

University of Twente, Enschede (NL)  
Westfälische Wilhelms-Universität Münster (DE)

Bachelor Thesis

**Feedback behaviour in the platform economy.**  
Do the working conditions of platform workers matter?

Andre Klausmeyer, s1868691

Date: 4 July 2019

Public Governance across Borders

Word count: 16.865 words

## **Abstract**

The rise of platform economy services has led to discussions about poor working conditions of platform workers. At the same time, online reputation feedback systems where consumers give immediately feedback about the service quality are becoming ever more important. Platform workers increasingly rely on these feedbacks because they serve as indicators that can determine whether a worker will be assigned for new jobs or not. This study investigates the extent to which consumers consider the working conditions of platform workers when they participate in online feedback ratings. The aim of this study is to find out how this can be explained by platform specific characteristics, the socio-economic status of the consumers, or differences in the consumer's perceptions of the platform economy. Quantitative data was collected via an offline and online survey (N=91). A multiple linear regression analysis revealed that the factors consumer's gender, political orientation, age, and the perceived impact of the feedback rating have significant effects on the extent to which consumers emphasize the working conditions of platform workers.

## Table of Contents

<b>1. Introduction</b> .....	1
<b>1.2 Research question</b> .....	3
<b>2. Theoretical framework</b> .....	4
<b>3. Data and Methods</b> .....	13
<b>3.1 Research Design</b> .....	13
<b>3.2 Case selection and sampling</b> .....	13
<b>3.4 Descriptive Statistics &amp; Internal and External Validity</b> .....	16
<b>3.5 Operationalization</b> .....	20
<b>3.6 The dependent variable</b> .....	20
<b>3.7 The Independent Variables</b> .....	22
<b>4. Analysis</b> .....	29
<b>4.1 The dependent variable Emphasis on the working conditions</b> .....	29
<b>4.2 Bivariate correlations</b> .....	30
<b>4.3 Independent sample t-tests</b> .....	32
<b>4.4 Regression analysis</b> .....	36
<b>5. Conclusions and Discussion</b> .....	43
<b>6. References</b> .....	46

### Appendix

- Appendix I (Factor analysis)
- Appendix II (T-tests for social classes)
- Appendix III (Preliminary regression analysis)
- Appendix IV(Collinearity Diagnostics)
- Appendix V (Survey questions)

## 1. Introduction

The rise of the platform economy has brought many advantages for consumers as they oftentimes can save money and have more flexibility in their purchase decisions compared to traditional forms of consumption. The platform economy is a relatively young phenomenon as it emerged at the beginning of this century. Unlike in a typical business environment where a consumer and a producer exchange goods, the platform economy is characterized by the interplay of three actors: the consumer (crowdsourcer), the workers, and the platform itself as an intermediary between the two (International Labour Organization, 2018). There are different types of platforms, like for instance, *crowdwork platforms* and *work-on-demand via apps platforms*. The former refers to digital services, like graphic-design services, that can be performed online and independent of the location. The latter refers to local services, like food delivery services, that are coordinated via apps (Stefano, 2015). Furthermore, one can distinguish between three functions that (labour) platforms fulfil. First, they match the workers with demands. Secondly, they provide the infrastructure system (tools and services) that make the exchange of work for a compensation possible. And third, platforms set the governance rules of the platform which reward good behaviour and discourage bad behaviour (Choudary as cited in International Labour Organization, 2018). Typically, such reward or punishment systems are created by the use of so-called feedback reputation system, where consumers can give instant feedback about the service quality of the delivered work. These systems are widely considered to be key instruments to create trust among platform economy consumers (Dellarocas, 2003; Hawlitschek, Teubner, & Weinhardt, 2016). Such systems can be designed in many ways, for instance, through written feedback reviews, rankings (1 - 5 stars), or more simple thumbs-up/down systems. In most platform services, consumers are asked to give a feedback after each transaction. Depending on the service, the feedback can be one-sided so that only the consumer rates the platform worker, or it can be two-sided where both the worker and the consumer rate each other.

Closely related to the investigation of feedback reputation systems are discussions about the working conditions in this new type of economy. Generally speaking, one can argue that due to the great variety of platform services, also the working conditions vary from service to service. Especially in the crowd work sector, one can distinguish between lower- and higher-skilled tasks. For instance, click workers, who perform easy repetitive online tasks, might earn less than highly skilled website developers. Therefore, it is also hard to speak of *the* platform economy as a one single phenomenon. Nevertheless, scholars have argued that there are many

aspect affecting the working conditions of many platform workers. These include, among others, "unfair treatment, low earnings, non-payment, lack of social protection, and lack of voice" (International Labour Organization, 2018, p. 3). Also, for the local platform services (work-on-demand via apps), there are serious objections concerning the working conditions (Cook, 2015; Scholz, 2017). For instance, in Germany this has led to protests among platform workers who protested for the right to form labour unions and fair wages (taz.de, 2017). Another issue is the unclear employment status of platform workers. For example, many are considered as self-employed which often results in a lack of the social protection of platform workers because as self-employed workers (European Commission, 2016). Also, income insecurity can be regarded as a problem of platform workers (Berg, 2016). Again, this also has to do with platform reputation systems that affect the likelihood that a person is being hired again.

