalization

In this section of the thesis, I will go through the operationalization of all relevant variables. For a more coherent and logical discussion (and considering the fact that the survey was designed in blocks), the operationalization will be discussed block by block. It is worth mentioning, however, that most variables were operationalized as scales, which will be further elaborated in this chapter.

6.1 On employability and ridesharing - dimensions measured by scales

This block is arguably the most important block of the research design. This block was operationalized exclusively as multiple-statement, 7-item likert scales with answers ranging from “*Strongly agree*” to “*Strongly disagree*”. Each individual multiple-statement likert scale was designed to capture a certain thesis-related dimension. The dimensions captured are as follows: a) Ridesharing preference; b) Taxi preference ; c) Ridesharing effect ; d) Ridesharing threat and e) Perceived employability. All multiple question likert scales contained five questions, each predicting the same underlying dimension.

The first scale was aimed at capturing the extent to which participants perceive working in ridesharing services as preferential over the taxi industry. As such, they were asked to grade the following statements: “*I would prefer to work through ride-sharing as opposed to the taxi industry, because... it allows me to earn more money*” ; “*.... I can use my own car*” ; “*...I don’t have to comply to taxi regulations*” ; “*...I can choose when and how much time I work*” and “*...I can be my own boss*”. Cramer & Krueger (2016), Chen & Sheldon (2015) and Berger & Frey (2017) outlined the specific advantages that ridesharing have over the taxi service, which included areas such as better efficiency and higher work flexibility. The five statements captured this ridesharing preference dimension.

The second scale fits at the opposing side. If some taxi drivers are expected perceive ridesharing as preferable over the taxi industry, then the opposite statement can be claimed as plausible as well. To this extent, the second scale was aimed at capturing the extent to which participants believe that the taxi industry is a preferable alternative to working in the gig-

economy by grading a list of statements about the traditional employment framework. The following questions were asked: *“I would prefer to work through the taxi industry as opposed to working through the ride-sharing industry, because... I have a working contract”* ; *“... I can access various employment benefits”* ; *“... it allows me to earn more money”* ; *“... I can choose when and how much time I work”* and *“... I have job stability”*.

The third scale was aimed at inferring the participant’s perceived effect of ridesharing services. Indeed, ride-sharing is a highly politicized topic in Romania, which means that the people working within the Romanian taxi industry are top candidates to grade such statements. As such, the entrants were asked to grade statements about the perceived effect of ride sharing. The five statements were the following: *“Ride-sharing made me consider changing industries”* ; *“I would consider leaving my current employment and work through ride-sharing”* ; *“It is harder to find a job in the transportation industry since Uber entered the market”* ; *“Taxi driving lost attractiveness as a job since Uber entered the market”* and *“I am actively looking for alternatives on the job market since Uber entered the market”*. Questions were asked about Uber specifically so that the individuals can better emphasise with the type of ride-sharing the survey enquired about, more specifically for-profit, on-demand ridesharing, as conceptualized by Carmen Balan (2016), which is best represented by the Uber ridesharing service.

The fourth scale goes hand in hand with the third entry in this list as is aimed at capturing one of the main dimensions that are being analysed in this thesis, which is the perceived threat of ride-sharing. Again, as ride-sharing in general is a highly politicised topic within the Romanian setting, participants were expected to have a strong opinion on the matter. Therefore, they were asked to grade the following statements: *“Ride-sharing is a threat to the taxi business because ... it is disloyal competition”* ; *“... it sets a lower standard of job security for future workers”* ; *“... it sets a lower standard of employment benefits for future workers”* ; *“... it makes me earn less as a taxi driver”* and *“... customers are leaving taxi in favor of ridesharing”*. The statements were operationalized following the literature analysis, more specifically the work of Cramer & Krueger (2016) ; Chen & Sheldon (2015) and Berger, Chen & Frey (2017), which provided an empirical basis for the threats of ridesharing.

The fifth and last dimension is another central dimension to this thesis. This scale aimed at capturing the extent to which taxi drivers agreed or disagreed to various statements depicting perceived employability predictors as theorized by Berntson (2008). Participants were asked to

grade statements such as *“I feel confident in retaining my current employment in the next 12 months”*, *“If I wanted, I could look for better employment in the taxi industry”*; *“If I wanted, I could look for better employment outside the taxi industry”* ; *“Ride-sharing has no real impact on my employment opportunities”* and *“Ridesharing has no real impact on my job security”*. The statements were designed to capture various sub-dimensions of perceived employability, such as confidence in getting equal, new, or better employment (Berntson, 2008), intra-industry perceived employability, inter-industry perceived employability, etc.

6.2 Internal consistency and dimension recode logic.

The scales capturing important dimensions within the thesis required more work before enabling statistical analysis. Initially, these scales were coded as 7-item likert scales. In other words, the respondents were given 7 possible answers: *“Strongly agree”* , *“Agree”*, *“Somewhat agree”*, *“Neither agree nor disagree”*, *“Somewhat disagree”*, *“Disagree”* and *“Strongly disagree”*. However, these dimensions suffered from a small final sample size (=44) and it was therefore decided that all these multiple-statement likert scales will be recoded into 5-item likert scales for a more coherent frequency distribution. The following recode logic was applied: (1=1) , (2,3 =2) (4=3) , (5,6 = 4) and (7=5). The result was the following ranking order: 1 = *strongly agree* , 2 = *agree*, 3 = *neither agree nor disagree*, 4 = *disagree*, 5 = *strongly disagree*.

As can be seen, the direction of the scales was inverted in the operationalization process, with 1 (strongly agree) being the highest possible answer and the 5 (strongly disagree) being the lowest possible answer. Indeed, such a ranking order is counter-intuitive to read, let alone to interpret statistical results. Therefore, the scores were inverted, following this logic: (1=5) (2=4) (3=3) (4=2) (5=1). This inversion meant that now, the highest ranking answer was given a score of 5, whereas the lowest ranking answer was given a score of 1.

Figure 1 (p.16) presents the Alpha score of each individual dimension. As can be observed, the multiple-statement likert scales measuring the effect of ridesharing and perceived employability had suboptimal alpha scores. Testing for inter-item correlations revealed the most disruptive items in each of the scales. The dimension of perceived employability suffered from internal consistency due to items, namely *“I feel confident in retaining my current employment in the next 12 months”* and *“If I wanted, I could look for better employment in the taxi industry”*. Indeed, Berntson (2008) defines perceived employability as an individual’s perceived capability

of getting into new, better, or equal employment. This definition inherently implies worker mobility, or at least willingness for a change of employment. Willingness to retain employment, therefore, does not capture perceived employability as conceptualized by Berntson. Furthermore, it was found that intra-industry mobility negatively affected the internal consistency of the reliability scale. Since this multi-statement likert scale included some statements about Uber, it could be plausibly assumed that this dimension better captures the perceived employability of taxi drivers in the presence of Uber (or ridesharing in general).

Figure 1

Cronbach's Alpha per dimension, before and after disruptive variables were removed.

<i>Scale name</i>	<i>Cronbach's Alpha (before)</i>	<i>Cronbach's Alpha (After)</i>
Ridesharing preference	.880	.880
Taxi preference	.939	.939
Ridesharing effect	.610	.689*
Ridesharing threat	.914	.914
Perceived employability	.486	.625*

**In both cases, two disruptive variables were removed after checking inter-item reliability*

The second sub-optimal dimension is the effect of ridesharing. Again, after checking inter-item correlations it was found out that the statements *“It is harder to find a job in the transportation industry since Uber entered the market”* and *“I am actively looking for alternatives on the job market since Uber entered the market”* were the two most disruptive. In order to ensure internal consistency, these two items were removed from the overall final dimension.

6.3 On employment and the taxi service.

During the survey design process, it was decided that questions which capture basic demographic data are to be put at the very end. Instead, the introductory block looked at defining the type of worker the participant is. As such, questions were asked about: a) level of education, b) employment status, c) nature of the contract, d) sources of income and e) overall working experience. The logic behind this decision is fairly simple: in order to have a better understanding of various more complex variables are shaped (such as the threat of Uber, the effect of ridesharing, the extent to which one perceives itself as more or less employable, etc), it is important to capture certain “background” information which can, on one hand, add context to the data analysis and, on the other hand, can be considered important explanatory variables of the more complex dimensions.

The first question of the survey is *“What is your current employment status?”*. This variable was operationalized as a scale variable, due to the fact that the measurement level is inherently nominal. As will be seen, most variables within this data-set have been operationalized with either a nominal, ordinal or interval level of measurement. Given the fact that the survey was aimed at taxi drivers, the two main groups were expected to be a) drivers under full-time employment and b) self-employed drivers. This question goes hand in hand with the question which tried to capture the nature of employment. *“What is your employment contract as a taxi driver?”* aimed at further defining the employment status. Participants had the option of choosing either a) full-time employment, b) Part-time employment and c) on-call driver. This question was put here to easily define outliers. Drivers which work under the on-call schema are expected to have a perception of the threat of Uber which is incompatible with the taxi drivers under full employment, due to a less amount of actual contact with the realities of the taxi industry.