So far, only few scholars have dealt with this connection between the working conditions of platform workers and feedback reputation systems. For instance, some scholars found that the *platform reputation* of a worker - which is primarily created by feedbacks reputation systems - is an important factor of the job quality in platform economy (Wood, Graham, Lehdonvirta, & Hjorth, 2019). This is because poor feedback ratings can lead to a poor *platform reputation* of a worker - which, in turn, leads to lower incomes and job insecurity. This mechanism is crucial to understand because many platform workers are self-employed. Hence, they do not have a typical working contract *with* the platform, but they work as freelancers who offer their services *via* the platform. Doing so, a platform worker competes with many other workers on a platform who offer their services, too. In such a competitive situation, a positive platform reputation (i.e. good feedback ratings) is an important advantage in order to be assigned for a task (Chen, 2015). In other words, this means that a negative platform reputation is a huge disadvantage because the platform worker might not be able to get a new assignment. Consequently, platform workers heavily depend on the feedback ratings because they have a high influence of the job quality in the platform economy (Khanna, 2018).

Other research in this field has mainly stressed the positive effects of such systems feedback systems. For instance, online reputation systems have been characterized as crucial to make the platform economy work because they create trust among the platform users (Hausemer et al., 2017; Hawlitschek et al., 2016). As an example, one might think of an Airbnb user who carefully checks the feedback ratings of a host before he or she is willing to book an apartment. Consequently, a functioning feedback reputation system will benefit those who are trustworthy and punish those that are not trustworthy (Dellarocas, 2003). However, besides this research about the trust-creating effects of such systems, there is not much known about the underlying

motives of consumers to participate in feedback ratings and in which ways consumers evaluate the quality of the services. Some scholars have pointed out that feedback ratings in the platform economy differ from ratings in the e-commerce sector, where solely the product quality is being evaluated (Pettersen, 2017; Zervas, Proserpio, & Byers, 2015). In the platform economy this is different in the sense that consumers rather evaluate the quality of a relationship between the platform worker and the themselves Hence, there must be some social aspects involved in the feedback ratings (Pettersen, 2017). Interestingly, some studies have found that a large majority of online feedbacks are overwhelmingly positive (Filippas, Horton, & Golden, 2018; Hu, Pavlou, & Zhang, 2013). Since one can assume that the service quality in the platform economy naturally fluctuates to some extent, a more normal distribution of positive (and negative) feedbacks would be logical. This leads to the question what exactly it is that consumers take into consideration when they give feedback in the platform economy; and if the poor working conditions of platform workers play a role here. This study uses a novel approach by connecting the field of working conditions in the platform economy with reputation feedback systems. Hence, this study aims to fill this knowledge gap by investigating whether consumers are solely considering the service quality when rating or whether other reasons, like the working conditions of platform workers, are considered as well.

## **1.2 Research question**

The main explanatory research question of the thesis will therefore be:

*To what extent do consumers consider the perceived working conditions of platform workers when giving feedback in online platform services?*

From this main question one can derive a sub-question that helps to explain it fully:

*And to what extent can these considerations be explained by:*

- a) platform specific characteristics,*
- b) social demographic characteristics of the users,*
- c) the consumer's knowledge about the working conditions of platform workers?*

Hence, the main dependent variable in the thesis will be "Emphasis on the working conditions in feedback ratings". For the purpose of clarity, the variable will be called *Emphasis on the*

*working conditions* throughout this paper. The independent variables will be developed in the theory section together with hypothesis to test. The unit of analysis are the consumers in the platform economy.

### **Societal and scientific relevance**

The topic of this thesis has both a societal as well as an academic relevance. The platform economy is a relatively novel phenomenon. This means that academic research about the topic is relatively young and still emerging. Academics across disciplines are dealing with the phenomenon because it involves social, economic and increasingly also legal aspects. Many questions are still unanswered or unaddressed. Although some scholars have dealt with the necessity of using online ratings as a way to create trust in online services, there is still a knowledge gap concerning the factors that people consider when they give online feedback in the platform economy (Pettersen, 2017). Hence, this thesis contributes to the academic literature by adding insights to both the working conditions of platform workers as well as to the wider discussion about trust creating systems in the platform economy.

Besides this, one can argue that the platform economy is no longer an issue solely discussed among academics or practitioners. Increasingly, also governmental actors, trade unions, and other societal organizations discuss the rise of the platform economy as it will have great societal implications. As the platform economy is expected to grow rapidly in the next decades, this will have a disruptive impact on the way we work, consume, and live as a society. (Drahokoupil & Fabo, 2016; Katz & Krueger, 2016; Kenney & Zysman, 2016) Especially for policy makers there are many challenges as this new form of economy is still largely unregulated (European Commission, 2016; Pesole, Urzì Brancati, Fernández-Macías, Biagi, & González Vázquez, 2018) Hence, the discussions about the rise of the platform economy and its consequences for society are just at the beginning and will certainly become more important in the future than ever before.

## **2. Theoretical framework**

In the following section a theoretical framework of main determinants for peoples rating behaviour will be developed. The framework consists of determinants that are expected to have an effect on the emphasis people put on the working conditions of platform workers (dependent variable). In this framework, the most important determinants mentioned in the literature, will be integrated. Theoretically, it bases on (economic) literature about online reputations systems in the platform economy as well as on (social) studies that deal with the working conditions of

platform workers. Combining findings from both fields, three types of determinants can be identified: platform specific characteristics, consumer specific characteristics, and factors associated with (perception of) the working conditions of platform workers. For each category hypothesis will be developed.