Apart from questions capturing the level of education, the most important question in this block is: *“Is taxi driving your main income?”*, with a yes or no answer. This question is the preface of the second survey block, in which questions about Uber were asked. This is because participants which do not have taxi driving as their main income are expected to work as a side, for various on-demand for-profit ridesharing services.

6.4 On ridesharing work

The second block looks to capture precious contextual information from the participants. More specifically, this block seeks to answer the question of whether or not taxi drivers in Romania also engage in ridesharing work on the side. Participants were asked the question “*Have you ever worked in the ride-sharing industry?*” and were asked to provide a simple “Yes” or “No” answer. A “Yes” answer would have triggered a block of two questions. The first question “*How often did you work through ride-sharing?*” was aimed at capturing frequency of work. It was operationalized as an ordinal variable, with the participants being given the option of choosing from an 4-item scale ranging from “*Only once*” to “*Very often*”. The second question was aimed at capturing perceived preferability for ride-sharing: “*Did you ever consider quitting the taxi industry in favor of the ride-sharing industry?*”. The question was coded as having simple “Yes”, “Maybe” and “No” answers.

The contextual information captured by this block is extremely important in the case of this thesis, which tries to infer whether or not ridesharing has any effect on the perceived employability of taxi drivers. Indeed, as was theorized earlier in this paper, there is the chance that taxi drivers perceive ride-sharing not only as a threat, but as an opportunity, and knowing such information helps with the explanation of the main hypotheses.

6.5 On collective bargaining power

The collective bargaining power block was operationalized as having a single binary variable. The participants were asked “*Are you a member of a union?*” with simple “Yes” or “No” answers. The underlying logic behind this question was to further separate the sample between being a member of a union and not being a member of a union, as unionized workers were expected to have a vastly different opinion than the latter. Ideally, this variable would have been used as a control variable in the regression analysis.

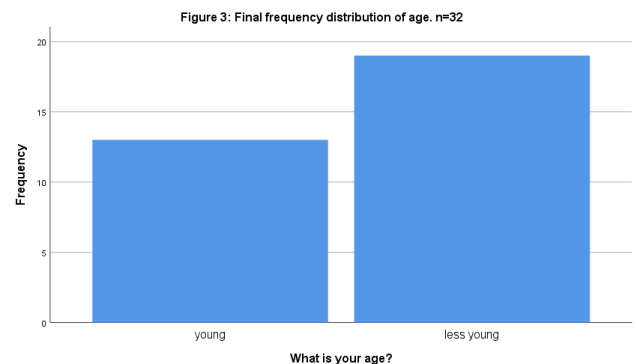
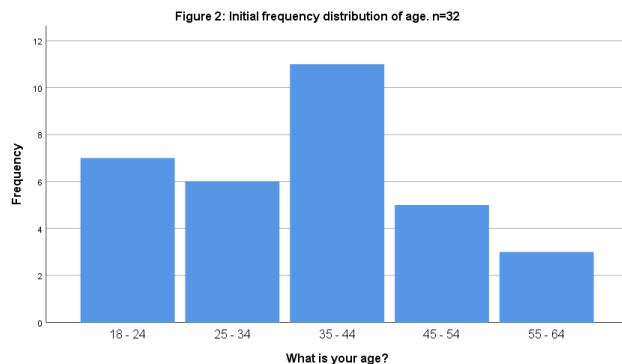
6.6 Basic demographics

The last block was aimed at capturing basic demographics about the participants. Therefore, questions were asked about a) Age b) Gender and c) Nationality. The nationality variable was added to capture the instance in which a participant is not of Romanian nationality.

6.7 The design of grouping variables and further re-coding

This thesis used a lot of independent variables. However, these variables had to be further adjusted to enable statistical analysis. This subchapter will go through all the relevant independent variable manipulation.

The variable “Age” was the first candidate for re-coding. Figure 1 presents the frequency distribution of Age, with an even smaller n ($=32$) than the initial sample size. Keep in mind, however, that this number represents the amount of valid entries. To exemplify the disparity between age groups, there were only three recorded entries in the 55-64 age group, whereas the best represented age group were taxi drivers between the ages of 35-44. Furthermore, this thesis relies on a series of t-tests, so in order to test age related hypotheses, this variable was re-coded as a binary variable consisting of the following categories: “Young” and “Less young”. The logic behind this decision was the following: the age interval of 18-34 was coded as “young” and the age interval 35-64 was coded as “less young”. Figure 3 presents the final frequency distribution of this independent variable. As can be observed, the frequency distribution is more even, with no group suffering a lack of sufficient entries.

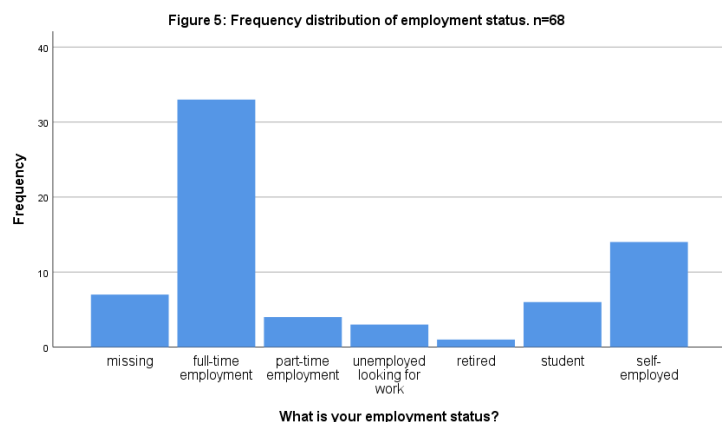
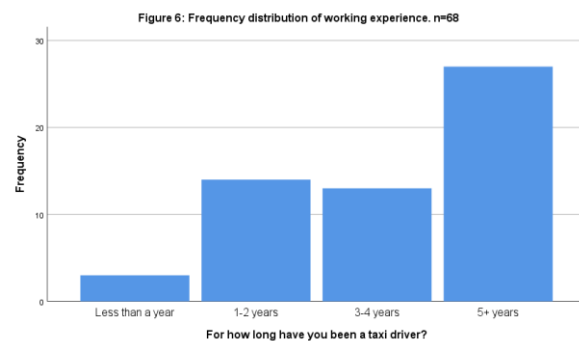
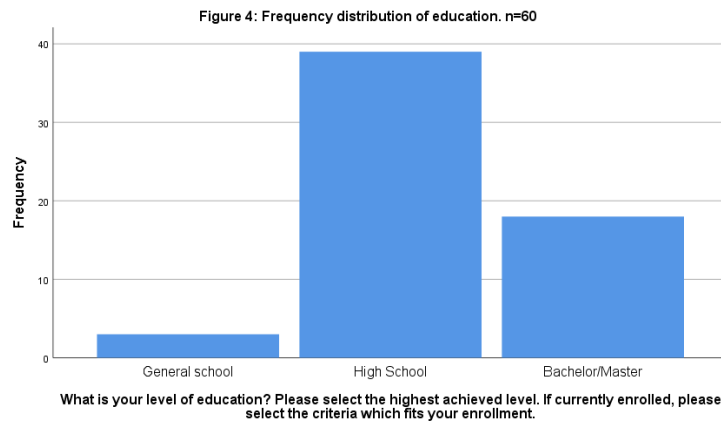


Education was another prime candidate for re-coding, due to its nature as an independent variable. Figure 4 presents the frequency distribution of the variable education. It can be quickly observed that the respondents fall into three categories. The first category is “General School”, with only 3 entries, followed by “High School” with 39 entries and “Bachelor/Master” with 18 entries. Since the independent samples t-test uses a binary grouping variable and I therefore had to maximize the eventual sample size of the statistical test. The “General School” age group presented me with two options. Either set it aside from the data analysis or integrate the group within the “High School” age group. The latter decision was taken. Therefore, the variable education was re-coded as a binary variable, with two distinct education groups. The “Low level

education” was represented by the entries with a high school or lower level of education, while the “*High level education*” group was represented with entries that had a level of education of bachelor or higher.

Employment status was the third grouping variable which required re-coding. Figure 5 presents the frequency distribution of employment status. By far the most overly-represented group in this case were drivers under full-time employment. However, this thesis distinguishes primarily between two different types of employment: traditional employment and self-employment. Since part-time employment technically falls under traditional employment, a decision was taken to group “*full-time employment*” and “*part-time employment*” together.

The last grouping variable used in this thesis was employment experience. Figure 6 shows the frequency distribution of this variable by groups. The most overly-represented group is clearly the taxi drivers with 5+ years of experience. However, I wanted to ensure that no entries are lost when moving towards data analysis, so this variable was re-coded as a binary variable. The following recode logic was applied: (1 2 = 1) and (3 4 = 2). In other words, taxi drivers with a declared work experience of 2 years or less were put together into the “*Low*



work experience” group, whereas the taxi drivers with 3+ years of work experience were subsequently put together into the “*High work experience*” group.

Overall, these decisions were intended to achieve two things: a) the grouping of important independent variables in order to enable statistical analysis through the independent samples t-test and b) the maximization of available entries for the grouping variables, considering the fact that the overall data-set suffered from a rather low sample size to begin with.

7. Descriptive statistics

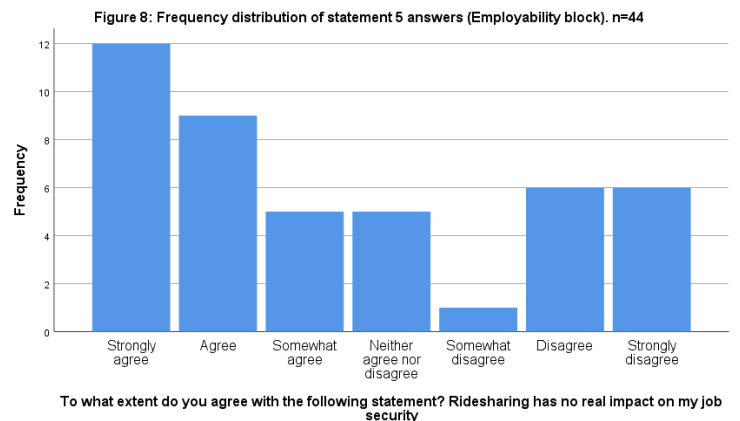
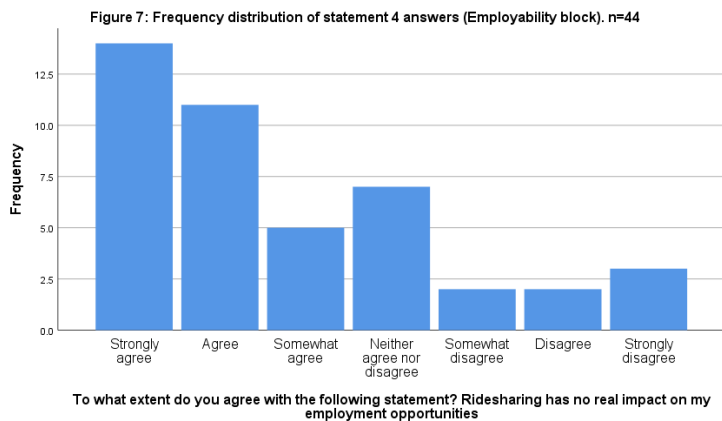
This section of the thesis will present the descriptive statistics of the final data-set. For a more coherent and logical discussion, this chapter will be split in two main sub-chapters: a discussion on the descriptives of the dependent variables and a discussion on the descriptives of the independent variables

7.1 Descriptives of dependent variables

This sub-chapter presents the descriptive statistics of the dependent variables. In other words, descriptives will be presented with regards to a) Perceived employability and b) Ridesharing threat. This section will also present the descriptive statistics with regards to working preference, namely ridesharing preference and taxi preference.

7.1.1 Perceived employability

The dimension of perceived employability was initially operationalized as a multiple-statement likert scale. However, due to poor internal reliability, two disruptive statements were left out to allow more reliable statistical analysis. For further information please refer to chapter 6.2. The most interesting statements to analyse here are the ones that capture the perceived impact of ridesharing on a) employment opportunities and b) job security.



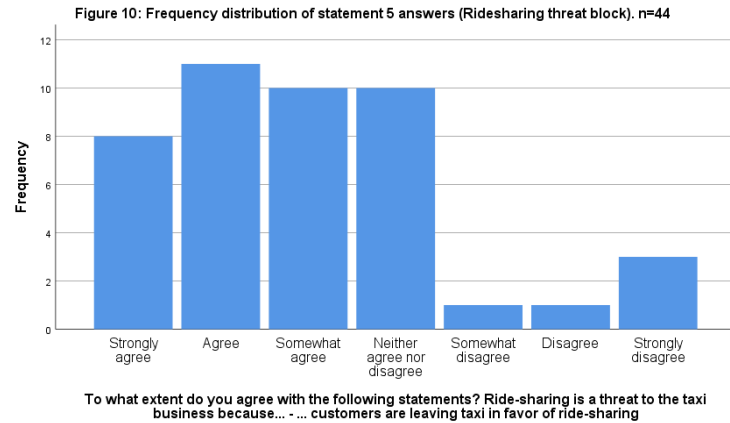
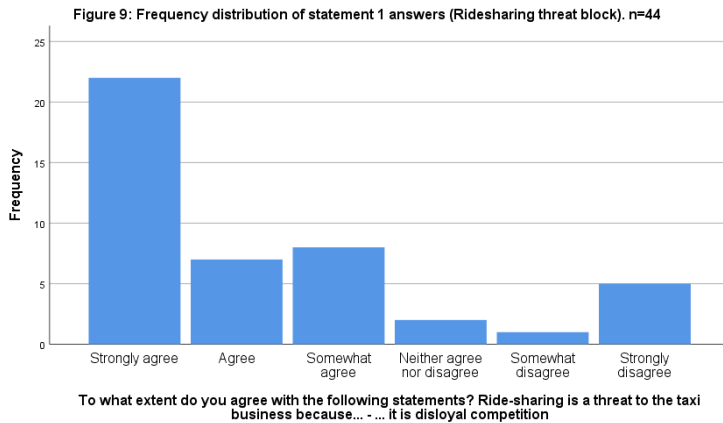
Figures 7 and 8 present the frequency distribution of the scores. Keep in mind that these are the raw answers. The data was later changed to enable statistical analysis. Chapter 6.2 contains all the relevant information with regards to data manipulation of the likert scales.

As can be observed from these two figures, a large proportion of the sample believe that ridesharing does not have a substantial impact on their job security and employment opportunities. This would in turn imply a higher level of perceived employability, but no conclusions can be drawn. Chapter 4.3 and the subsequent sub-chapters presented a list with clear determinants of perceived employability, among which there is age, education, work experience, etc. Figures 2 and 3 (p.20) already presented the age distribution of the sampled group, with older drivers having a higher representation than younger taxi drivers. Furthermore, Figure 6 (p.21) has shown that the sampled group is also positively skewed with regards to employment experience. Indeed, it can be implied that, on average, the sampled group would have a positively skewed level of perceived employability as well, given the frequency distribution of the determinants.

Whether or not there is a statistically significant difference in the levels of perceived employability across different age/education/work experience groups remains to be seen. However, the descriptives seem to imply that there could be some interesting results in the data analysis section.

7.1.2. Ridesharing Threat

Ridesharing threat is another central dimension which was operationalized as a multiple-statement likert scale. In this case, however, the dimension reported a high level of internal reliability, as presented in Figure 1 (p.17). More specifically, this scale reported a Cronbach's alpha score of .914, which is traditionally considered to be an excellent level of reliability. The general idea was to capture the opinion of romanian taxi drivers on the threat of ridesharing. Participants were asked to grade a plethora of statements, which were elaborated upon in Chapter 6.1. Here, the most interesting descriptives are presented, particularly the score ranking on the opinion of ridesharing as disloyal competition as well as the extent to which ridesharing is perceived to “steal” a portion of the market share which was traditionally controlled by the taxi industry.



Figures 9 and 10 present the frequency distributions of these answers. The assumption that taxi drivers perceive ridesharing services as highly disloyal competition holds true in the frequency distribution. An overwhelming proportion of the sample strongly agreed with the statement that ridesharing is indeed disloyal competition. Furthermore, an overwhelming proportion of the sample agreed with the fact that customers are leaving the taxi in favor of ridesharing. There is empirical basis for that. On the one hand, ridesharing services do not formally employ drivers, even though previous research has proven that these services maintain a similar level of uni-directional control over their drivers as the traditional taxi (K. Cunningham-Parmeter, 2016). In turn, ridesharing services have the benefit of operating in markets with no formal ridesharing regulations. Such services, then, do not have to face the same regulatory

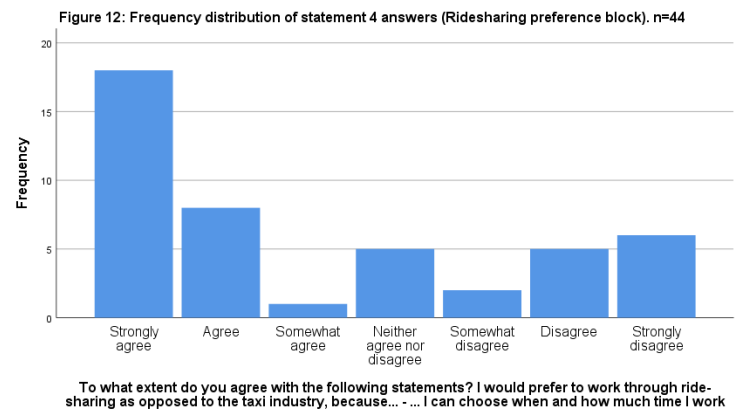
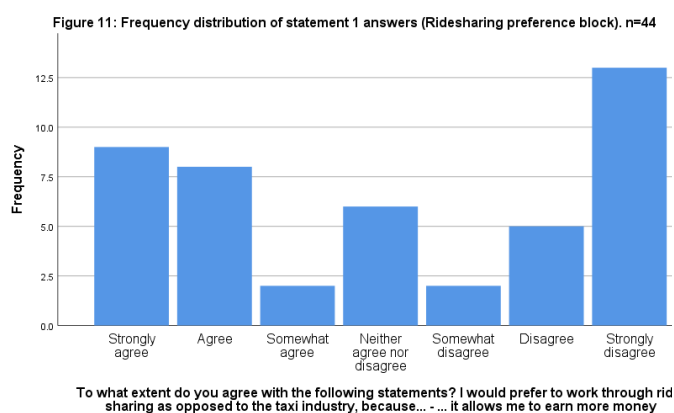
barrier that taxi companies do. On the other hand, previous empirical research has shown that in areas where ridesharing is present, taxi revenue goes down (Berger, Chen & Frey, 2017).