### **The dependent variable: Emphasis people put on the working conditions**

The main variable of interest in this paper is to find out to which extent (if any) people consider the working conditions of platform workers when they give feedback. Among scholars there are discussions about what can be considered as “working conditions”. Factors can include, for instance, the payment or the social protection (International Labour Organization, 2018). However, in this paper, the focus will be on those factors that can be directly influenced by the feedback reputation systems. For instance, social protection can be considered as an important factor concerning the general working conditions of a person, however, it is relatively unlikely that it is directly influenced by consumer's feedback rankings. On the other hand, there are factors that can be directly influenced. To be more precise, there are two main mechanisms how ratings can affect the working conditions of platform workers, namely:

- 1) The future prospects of getting hired again in the future;
- 2) The stability or instability of income

The future prospects of getting hired again in the future is the central point that can be influenced by positive or negative ratings. Feedback ratings are there to create trust and to ensure the quality of a service. Platforms like Uber do consider the feedback rankings of its drivers very carefully. And as it is known that bad ratings, or rather those that are not nearly perfect, are considered as a sign of poor quality and can lead to not being hired again (Filippas et al., 2018). As platform workers are usually self-employed, they do not get fired in such a case, but they simply do not get new jobs which then has the same effect.

Filippas et al. (2018) did research on this mechanism that people's ratings can harm the future prospects of platform workers. They conducted their research in the context of internal feedback ratings within an organization where employees could rate each other and found that in reputation systems there is a tendency that ratings are getting better over time (rating inflation). Looking from an economic cost-benefit perspective, they argue that this pressure to rate others positively is due to increased “cost of harming the worker's future prospects” (Filippas et. al., 2018, p. 27). What they call the “costs of harming others” could be translated into a more social science perspective with concepts like social behaviour, altruism, empathy,

or values that stress helping others (who are vulnerable). The context of their research is slightly different because in their example colleagues rated each other. Of course, most time not the case in platform economy feedback ratings. However, the findings can still be relevant for this context as well.

Focussing on the job quality in the gig-economy, Wood et al. (2019) found that there are two main determinants of job quality in the gig-economy: *skills* and *platform reputation*. According to them, the absence of these two leads to low incomes or income insecurity. This finding shows that the working conditions in the platform economy are directly connected with the online reputation systems because the *platform reputation* of the worker heavily depends on the consumer's feedback. Therefore, Wood et al. (2019) also argue that platform workers have relatively little bargaining power compared to consumers that have relatively much power over the workers (via the ratings).

The second mechanism, namely the stability or instability of income can be seen as a consequence of (not) harmed future prospects. The better the feedback is, the more likely is worker is being hired again. This, in turn, leads to more stability of income. The same way, negative feedbacks can deteriorate the future prospects, and thereby, can lead to more instability of income. Hence, a striking question of this paper is whether or not people care about the impact of their ratings on the future prospects of the workers. The degree to which they consider the future prospects of the workers might also be influenced by their perception of whether or not their individual feedback can make a real difference (or have an impact) or not. It seems possible, that some people might believe that their own rating is only one out of many and does not contribute to a change. This logic could be quite similar to those of non-voters voters in elections who have doubts that their vote will influence the outcome. Using a rational-choice approach, also Anthony Downs (1957) famously argued that it is not rational for individuals to participate in general elections because the personal costs are higher than the potential benefits. In the voting example, the likelihood that an individual's vote will make a big difference is extremely low. This so-called paradox of voting could also be applied to peoples rating behaviour in the platform economy. From this point of view, it seems logically that people who think that their rating will have a great impact, will a) rate more often (or at all) and b) consider their impact on the workers more strongly compared to those who believe that their rating would not have any substantial impact. The latter might not give feedback at all or at least do not consider their impact on the future prospects so strongly. This leads to the following hypotheses:

*H1: People who generally believe that their own feedback has a great impact, are more likely to participate in feedback ratings at all, compared to those who do not believe that their ratings have a great impact.*

*H2: People who believe that their own feedback rating will have a great impact on the working conditions, are more likely to consider the working conditions of platform workers, compared to those who do not believe that their ratings will have a great impact.*

In the following, three types of determinants for the dependent variable will be discussed: a) platform specific characteristics, b) consumer specific characteristics, and c) factors associated with consumers perception and knowledge of the working conditions of platform workers.

#### **a) Platform specific characteristics**

As scholars have noted, the platform economy is a very broad phenomenon consisting of many different kinds of services and types of platform mediated work (Möhlmann & Geissinger, 2018). As Groen, Maselli, & Fabo (2016) have suggested, one can distinguish between four basic types of digital labour markets. They make a first distinction between services that can be conducted around the globe because they are virtual and those that are of physical nature and locally bound. Furthermore, they distinguish between low-skilled and high-skilled jobs. This results in four categories. Examples for low-skilled services include Amazon Mechanical Turk which is virtually and globally, or Uber which is a local and physical. Examples for high-skilled services are UpWork which is globally and virtually, or TakeLessons which is locally. This distinction makes clear that there is not one type of platform work but several. Concerning the working conditions of platform workers, discussions often focus on the low skilled platform workers, such as Uber drivers or delivery workers. For instance, for low-skilled jobs, the idea of not harming people could be relevant. As Wood, Lehdonvirta, & Graham (2018) argue, especially low-skilled platform workers tend to be more vulnerable and having to face poorer working conditions compared to high-skilled ones. Arguing that people generally might not want harm people that are very vulnerable compared to those that are not so vulnerable, this leads to the following hypothesis:

*H3: People are more likely to emphasize the working conditions for low-skilled platform workers compared to high-skilled ones.*

Also, one can assume that people may take the working conditions of local platform workers more into account simply because these workers are more visible compared to workers who perform virtual tasks. Whereas a Deliveroo driver might wear colourful printed textiles, a gig-worker who only performs virtual service from home is nearly invisible for the general society (Schmidt, 2017). This leads to the following hypothesis:

*H4: People are more likely to emphasize the working conditions when services are performed physically or locally compared to virtual or global services.*

Another distinction that can be made is whether the service is repeated on a regular basis (e.g. weekly cleaning jobs; maybe even always with the same platform worker) or whether the service is performed uniquely or at least seldomly (e.g. an Uber drive once every half a year). Hence, this results in following hypothesis:

*H5: People are more likely to emphasize the working conditions if the service is performed on a regular basis compared to a service that is done only once.*

## **b) Socio-demographic characteristics**

The influence of socio-demographic of people characteristics are often one of the most frequently used variables in social science research. In many cases they act as intervening variables and can explain a lot in people's behaviour. A stream of research that can be seen as similar is about ethical consumption. Previous research in this field has primarily focussed on consumers views about ethical consumption and their willingness to pay more (WTP) for ethically produced products, such as fair-traded coffee or fair produced cloth (Andorfer & Liebe, 2012). As the topic is quite similar, it makes sense to derive some hypothesis concerning the socio-demographic characteristics from findings in ethical consumption studies.

### **Education**

Starr (2009) in her research analyses data from the General Social Survey (GSS), a yearly conducted representative household survey in the U.S. She investigates socio-demographic factors that are associated with issues of ethical consumption. In line with others, she finds that education is positively associated with ethical consumption. According to her, the underlying reason could be that educated people have "advantages in acquiring and processing information on social, ethical and environmental issues" (Starr, 2009, p. 919). She further argues that more educated people tend to read newspapers more often – and hence are better informed about social and ethical issues. In line with this, Herbert (2018) also confirmed this. She argues that people who are higher educated would have stronger humanitarian values that led people care

for others (Hyman and Wright as cited in Herbert, 2018). This argument would also make sense in the context of knowledge about protests among platform workers and debates about the working conditions in general. This results in the following hypothesis:

*H6: Higher educated people are more likely to emphasize the working conditions of workers when giving online feedback compared to lower educated people.*

### **Gender**

Furthermore, Starr (2009) argues that previous studies have shown that altruism is more often associated to women than to men. Other empirical findings have confirmed this, for instance, using dictator game experiments, where women tend to behave more group oriented (altruistic) than men (Eckel & Grossman, 1998). However, more recent research has also shown that – although this tendency is still observable – people also expect women to be more altruistic than they actually are (Braaas-Garza, Capraro, & Rascon, 2018) In line with this, Rand, Brescoll, Everett, Capraro, & Barcelo (2016) in their meta-analysis of several studies on the issue, suggested that women are more altruistic because they may have internalized altruism more than men because it is simply more expected of them by society. This would also make sense in the context of perceived working condition of platform workers. Hence, one can assume the following:

*H7: Women are more likely to emphasize the working conditions of platform workers when giving online feedback compared to men.*

### **Interest in politics and political orientation**

Starr (2009) also finds that general interest in politics is positively associated with ethical consumption behaviour. According to her this might be due a higher “general influence of proactive attitudes in socio-political participation”(Starr, 2009, p. 924). Herbert (2018) also found that the political orientation (on a left-right scale) has an intermediating effect on people’s awareness of platform economy-related protests. As she argues, this might be due to a general tendency that left-wing oriented people tend to consume more media dealing with issues of the problematic working conditions of platform workers. This results in the following two hypotheses:

*H8. People who are interested in politics are more likely to emphasize the working conditions of workers when giving online feedback than people who are not interested in politics.*

*H9. People with a rather left-wing political orientation are more likely to emphasize the working conditions when giving online feedback compared to rather right-wing people.*

### **Social Class**

It is known that people tend to care about people who are similar to them (Hampton, Fisher Boyd, & Sprecher, 2018). A general determinant of such similarity can be the socio-economic status as many studies have found that the socio-economic status of people influences people's lives in many ways. Theoretically, one can assume that people who consider themselves as being working class people will identify stronger with platform workers in the in the "work on demand via apps" platforms because these jobs can be regarded as rather low, working class activities. This leads to the following hypotheses:

*H10: People who consider themselves to be working class people, are more likely to emphasize the working conditions of platform workers, compared to those who consider themselves as middle or higher class.*

However, one should keep in mind that this effect can also be counterbalanced by the variable *education*. As argued above, higher education could also lead to a greater emphasis on the working conditions. However, higher education is typically associated with middle- or higher-class backgrounds and not so much with a working-class background. This, in turn, could counterbalance the effect of the working class-background.

### **c) Knowledge about the working conditions**

As the platform economy emerges with an increasing pace, the debate about poor working conditions and protests of platform workers can hardly be overlooked. Discussions not only take place in academia but also increasingly in press coverage (Deutsche Welle, 2019 ; ZEIT Online, 2019). Closely related to bad working conditions are protests of platform workers that are becoming more popular in recent years. In Germany, recently taxi drivers protested against

a legislation amendment that shall liberalize passenger transportation services – and hence making room for Uber in Germany (Deutschlandfunk.de, 2019) .