To conclude, it seems that the sampled group has a very strong opinion on the threat of ridesharing. However, it remains to be seen whether or not perceived employability plays a role in explaining the perceived threat of ridesharing.

7.1.3. Ridesharing preference vs Taxi preference

This thesis is aimed at providing a more concise picture of the on-demand transportation market in Romania, more specifically at taxi-like services. Since ridesharing is a new entry in this industry, I was particularly interested in finding out why the subjects prefer one service over the other. To this extent, two separate scales were created: one capturing ridesharing preference and the second one capturing the exact opposite: taxi preference.

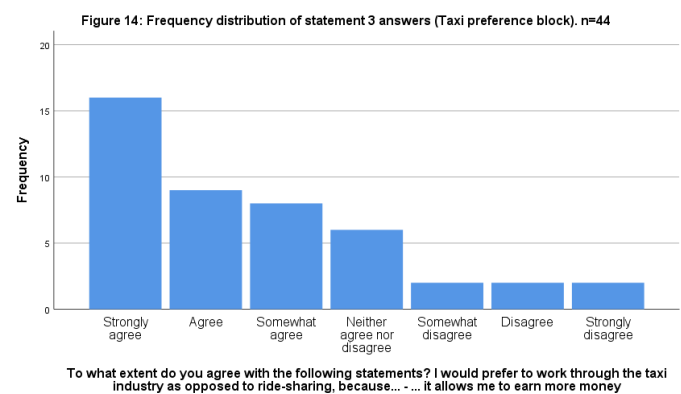
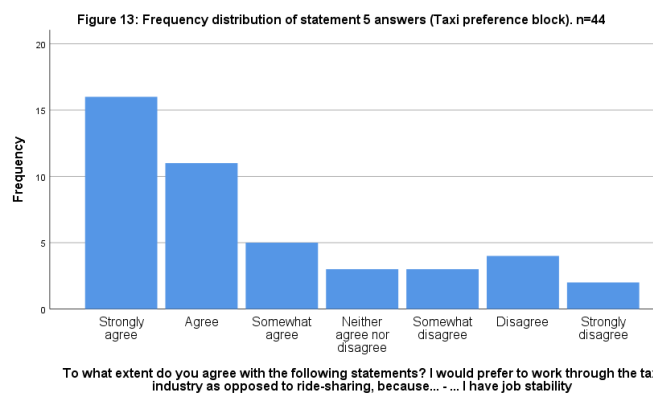
There are many arguments for the ride sharing industry. I maintain, however, that the most important arguments are the following: a) the prospect of higher income and b) work flexibility.



Figures 11 and 12 present the frequency distribution of these answers. It seems that the sampled group agrees on the fact that ridesharing is a preferable alternative to the taxi service in terms of work flexibility. As can be seen from Figure 12, a very high percentage of respondents strongly agreed with the fact that ridesharing provides better working flexibility than the taxi service and considering the fact that drivers are not per-se employed and can therefore more freely choose their working schedule, this assumptions seems to hold true.

Figure 12, however, presents an interesting finding. It seems that ridesharing services do not offer better income opportunities than the taxi service. What can be observed instead is that a high proportion of the sampled group actually disagree with the fact that ridesharing allows the prospective worker to increase its income. For the taxi driver, the prospect of earning more money through ridesharing does not seem to hold true. Instead, it seems that a high proportion believe that the difference in potential income between taxi drivers and ridesharing drivers is negligible.

If taxi drivers believe that ridesharing does not make them earn more money, is then the case that the traditional taxi service delivers more income than the ridesharing alternative? Furthermore, is the stability of a working contract such a sought after benefit?



Figures 13 and 14 present the frequency distribution of these answers. Indeed, it seems that the prospect of job stability is a high priority for taxi drivers and in turn, it is one of the reasons why the traditional taxi driving job is a preferable alternative to working through ridesharing. This, of course, is not surprising.

The surprising finding lies in Figure 14. It seems that, actually, the taxi service provides the driver with the prospect of higher potential income than what is possible through ridesharing! In this case, the direction is opposite: an overwhelming amount of respondents believe that taxi driving is a preferable alternative to the ridesharing service with regards to potential income. The question to be asked then is: if taxi driving provides higher potential income, why is ridesharing such a preferable alternative? Presumably, it is due to the fact that being a taxi driver traditionally requires a taxi license, which is severely limited in both potential area of activity and actual number of readily available regional or local licenses. However, this hypothesis can not be tested with the current data-set and is more of a recommendation for future research

7.2 Descriptives of independent variables

This sub-chapter will present the overall descriptive statistics of the independent variables contained in this data-set, as well as statistics on demographics. Figure 2 (p.20) presents the age distribution of the sampled group. The most well-represented age group is, unsurprisingly, the 35-44 age group. Overall, the data-set contains taxi drivers which are predominantly 35 years or older. Furthermore, the sampled group is predominantly male, with only two female respondents.

Figure 4 (p.21) presents the frequency distribution by levels of education. As expected, the majority of the respondents had high-school as the highest achieved level of education (65%). Interestingly enough, the second largest group has either Bachelor or Master level education, this group representing 30% of the sample. Only three entries (5%) had general school as the highest achieved level of education. This education distribution is expected, due to the fact that being a taxi driver is generally considered a low-skill job.

Furthermore, employment status was also asked within the survey. The assumption was that a majority of taxi drivers work under full-time employment, while the second expected majority was drivers under self-employment. Indeed, Figure 5 (p.21) shows that this assumption is met for the sampled group. Indeed, table 5 shows that this assumption is met by the final distribution of the data-set. In total, 33 (48.5%) participants were under full employment. Coming in second were self-employed taxi drivers, with 14 (20.6%) entries. Interestingly, 6 of the respondents were students, which means that taxi driving is still an attractive side-job for young adults following higher education studies.

However, it was interesting to know whether or not the participants' current employment is also their main source of income. Therefore, the participants were asked whether taxi driving provides them with their main income. Figure 15 (p.28) presents the frequency distribution of these answers. It seems that a high proportion of the participants have taxi driving as their main source of income, which is expected, as most of the participants were under full-time employment in the first place. However, more context is required for the participants which delivered a “No” answer. Therefore, the participants with a “No” answer were asked further questions about the nature of their income.

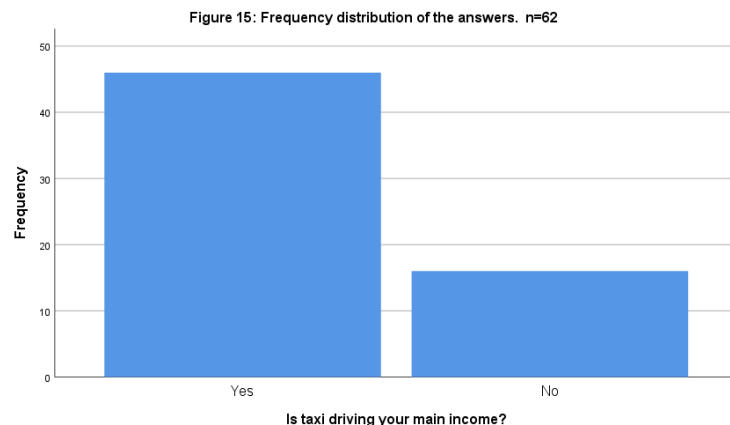
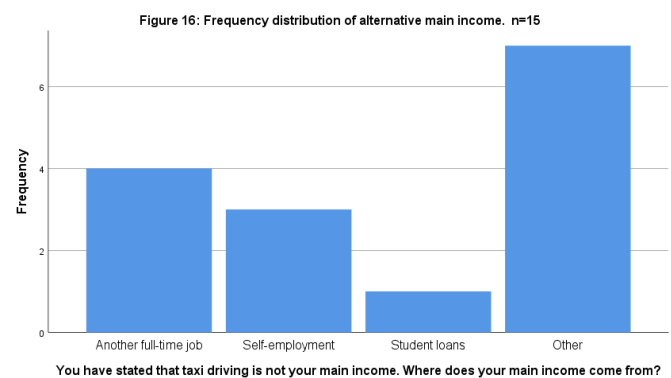


Figure 16 presents the frequency distribution of the answers which stated their alternative main income source. 4 of those answers reported another full-time job as the main source of income, whereas 3 reported that self-employment provided the main source of income. However, self-employment does not necessarily mean working through ridesharing. The highest number, 7, reported “Other” as a main source



of income. The fact that a relevant proportion of the participants have a secondary income source is expected. Romania has the second lowest salary in the EU, tied with Lithuania, at 400 euro per month (Eurostat, 2018). This is 1000 euro below the equivalent minimum wage in the UK, for example. It comes with no surprise, then, that a lot of the participants felt compelled to have more than one full-time job in order to increase their income.

However, I was particularly interested if whether or not there are participants in the data-set that also work for ride-sharing services. Even though ridesharing services do not seem an attractive alternative income-wise, there are other important factors which can incentivize a taxi driver to partake in ride sharing, such as high work flexibility. Therefore, it can be well assumed that at least a small proportion of the data-set also worked through ride-sharing at least once. Therefore, participants were asked if they ever worked through ride-sharing. Figure 17 (p.29)

presents the frequency distribution of those answers. Unsurprisingly, a high proportion of the sampled group have never worked through a ridesharing service. It can be hypothesized here that taxi drivers are not generally seen as the typical ridesharing “independent contractor”, which can raise questions about the professional expertise of ridesharing drivers, but this hypothesis exceeds the scope of this thesis. However, it was found that 7 out of 11 of the respondents that did work through ride-sharing, did so either regularly or very often. This is a particularly interesting finding, as ride-sharing services seem to be a solid alternative for the taxi drivers that actually choose to do so. In total, 19.3% of the sampled group reported that they had worked through ridesharing at least once.

Furthermore, all participants were asked if they ever considered quitting the taxi industry in favor of working through ridesharing. Figure 18 presents the frequency distribution of those answers. It seems that 48.3% of the group stated that they did not consider quitting the taxi industry in favor of ridesharing, with 29.3% stating the exact

opposite. An interesting finding here is that a little bit over half of the respondents (51.7%) either considered leaving the taxi industry in favor of ride-sharing or are undecided. The disruptive force of ride-sharing services is well recorded in Romania and, to this day, the Romanian government did not have a solid policy response to this issue. Meanwhile, ridesharing services continue to grow in the country, as Uber alone hit the milestone of 1 million users earlier this year (Uber, 2018). With an underwhelming response from public authorities, it can be understood why such a relevant proportion of the data-set considered “switching sides”. While it remains to be seen whether or not ride-sharing can substitute (as opposed to complement) the Romanian taxi industry, the data-set seems to imply that a disruptive force with noticeable effects on taxi drivers exists.

Figure 18: On “changing sides”, n = 58

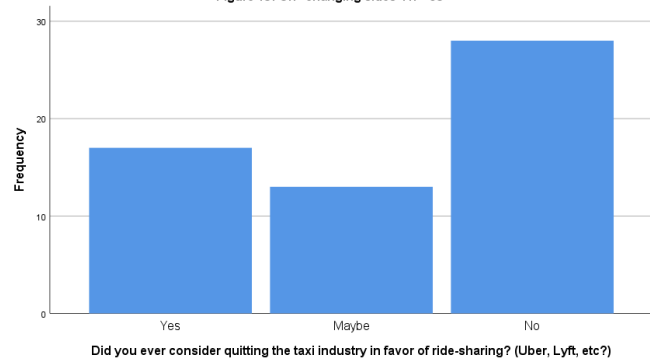
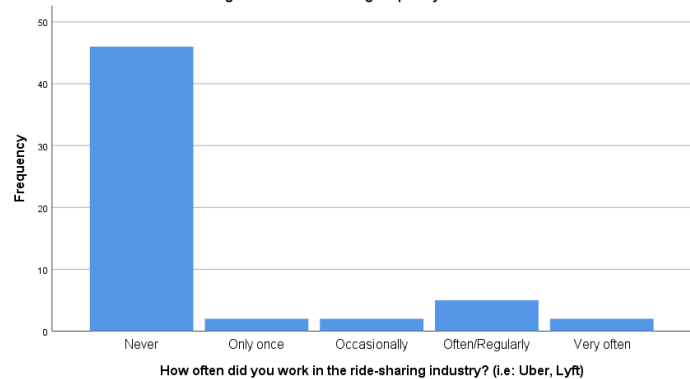


Figure 17: On ridesharing frequency, n = 57



8. Data Analysis

This section of the thesis will go through the whole data analysis process. For a more coherent discussion, this chapter will follow the hypotheses in a linear fashion, explaining results and analysis techniques on a hypothesis by hypothesis basis.

Figure 19

Independent Samples T-test, t-statistic score matrix + group mean value

Variables	<i>P. Employability</i>	R. Threat	R. Eff	R. Pref	T. Pref
Age (t score)	2.028***	.954	2.853*	3.495**	.762
Young (mean)	3.897	3.553	3.666	3.676	3.923
Old (mean)	3.259	3.911	2.666	2.410	4.200
Education (t score)	.901	.126	.792	.972	2.212*
Low (mean)	3.505	3.744	3.149	3.033	4.124
Bachelor + (mean)	3.785	3.700	2.881	3.414	3.400
Employment (t score)	1.641	.798	.170	.271	1.896
Normal (mean)	3.710	3.756	2.898	2.947	4.252
Self-employed (mean)	3.100	4.060	2.833	3.072	3.380
Work Exp. (t score)	1.139	1.362	2.412*	1.917	1.720
High (mean)	3.822	3.426	3.555	3.626	3.526
Low (mean)	3.476	3.892	2.797	2.910	4.085

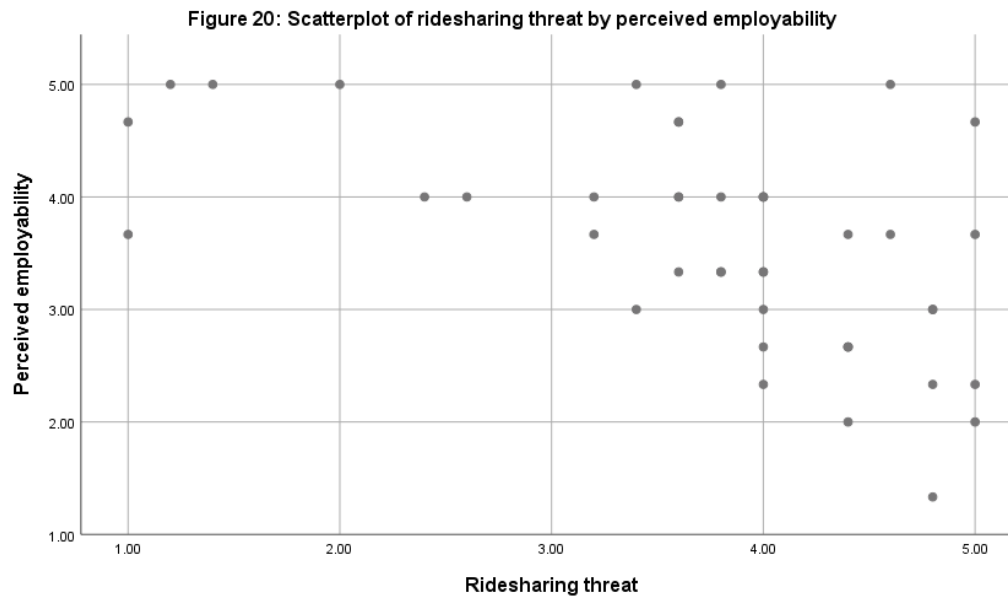
*Note: * = sig. at .05 ; ** = sig. at .01 ; *** = not sig, but 0.52*

Figure 19 presents all the independent samples t-tests ran throughout the data analysis version. T-statistic scores are bolded, each flagged according to level of significance. 10% confidence intervals of significance were not used in statistical analysis, given the already low sample size. Adding a 10% confidence interval of significance would have simply added

uncertainty on top of uncertainty. Furthermore, mean value scores by groups were included in this figure to enable interpreting the direction of significant relationships.

8.1. Hypothesis testing

8.1.1. The relationship between the threat of ridesharing and perceived employability



The central hypothesis of this thesis is **H1**: “*The higher the perceived employability of a taxi driver, the lower the perceived threat of Uber*”. This means that the expected relationship between these two variables is a negative relationship. In order to test this hypothesis, a correlation analysis has to be undertaken. The central assumption of a correlation analysis is whether or not the relationship between the two variables is linear.

Figure 20 presents the initial scatterplot. As can be seen, it seems that there are some minor outliers. However, by looking at the scatterplot, the relationship still seems linear enough to enable statistical analysis of the correlation between the two variables. Ideally, the disruptive cases would have been removed, but given the already small sample size, this would negatively affect any further regression analysis. Because of this, it was decided that, while the relationship between the two is not perfectly linear, the four cases were not removed. The second assumption of correlation analysis is that both variables have to be continuous. Considering the interval

measurement level which is inherently continuous, this assumption is met. Therefore, a correlation analysis was run.

Figure 21: Bivariate correlation of Ridesharing Threat and Perceived Employability (N=44)

Statistic	Ridesharing Threat	Perceived Employability
Pearson Correlation	-.541**	1
Sig. (2-tailed)	>.01	-

*Note: ** = Correlation is significant at the 0.01 level (2-tailed).*

Figure 21 presents the results of the correlation analysis. Indeed, the correlation analysis reveals the fact that the relationship between the two variables is indeed negative, which seems to confirm the original hypothesis. A score of -.541 indicates a relatively strong negative relationship between perceived employability and the threat of ridesharing and the statistical test confirms this with the relationship being significant at >.01. Based on this test, it can be assumed that, in the case of Romanian taxi drivers, the higher the level of perceived employability, the lower the perceived threat of ride-sharing.