Herbert (2018) in her research tested whether platform economy consumers who are aware of protests among platform workers are willing to pay more in order to improve the social protection of platform workers. She found that consumers who are aware of protests are more likely to support an improvement of the social protection of platform workers and, in turn, were willing to pay more for the services. She also found that the political orientation of consumers played a role in their support. These results have also been confirmed in studies about ethical consumption that focussed on the willingness to pay more for cloth that are produced under fair conditions (Bair, Dickson, & Miller, 2016, 2014). The underlying logic for the effect of the awareness of protests is twofold. Besides the effect of higher education, she argues that the awareness of a problem can lead to a change in behaviour of people (Halady and Rao as cited in Herbert, 2018). Although these findings have been asked in the context of consumers' stated willingness to pay more, they might also play a role when it comes to their rating behaviour. However, it must be noted that, recently, other scholars came to different conclusions. For instance, Christiano & Neimand (2017) argue that awareness of a problem alone does not always lead to a change in behaviour of people. They find that sometimes - for instance, in very polarized topics - awareness campaigns can even have the opposite effect, where people stick even stronger with their initial behaviour instead of changing their mind. Also, in the context of sustainable consumption or the motivation to participate in sharing economy services, the so-called attitude-behaviour-gap is widely known (Hamari, Sjöklint, & Ukkonen, 2016). This phenomenon occurs when people are not behaving according to their stated attitude. For instance, a person might state that he or she appreciates products that are produced under fair conditions but actually buys cheaper products that are not produced fair.

Hence, it is important to keep in mind the presented considerations when deriving the following hypothesis:

*H11: People who are aware of the protests among platform workers are more likely to consider the working conditions when giving online feedback, compared to those not aware of it.*

*H12: People who support protests among platform workers are more likely to consider the working conditions when giving online feedback, compared to those who do not support them.*

#### **d) Perception of the working conditions**

Furthermore, it would be interesting to see if the perceptions of the working conditions of platform workers also play a role for those who do not use platform services at all. Theoretically, one could assume that some people might not use platform economy services *because* they have negative perceptions of the working conditions of platform workers, and hence, might support protests among platform workers. The same way, users of platform economy services might have more positive perceptions about the working conditions of platform workers as they (still) use the services which others might avoid out of ethical reasons. This idea leads to the following hypothesis:

*H13: People who have more positive perceptions about the working conditions of platform workers are more likely to use platform services frequently, compared to those who have more negative perceptions.*

The same way, this logic could also apply to the feedback systems. As previous research has shown, online feedback reviews tend to be overwhelmingly positive (Hu et al., 2013). This leads to the assumption that people might make use of "general rating strategies", meaning that they, for instance, give positive feedback as a default. Combining this with the above discussed idea of people's intention to not harm the workers future prospects (even more), this can lead to the following hypotheses:

*H14: People who have more negative perceptions about the working conditions of platform workers, are more likely to emphasize the working conditions, compared to those who have more positive perceptions.*

*H15: People who have more negative perceptions about the working conditions of platform workers, are more likely to give (generally) more positive feedback, compared to those who have more positive perceptions.*

However, both hypotheses need to be considered carefully since previous research has shown that an attitude-behaviour-gap can play a role here. This phenomenon is known not only in research about (un)ethical consumption but also in sharing economy studies regarding the motivation of people to participate in platform services (Hamari et al., 2016). It means that

people state one thing, and act in another way. For instance, people might state that they consider ethical working standards to be important but buy products from which they know that they are produced unethically. In this context, people might say that the working conditions of platform workers matter to them but, eventually, do not consider them in their feedback behaviour.

### **3. Data and Methods**

#### **3.1 Research Design**

In this paper a cross-sectional research design was chosen. Due to the fact that there is limited available data about platform service usage in general – and specifically in the field of rating systems – the collection of original data was essential for this study. The target population of the survey are people living in Münster. So, the sample gives specific information about the use of platform services among people living in Münster. In order to reach a good sample quality as well as a high number of participants a two-pronged approach was chosen. A survey was created with the Software Qualtrics. This survey was then used to conduct an offline as well as an online sample.

#### **3.2 Case selection and sampling**

The best mean to achieve high data quality is to have a random sample among the general population. As the survey was not only aimed at platform users but also at those who do not use it (but who have some knowledge about it), it was possible to aim for a general population sample in Münster. Due to the limited time and means available, a pragmatic approach was chosen – namely, asking people in front of a supermarket. In order to ensure a relatively random sample, several supermarkets in socio-economically different districts of the city were chosen (see Table 1.). The survey was open from 4 May 2019 to 24 May 2019. The main offline data collection took place on two Saturdays from 10 – 15 o'clock because at this time the chances to reach a relatively random population are the highest since many people work during the week. Additionally, some days among the week at different times and locations were chosen (in the afternoons and in the evening hours from 17 – 18 o'clock) in order to reach many different people. In front of the supermarkets, every fifth person entering the supermarket, was approached and asked to participate in the survey. Then, the researcher guided the participants through the survey that was displayed on a tablet pc.