However, I wanted to test this relationship further. The small sample-size still allows simple linear regression analysis. The question that I am asking is simple: All else equal, does an increase in the level of perceived employability leads to a decrease in the perceived threat of ridesharing? To this extent, simple linear regression was conducted. Similar to correlation analysis, the main assumption of regression analysis is that the two variables have a linear relationship. It was confirmed by Figure 21 (p.31) that the relationship is slightly linear. The second important assumption is that the data is normally distributed.

Having looked at the Q-Q plots of the two variables, it seemed that the variable capturing ridesharing threat has a slight deviation from the expected normal distribution, yet it did not seem big enough to warrant an intervention. The last important assumption is whether or not there is multicollinearity. However, multicollinearity can only occur if the independent variables are too highly correlated between each other. In reality, the model uses, at best, only two independent variables, so the Variance Inflation Factor (VIF) is not expected to significantly disrupt the regression models.

Figure 22: Regression Analysis of Hypothesis 1

	Model 1 (base)	Model 2	Model 3	Model 4	Model 5
Ridesharing Threat	-.477**	-.462**	-.478**	-.464**	-.468**
Age (1 = young)		.473			
Education (1 = low)			-.259		
Employment (1 = trad.)				.077	
Work exp (1 = low)					.128
R squared	.292	.295	.313	.326	.301

Note: ** = Significant at .01

Figure 22 presents the results of the regression analysis by model. In the base model, the main hypothesis (**H1**) still stands true: there is a negative and significant negative relationship between perceived employability and the threat of ridesharing. Indeed, all else equal, it seems that one unit increase in perceived employability leads to a -.477 decrease in the perceived threat of ridesharing. Furthermore, the R squared score is slightly small: .292, which means that the data does not really fit the regression model. However, it is worth mentioning that the data was collected by means of a survey with human participants, which affects R squared because humans are not as easily predictable as natural phenomena. This is not to say that the B coefficients and the significance level are unusable. Indeed, important conclusions can still be drawn.

However, the purpose of regression analysis is to control for certain expected interactions between variables. If no control is in place, then the regression analysis is essentially identical with the correlation analysis. Since this thesis suffers from a low sample size in the data-set, it is statistically impossible to add too many control variables in the regression model. Instead, the base regression model was kept as a reference point and controls were added one by one. While this is a typically unorthodox approach to modeling the regression analysis, in this case, it is considered to be the most logically sound approach. To be more specific, the regression models controlled for a) Age, b) Education, c) Employment status and d) Work experience. The question asked was: “All else equal, does an increase in the level of perceived employability lead to a

decrease in the perception of the threat of Uber while individually controlling for age, education, employment status and work experience?”.

As can be seen from Figure 22 (p.33) the results do not vary significantly at all. Indeed, there is the same level of significance across each model, including the base model. More specifically, the relationship is significant at .01 level regardless of which control was put into place in the regression model. Model 4 has the highest R squared (.326), which means that this model is the one that fits the regression line best. However, the variance in the level of R squared compared to the base model is not high at all and I consider it negligible.

In conclusion, it seems that there is some empirical basis to believe that level of perceived employability of romanian taxi drivers plays a role in shaping the individual's perception of the threat of ridesharing. In turn, **H1** is accepted.

8.1.2. Age - is there a difference between age groups?

Age is conceptualized as an important variable. The thesis predicts that there are differences in the level of perceived employability and perceived threat of ridesharing between age groups. It was mentioned that the variable age has been recoded into two groups: “*young*” and “*less young*”. This enables an independent samples t-test. This statistical test compares the means of two independent groups - in this case, between young and less young participants. It is used to determine whether or not there is a statistically significant difference between the two groups. **H2a** states: “*Older taxi drivers in Romania are less concerned with the threat of ridesharing than younger taxi drivers in Romania*”. For this hypothesis to stand true, there has to be a significant difference between the two age groups with regards to the threat of ridesharing.

In order to enable statistical analysis, some central conditions have to be met. The first requirement is that the dependent variable is continuous. In other words, the dependent variable is required to have a measurement level of either interval or ratio level. In this case, the dependent variable is measured at the interval level, which meets the criteria. The second requirement is that the independent variable is a binary or categorical variable. Indeed, the variable age has been re-coded as a categorical variable and, in turn, fulfills this requirement. The third central requirement is that the independence of observations. This means that the individuals in the first group cannot be in the second group. The variable passed this requirement as well. Ideally, a random sample would have been selected but the data collection strategy could

not fulfill this assumption. Therefore, it is impossible to state that the sample data from the population is random.

Figure 19 (p.30) presents the t-statistic of every independent samples t-test that was conducted within the thesis. As can be observed, with a t-statistic score of .954 and a two-tailed significance level of .348, there is no observed significant difference in the mean value of the perceived threat of ridesharing between the two age groups. The younger age group had a mean value of ridesharing threat of 3.553, whereas the older group reported a mean value of 3.911, implying that the direction is opposite to the hypothesised direction. In turn, **H2a** is rejected.

Furthermore, **H2b** states: “*Older taxi drivers in Romania perceive themselves as more employable than younger taxi drivers in Romania*”. For this hypothesis to stand true, I need to find a statistically significant difference in the mean values of perceived employability across the two age groups. Again, some central assumptions have to be met. It was already stated that the independent variable age passes the categorical measurement level requirement. Furthermore, the dimension of perceived employability was operationalized as a scale, which has an inherently interval measurement level, which passes the continuous measurement level requirement of the dependent variable.

Figure 19 (p.30) presents the t-statistic score of the independent samples t-test which measures the differences in the mean level of perceived employability between the two age groups. With a t-statistic score of 2.028, there seems to be at least some difference in the mean score of the dependent variable between the two groups. Surprisingly, the younger group reported a mean value of perceived employability of 3.897, whereas the older group reported a mean value of 3.259. Again, this implies a negative relationship between age and perceived employability, which goes against the direction hypothesised in **H2b**. However, with a significance level of .052, the statistical test missed the required critical value for statistical significance. To this extent, **H2b** is also rejected.

Nevertheless, there is an observed difference between the level of perceived employability between age groups. It is possible that, with a substantially higher sample size, the results would have been significant. However, given the current results, the null hypothesis is accepted.

Furthermore, I wanted to test whether or not there is a significant difference between the two age groups with regards to other central variables, namely the effect of ridesharing, as well

as ridesharing preference and taxi preference. As can be seen from Figure 19 (p.30), there is a statistically significant difference between age groups in the case of the effect of ridesharing as well as well as ridesharing preference. Indeed, the difference in ridesharing effect is significant at .05, whereas ridesharing preference is even stronger, as it is significant at a critical value of .01.

Regarding the effect of ridesharing, the younger age group reported a mean value of 3.666, whereas the older group reported a mean value of 2.666. With a t-statistic score of 2.853, this negative relationship is significant at the 95% confidence interval level.

Regarding ridesharing preference, the younger age group reported a mean value of 3.676, whereas the older group reported a mean value of 2.410. Again, with a t-statistic value of 3.495 this negative relationship is significant at the 99% confidence interval level. Indeed, younger taxi drivers seem to prefer working through ridesharing services more than older taxi drivers.

8.1.3. Education, or how learning shapes the perception of employment opportunity

Education is another central variable which is expected to shape both the way individual taxi drivers perceive the threat of ridesharing and the way individuals perceive themselves as more or less employable. The underlying assumption was that there is a statistically significant difference in the mean value of both perceived employability and the perceived threat of ridesharing between different educational groups.

H3a states: *“Taxi drivers with a level of education of bachelor or higher have a higher level of perceived employability than taxi drivers with a lower level of education”*. Since education is considered here a binary variable (high vs low education level) and both variables of perceived employability and ridesharing threat are measured as continuous variables, the statistical test that is used here is the independent samples t-test, which is used to determine whether or not there is any significant difference in the mean value of the dependent variable across the two groups of the independent variable.

Figure 19 (p.30) presents the t-statistic score of this statistical test. With a t-statistic score of .901 and a non-significant critical value, it seems that there is no statistically significant difference in the mean values of perceived employability across the two education groups. The low educated group reported a mean value of 3.505, whereas the highly educated group reported a mean value of 3.785, which indicates a non-significant positive relationship between education and perceived employability. Nevertheless, **H3a** is rejected.

H3b states: *“Taxi drivers with a level of education of bachelor or higher are less concerned with the threat of ridesharing than taxi drivers with a lower level of education”*. Again, this hypothesis is tested with an independent samples t-test. Just like the perceived threat of ridesharing, the variable perceived employability is measured as an interval level, which is an inherently continuous measurement level. Given the fact that education is a binary variable in this thesis and that the assumption of normality is met in the case of the dependent variable, a t-test is justified.