**Table 1.** Time and dates for the offline sample

<b>Date and time</b>	<b>Supermarket</b>	<b>District in Münster</b>
Sat., 4 May, 10 -12 hrs.	LIDL discount	Mecklenbeck
Sat., 4 May, 13 – 15 hrs.	EDEKA Center supermarket	Geist
Sat., 11 May, 10 – 12 hrs.	Edeka supermarket	Aaseestadt
Sat., 11 May, 13 – 15 hrs.	Aldi supermarket	Gievenbeck
Wed., 15 May, 14:30 – 15:30	Rewe supermarket	Kreuzviertel
Sat., 18 May, 19:30 – 20:45	LIDL	Südviertel
Mo., 20 May, 18 – 19 hrs.	Express Edeka City Shop	City center
Fr., 24 May, 17 – 18 hrs.	Rewe to go City shop	City center

### **The online sampling approach**

The offline-sample was accompanied by an online-sampling-approach that based on opportunity sampling. Therefore, the researcher spread the link to the online survey among friends and contacts who live in Münster via WhatsApp and e-mail. These contacts were also asked to share the link themselves with their own contacts from Münster. This snowball sampling technique has the advantage that relatively many people can be reached. However, it has the disadvantage that the social backgrounds of the people are likely to be biased and very similar to the one of the researchers (Babbie, 2014). But among young people, the share of actual participants in the platform economy is relatively high. So, it has the advantage that most likely most participants have some experience with platform services or have heard of it.

The online sample was also spread with an opportunity sampling approach. Here, the link was shared on Facebook groups that have a relation to Münster. These groups consist of many group members and are more diverse than only the contact networks of the researcher. However, this sample can be biased too because primarily young people tend to be active on Facebook. Also, in these groups many survey links from the University of Münster are posted, a lot of them offering some monetary rewards or chances to win a gift coupon, which makes other survey more attractive for participants. Therefore, the chances to reach people to participate is not very high.

In order to ensure that only people who live in Münster participated, the first question in the survey asks about the current residence of living<sup>1</sup>. People who indicated that they are currently not living in Münster, were excluded from the survey. The same approach was used for people who have never heard about the platform economy before. In order to differentiate the online sample data from the offline sample data, the final question of the survey asked if the respondent filled out the survey alone or if he was guided through the survey by the researcher<sup>2</sup>. In total, both the online and the offline strategies have strong and weak points. However, these points can – to some degree – balance each other out.

### **Sample size**

In total, 248 people participated in the survey. However, many cases had to be excluded from the analysis: Respondents who indicated that they do not live in Münster were excluded directly. Unfortunately, the sample also contained many cases where the respondents said that they do not know or do not use platform economy services. Therefore, these cases were excluded as well. Finally, cases with missing values on relevant questions had to be excluded. This resulted in a final sample of N = 91 cases.

### **Media coverage at the time of the sample**

What might be worthwhile to keep in mind is the media coverage about issues concerning atypical working relationships in general as well as the platform economy specific news coverage at the time when the survey was open. In the weeks before they survey was open and while it was open, relatively much media coverage was available dealing with the problems of atypical working relationships in Germany. Also, at this time the initial public offering of Uber at the stock market was accompanied with protest of taxi drivers in Germany because there are discussions going on about a reform of the transportation laws that would lead to a greater acceptance of services like Uber (www.dw.com, 2019 ; hessenschau.de, 2019). Although not identical but certainly related was the issue of poor working conditions of delivery drivers in

---

<sup>1</sup> This question was added later at the first day of the data collection after the first session of data collection took place. However, all people who participated before the question was added, were from Münster. So, these cases were also used for the analysis (see SPSS syntax).

<sup>2</sup> Again, this question was added later after the first days of the offline data collection but still before the online sampling started and the survey link was spread among the researcher's contacts and in Facebook groups. Therefore, the first cases of the offline sample were manually marked as offline cases also used for the analysis (see SPSS syntax).

Germany who often work below the minimum wage (Spiegel Online.de, 2019; tagesschau.de, 2019). In total, the issue was relatively much covered in the media at that time.

### **3.4 Descriptive Statistics & Internal and External Validity**

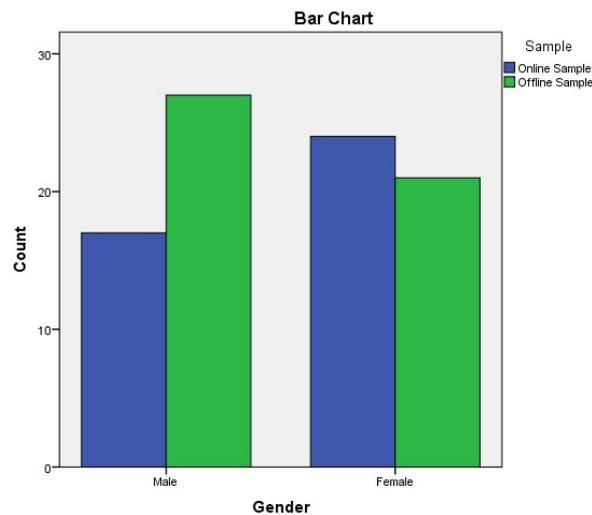
External validity refers to the question whether the sample represents the real population in key demographic characteristics so that the results can be generalized for a greater population. As the sample was only conducted among people who live in Münster, the reference group is the general population of Münster. When considering the external validity, it is important to keep in mind the mixed sample consisting of a more or less randomly collected (offline) sample among the population of Münster, combined with an (online) opportunity sampling approach among contacts of the researcher who live in Münster. This approach was chosen to reach a relatively high number of participants in a relatively short time period. However, a general disadvantage of opportunity sampling is that generalizations from the sample to a greater population are very difficult because it is not a random sample anymore. In order to see how well the survey data represents the general population of Münster, core demographics of the survey participants will be compared with those of the general population of Münster.

#### **Core Demographics of the population of Münster**

The city of Münster published some demographics about the population. The latest figures are from 2017. At this time, Münster had a population of 309 429 people in total. 47,96% of were male and 52,04% were female. There are also some figures available about the age distribution. The groups of the younger people consist of about 15,2 % people between 0 – 17 years, 22,3 % between 18 – 29 years, and 26,1 % are between 30 – 49 years. Concerning the older people, the following categories are defined: The 50 – 64-year-old people make 19,4 %, the group between 65 – 79 years makes 11,7 % and the group above 80 makes 5,4 % (City of Münster, 2018).

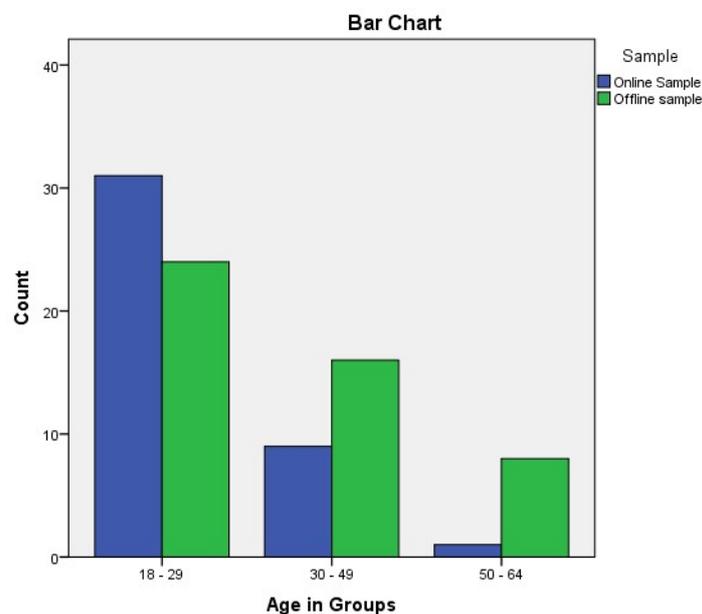
In both samples combined, the *gender* is relatively balanced: 49,5 % men compared to 50,5 % women. However, the gender differences within the two samples are greater. In the online sample, women are overrepresented with about 58,5% compared to only 41,5% men. In the offline sample on the other hand, men are slightly overrepresented with 56,3% compared to 43,8 % women. In the general population in Münster, women are slightly overrepresented with 52,04 %. Consequently, both samples balance each other out and represent the general population quite well.

**Figure 1.** Gender compared in the offline and online sample



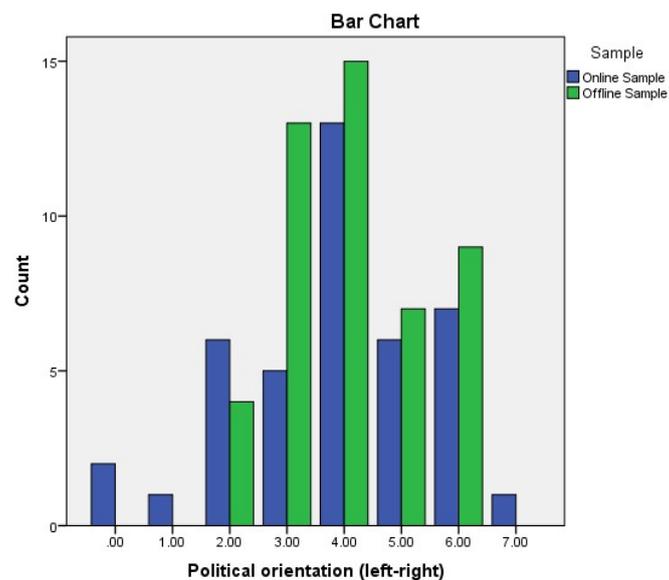
When it comes the *age* distribution, it is hardly surprising, the online is largely dominated by younger people who are in their 20s. Those between 18 and 29 years make 75,6 % of the online sample. Although the age distribution is more balanced in the offline sample, the group of younger people is still overrepresented with 50,0 %. Even though the offline sample is more balanced, both samples combined lack a considerable amount of older people above the age of 50. This group only makes up 2,4 % of the respondents in the online sample, and only 16,7 % of the respondents in the offline sample. Keeping in mind that 36,5 % of the general population in Münster is above the age of 50, makes clear that the age distribution in both samples do not represent the general population precisely.

**Figure 2:** Age groups compared in the offline and online sample



Concerning the *political orientation*, both samples are more equal than expected. In both groups, a value of 4 (on a 1 – 10 scale) was chosen most often (31,7 % in the online sample, and 31,3% in the offline sample). In both samples combined, a mean value of 4,02 with a standard deviation of 1,5 indicates that the sample can be regarded as center left.