Figure 19 (p.30) presents the t-statistic score of this hypothesis. As can be observed, the difference between the two education groups is even lower in this case, with a t-statistic score of .126, which is highly non-significant. The mean value of the low educated group was 3.744, whereas the mean value of the highly educated group was 3.700. Such small disparity between mean values cannot imply any specific direction. Indeed, there is hardly any difference in the level of perceived employability between different age groups, which is a surprise, considering the fact that education is hypothesised and conceptualized as one of the main explanatory variables of perceived employability. With a highly non-significant t-statistic, **H3b** is rejected.

Still, while not being specifically hypothesised that there is a difference in the level of taxi preference across education groups, this relationship was also tested within this thesis. Figure 19 shows that, surprisingly, the only significant difference in the mean values of important dimensions between education groups is in the case of taxi preference. With a t-statistic score of 2.212 and a critical value which is significant at .05, it seems that there is significant difference in the level of taxi industry preference across different education groups. The lower educated group reported a mean value of 4.124, whereas the highly educated group reported a mean value of 3.400, which implies that there is a significant negative relationship between taxi preference and level of education. In other words, taxi drivers with a low level of education prefer working in the taxi industry as opposed to the ridesharing industry.

Taxi drivers with a low level of education may prefer working in the taxi industry perhaps due to a lack of understanding of the nature of the ridesharing service. For example, in order to enable ridesharing work, one has to be a self-employed, mini-entrepreneur, which means that one has to behave like a private company, which is not appealing for people with low levels of education, which are expected to have a low level of accountancy knowledge.

People with higher levels of education may be keeping away from working in the taxi industry due to the severe limitations in scope regarding taxi licences. Being a highly regulated industry, getting into the taxi service is a daunting, often costly task which can only be profitable in the long run. Working through ride-sharing is a quick and easy way of earning extra income without facing all the regulatory barriers. Being able to use one's own personal car adds to the incentives as well, because a prospective uber driver can simply open the application, log-in and start working.

8.1.4. The interaction between the nature of employment and the perception of the threat of ridesharing

This thesis recognizes the inherent difference between taxi drivers employed in the traditional sense and self-employed drivers. Traditionally employed individuals are those taxi drivers which work through wage-employment. Wage employment comes with certain benefits for the employee and certain responsibilities for the employer. Of course, the nature of the said employment benefits differ based on the country of activity. Nevertheless, it is widely known that self-employed drivers do not have the same access to employment benefits.

Therefore, this thesis maintains that there is a difference between traditionally employed drivers and self-employed drivers with regards to their perception of the threat of ridesharing. **H4** states: *"Taxi drivers which are self-employed are less concerned with the threat of ridesharing than taxi drivers under traditional employment"*. Figure 19 (p.30) presents the independent samples t-test which tests the mean difference between self-employed drivers and drivers under traditional employment with regards to the perception of the threat of ridesharing. As can be seen, there was no significant difference in the mean values of the perception of ridesharing between the two employment groups. The traditionally employed group reported a mean value of 3.756 while the self-employed group reported a mean value of 4.060, it seems that the relationship is actually positive, as opposed to the theorised negative relationship. Nevertheless, with a t-statistic score of .798, **H4** is rejected.

Furthermore, it was tested whether or not there is any significant difference between the mean values of the other dimensions across employment status groups. Namely, it was tested whether there is any significant difference between employment groups with regards to taxi preference, perceived employability, ridesharing preference and the effect of ridesharing. All

these tests reported non-significant differences. In other words, it seems that the nature of employment plays a non-significant role in determining these differences.

8.1.5. On work experience, the threat of ridesharing and perceived employability

Hypotheses **H5a** and **H5b** of this thesis are based on the assumption that work experience shapes the way individual taxi drivers perceive both the threat of ridesharing and their own level of perceived employability.

H5a states: *“Taxi drivers with a higher amount of work experience perceive themselves as more employable”*. This hypothesis inherently implies that there is a positive relationship between work experience and perceived employability. In order to test this hypothesis, an independent samples t-test was conducted. Figure 19 (p.30) presents the results of this statistical test. It seems that there is no significant relationship between work experience and the level of perceived employability. The direction of the relationship seems to be the opposite to the one which was originally hypothesised. The low work experience group had a mean value of 3.822, whereas the high work experience group reported a mean value of 3.476. Nevertheless, the results of the independent samples t-test has shown that this relationship is not significant, not even at .05 level ($t = 1.139$). Therefore, **H5a** is rejected. There is no significant positive relationship between work experience and perceived employability.

Furthermore, **H5b** states: *“Taxi drivers with a higher amount of work experience perceive ridesharing services as less of a threat than taxi drivers with a lower amount of work experience”*. This time, the expected relationship between these two variables is negative. In other words, if work experience goes up, then the perceived threat of ridesharing is supposed to go down. The independent samples t-test matrix presented in Figure 19 (p.30) reveals the results of this test. Taxi drivers with a low amount of work experience had a mean value of ridesharing threat of 3.426, whereas taxi drivers with a high amount of work experience had a mean value with regards to ridesharing threat of 3.892. While the relationship is confirmed to be somewhat positive (which again, goes against the original hypothesis), the independent samples t-test has proven that this relationship is non-significant ($t = 1.362$). In turn, **H5b** is also rejected: there is no observable significant relationship between work experience and the perceived threat of ridesharing.

However, the relationship between work experience and the perceived effect of ridesharing was also tested. Figure 19 (p.30) presents the result of this test. It seems there is a negative relationship between work experience and the perception of the effect of ridesharing. To exemplify this relationship, the mean score of the perceived effect of ridesharing for taxi drivers with low work experience is 3.555, whereas the mean score of the perceived effect of ridesharing for taxi drivers with high work experience is 2.797. The t-statistic reported a score of 2.412. Furthermore, the independent samples t-test proved that this negative relationship is significant at the .05 level.

In conclusion, this chapter has shown that, while there is no significant difference in the level of perceived employability and the perception of the threat of ridesharing across different work experience groups, there are other significant differences. Indeed, work experience has been seen to only shape an individual's perception of the effects of ridesharing at a significant level.

9. Conclusions

This thesis was centered around two important concepts. On the one hand, we have the platform economy, which is essentially a biosphere of (mainly) online businesses. The scope and reach of the platform economy is beyond the capability of any in-depth study. For the purpose of this thesis, I was interested specifically in ridesharing services, represented by already famous business ventures such as Uber, Lyft and BlaBlaCar. Carmen Balan (2016) has shown that there are different ways of organizing ridesharing services and indeed, the most famous and disruptive form of ridesharing is what she considers “for-profit, on-demand ridesharing”. This definition does not come out of nowhere. The taxi industry functions on the same basic principle, as it is also a for-profit on-demand transportation service. There is no argument that the most famous for-profit on-demand ridesharing services are the likes of Uber and Lyft. This is because they function on the same principle as the taxi services, with the added benefit of having no wage-employed drivers as well as superior algorithmic technologies. Chen & Sheldon (2015), Cramer & Krueger (2015) and Berger, Chen & Frey (2017) have proven that not only are ridesharing services a disruptive force on the taxi market, but their superior algorithmic technologies and the incentive-based labor-supply increase schema is no match for the traditional taxi industry, which

is currently suffering from a long-overdue regulatory reform (Matt Blackbourn and Holly Raiborn, 2017).

Of course, while the disruptive effects of ridesharing have been studied, the articles exemplified in this chapter have one thing in common: they are all looking at the market-sided effects of these disruptions. In this thesis, I was particularly interested to study the effects of ride sharing at an individual level by focusing on the most vulnerable group: taxi drivers. To the extent of my knowledge, this is the first empirical research undertaking which follows this approach. There are many negative effects that ridesharing can have on the taxi drivers at an individual level. What I was particularly interested here was the notion of perceived employability.

Employability is a widely used and researched concept in the academic field of social sciences. Ghoshal (1997), defined employability as the continuous ability to learn, wheread Lee Harvey (2010), proposes that employability is a by-product of higher education and therefore is a characteristic exclusive to individuals which have been subject to high-level learning. However, the taxi industry is generally considered a low-skill job, so a more moderate definition of employability was taken into account. Berntson (2008) argues that employability is an individual's ability of getting into new, equal or better employment. He furthermore argued that employability is a two-faceted concept. On the hand, there is actual (objective) employability, whereas on the other hand there is an individual's perceived level of employability. Following Rothwell & Arnold (2007), this thesis defines perceived employability as the individual's perceived capability of getting into new, equal, or better employment.

If ridesharing would be conceptualized as a threat, this thesis argues that the nature of the threat is external relative to the individual. Therefore, the most central hypothesis of this thesis was that the level of perceived employability has a negative effect on the way individual taxi drivers perceive the threat of ridesharing, since highly employable people do not feel these external threats as intensely. Indeed, a taxi driver with a high level of perceived employability, if faced with the hypothetical threat of losing his or her job due to ridesharing always has the perceived comfort of rapidly finding new employment in another sector of the transportation industry. In other words, this thesis assumed that, the higher the level of perceived employability, the lower the perceived threat of Uber.

Indeed, it was shown that there is a highly significant negative relationship between the level of perceived employability and the subsequent perception of the threat of ridesharing, even after controlling for age, education, employment status and employment experience, which further cements the strength of the relationship. This follows both the definition of Berntson (2008) and the definition of Rothwell & Arnold (2007), which assumes that perceived employability is a person's perceived ability of getting new or better employment, without referring to any external threats.

Age was expected to have interactions with the level of perceived employability, as well as the perception of the threat of ridesharing, whereas the statistical tests undertaken has shown that these relationships are not significant. However, it was found that age is negatively correlated with the extent to which an individual prefers working through ride-sharing, as opposed to the taxi service. Moreover, level of education was shown to be negatively correlated with the preference of working through the taxi industry. Such contradictory results are not surprising, if put into context.

The data-set, on average, has shown that younger taxi drivers are, on average, more educated than older taxi drivers. And just as Lee Harvey (2010) assumed that employability is a by-product of higher education, it is also known that critical thinking is an acquired skill and, in itself, is also a by-product of continuous learning. And working through ride-sharing is not exclusively ridden with benefits. In order to work through ride-sharing full-time, a driver has to forfeit his or hers employment benefits in favor of working as a self-employed mini-entrepreneur. This gives ridesharing companies a way of "outsourcing" legal responsibility by not having any formal employees. However, taxi drivers with low levels of education seem to prefer staying within the framework of the traditional employment and prefer the taxi industry.

Furthermore, it seems that education is not a big factor in explaining the level of perceived employability of Romanian taxi drivers. Traditionally, taxi driving is a low-skilled work venture, which may mean that industry professionals are less concerned with their level of education when considering their intra-industry employability, since there are no specific educational requirements for being a taxi driver other than having a driver's licence and a certain amount of driving experience. This, in turn, may explain why education, which is an important predictor of employability in the traditional sense, does not apply in the case of romanian taxi drivers and perhaps low-skilled workers in general.

Further conclusions can be inferred here. There is no doubt that ridesharing is a disruptive force on the taxi market on an individual level. However, this research seems to indicate that the most affected group of people are precisely the most vulnerable: the low educated, the ones that perceive themselves as less employable. For a taxi driver with a low level of perceived employability in Romania, a country which is notorious in the EU for having one of the lowest minimum salaries in the whole Union, the threat of ridesharing is more intense and therefore can have negative effects not only on employment, but also spillover into different areas such as general well-being, which was very well explained by the Berntson (2008) thesis.

To conclude, this thesis has the following main takeaways: a) perceived employability is negatively correlated with the perceived threat of ridesharing. In other words, drivers with a high level of perceived employability are more likely to be less concerned with external threats to employment ; b) The data-set seemed to indicate that taxi is a preferable alternative to ridesharing regarding potential income. However, ridesharing was found to be perceived as superior regarding work flexibility ; c) Ridesharing preference is negatively correlated with age. In other words, younger professionals are more inclined to work in a flexible manner, preferring the ridesharing service over the traditional taxi which offers classic wage-employment ; d) More research has to be conducted on the effects of ridesharing services from the perspective of the workers in the traditional industry.

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11. Data appendix

Figure 23

Descriptive statistics of central variables

Variables	Mean	S.D	Min	Max	Count
P. Employability	2.39	.943	1.00	4.67	-
Rideshare Threat	2.26	1.06	1.00	5.00	-
Rideshare Eff	2.91	1.03	1.00	5.00	-
Taxi Preference	2.10	1.03	1.00	5.00	-
Rideshare Preference	2.81	1.21	1.00	5.00	-
Age Young	-	-	-	-	13
Age Less Young	-	-	-	-	19
Education High	-	-	-	-	18
Education Low	-	-	-	-	42
Employment Trad	-	-	-	-	37
Employment Self	-	-	-	-	14
Work Exp High	-	-	-	-	40
Work Exp Low	-	-	-	-	17

Employability and Uber: Platform Economy Survey

Start of Block: Introduction

This survey is about the relationship between the platform economy and you, the taxi driver. Platform economies are economies organized online (i.e: through a website). Take for example, Uber. Uber takes part in the "sharing" or "platform" economy by allowing drivers to put to work underused assets such as their personal car and provide transportation services.

What is your current employment status?

- ☐ Employed full time
- ☐ Employed part time
- ☐ Unemployed looking for work
- ☐ Unemployed not looking for work
- ☐ Retired
- ☐ Student
- ☐ Self-employed

What is your level of education? Please select the highest achieved level. If currently enrolled, please select the criteria which fits your enrollment.

- ☐ No school finished
- ☐ General school
- ☐ High School
- ☐ Bachelor/Master
- ☐ Doctorate

What is your employment contract as a taxi driver?

- ☐ Full-time employment
- ☐ Part-time employment
- ☐ On-call driver (can work whenever you want)

Is taxi driving your main income?

- ☐ Yes
- ☐ No

You have stated that taxi driving is not your main income. Where does your main income come from?

- ☐ Another full-time job
- ☐ Another part-time job
- ☐ Self-employment
- ☐ Investments
- ☐ Student loans
- ☐ Other

For how long have you been a taxi driver?

- ☐ Less than a year
- ☐ 1-2 years
- ☐ 3-4 years
- ☐ 5+ years

Do you have working experience in an industry other than the taxi industry?

- ☐ Yes
- ☐ No

Can you list other industries that you worked in? (i.e: catering, manufacturing, construction, etc.)

End of Block: Introduction

Start of Block: On Uber

Have you ever worked in the ride-sharing industry? (i.e: Uber, Lyft)

☐ Yes

☐ No

How often did you work through ride-sharing?

☐ Only once

☐ A few times/Occasionally

☐ Often/Regularly

☐ Very often

Did you ever consider quitting the taxi industry in favor of ride-sharing? (Uber, Lyft, etc?)

☐ Yes

☐ Maybe

☐ No

End of Block: On Uber

Start of Block: On employability and ride-sharing

To what extent do you agree with the following statements? I would prefer to work through ride-sharing as opposed to the taxi industry, because...

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
... it allows me to earn more money	☐	☐	☐	☐	☐	☐	☐
... I can use my own car	☐	☐	☐	☐	☐	☐	☐
... I don't have to comply to taxi regulations	☐	☐	☐	☐	☐	☐	☐
... I can choose when and how much time I work	☐	☐	☐	☐	☐	☐	☐
... I can be my own boss	☐	☐	☐	☐	☐	☐	☐

To what extent do you agree with the following statements? I would prefer to work through the taxi industry as opposed to ride-sharing, because...

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
... I have a working contract	☐	☐	☐	☐	☐	☐	☐
... I can access employment benefits	☐	☐	☐	☐	☐	☐	☐
... it allows me to earn more money	☐	☐	☐	☐	☐	☐	☐
... I can choose when and how much time I work	☐	☐	☐	☐	☐	☐	☐
... I have job stability	☐	☐	☐	☐	☐	☐	☐

To what extent do you agree with the following statements?

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree

Ride-sharing
made me
consider
changing
industries

☐☐☐☐☐☐☐

I would
consider
leaving my
current
employment
and work
through ride-
sharing

☐☐☐☐☐☐☐

It is harder to
find a job in
the
transportation
industry
since Uber
entered the
market

☐☐☐☐☐☐☐

Taxi driving
lost
attractiveness
as job since
Uber entered
the market

☐☐☐☐☐☐☐

I am actively
looking for
alternatives
on the job
market since
Uber entered
the market

☐☐☐☐☐☐☐

To what extent do you agree with the following statements? Ride-sharing is a threat to the taxi business because...

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
... it is disloyal competition	☐	☐	☐	☐	☐	☐	☐
... it sets a lower standard of job security for future workers	☐	☐	☐	☐	☐	☐	☐
... it sets a lower standard of employment benefits for future workers	☐	☐	☐	☐	☐	☐	☐
... it makes me earn less as a taxi driver	☐	☐	☐	☐	☐	☐	☐
... customers are leaving taxi in favor of ride-sharing	☐	☐	☐	☐	☐	☐	☐

To what extent do you agree with the following statements?

	Strongly agree	Agree	Somewha t agree	Neither agree nor disagre e	Somewha t disagree	Disagree	Strongl y disagree
I feel confident in retaining my current employment in the next 12 months	☐	☐	☐	☐	☐	☐	☐
If I wanted, I could look for better employment in the taxi industry	☐	☐	☐	☐	☐	☐	☐
If I wanted, I could look for better employment outside the taxi industry	☐	☐	☐	☐	☐	☐	☐
Ride-sharing has no real impact on my employment opportunities	☐	☐	☐	☐	☐	☐	☐
Ride-sharing has no real impact on my job security	☐	☐	☐	☐	☐	☐	☐

End of Block: On employability and ride-sharing

Start of Block: On COTAR

Are you a member of a union?

☐ Yes

☐ No

End of Block: On COTAR

Start of Block: Basic Demographics

What is your age?

☐ 18 - 24

☐ 25 - 34

☐ 35 - 44

☐ 45 - 54

☐ 55 - 64

☐ 65 - 74

☐ 75 - 84

☐ 85 or older

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other

What is your nationality?

End of Block: Basic Demographics

Start of Block: End of survey

Thank you for your participation! This is the end of the survey.

As a participant, you can ask to receive the results of the research upon completion. If you would like to receive the results, please enter your e-mail address below.

End of Block: End of survey