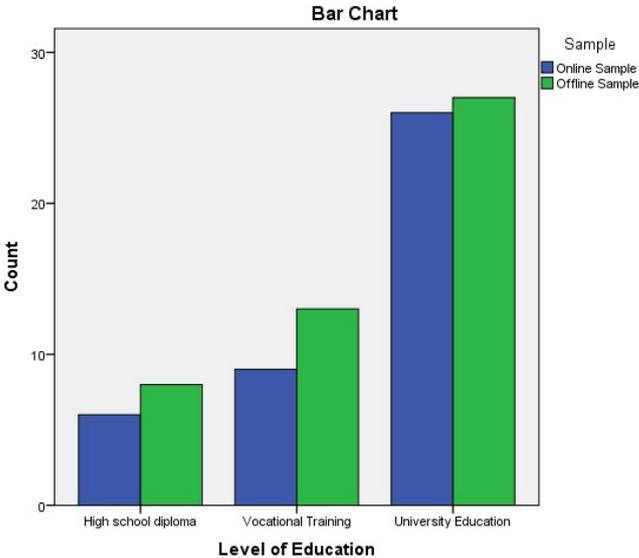
**Figure 3.** Political orientation compared in the offline and online sample



Interestingly, the *educational levels* are relatively similar distributed in both samples. People with university education (bachelor/ master or higher) are overrepresented in both samples. This group makes up 59,3% of all participants in both samples combined. The second largest group are people with vocational training and the third largest group consist of people who hold a high school diploma. The second largest groups are people with vocational training. In the offline sample, 22,0 % of the respondents have a vocational training, whereas the share is slightly higher in the online sample with 27,1 %. Finally, the smallest group consist of people who have a high-school degree (14,6 % in the online and 16,7 % in the offline sample). When interpreting the results, it must be kept in mind that university students who are currently enrolled in a Bachelor or Master study already fall into the category of higher-educated people although they may have not finished their studies yet. This approach might differ from other studies were people shall indicate the highest already achieved level of education. Unfortunately, there is no data available for the level of education of the general population in Münster. Although the figure of 59,3 % people with a higher-education background seems very high, it must be noted that in Münster the share of people with higher-education is regarded as relatively high as well. In 2017, about 21,06 % of the total population in Münster consisted of students that were enrolled at one of the higher education institutions of the city (Münster, 2018). And, of course,

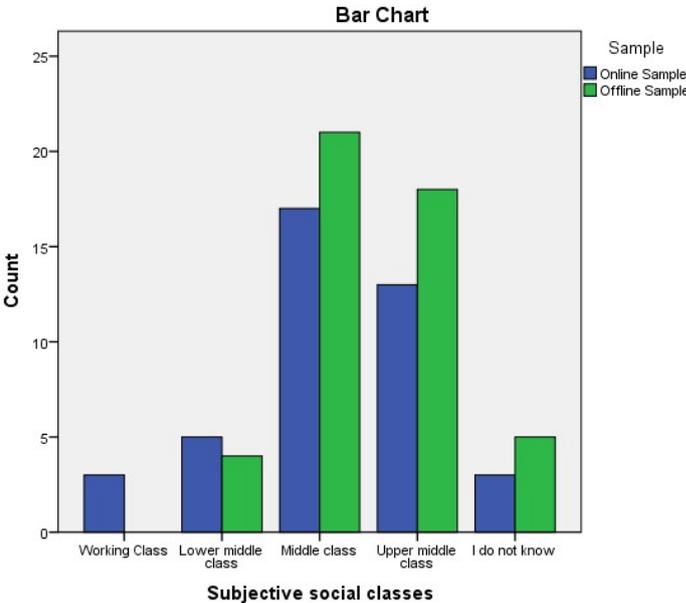
this figure does not include those who already finished their degrees, which makes it likely that the actual proportion of higher educated people is much larger.

**Figure 4.** Level of Education compared in the offline and online sample



Concerning the *subjective social class*, both samples are rather equally, although there are some differences. For instance, in the offline sample, more people identified themselves with middle class (43,8%) as in the online sample (41,5%). In both samples combined, most people selected middle class with a share of 42,9 % of all respondents. Only 8,8 % said that they do not their social class or that they do not want to tell it. Interesting is also that the offline sample contains no cases where people consider themselves as being part of the working class, compared to 7,3 % of the respondents in the online sample.

**Figure 5.** Subjective social class compared in the offline and online sample



To conclude, one can say that the offline sample does a slightly better job in representing the general population of Münster. For instance, the age distribution is not so strongly concentrated on younger people. However, both samples do not represent the general population of Münster exactly. Consequently, generalizations from the sample to the general population can only be made with caution.

### **3.5 Operationalization**

#### **3.6 The dependent variable**

The main dependent variable in this thesis is the Emphasis on the working conditions of platform workers in feedback. This variable is made up of three concepts. First, the future prospects of getting hired again in the future. Secondly, the stability or instability of income. And thirdly, the reputation of the platform workers.

The question was "When you give online feedback for 'Platform X', how important are the following considerations generally for you?". Participants could evaluate the importance of several aspects. In order to measure the importance people put on the working conditions, the following aspects were displayed: "The future prospects of the workers to get hired again", "The worker's reputation", and "The income security of the worker". These concepts were presented together with other factors that might play a role when giving feedback, such as "Overall service quality", the "Price-performance ratio", "Punctuality", as well as the "Kindness of the platform worker". The participants could state how important they find each of the different aspects by choosing one of the following ordinal answer categories "Very important" (1), "Somewhat important" (2), "Neither important nor unimportant" (3), "Somewhat unimportant" (4) and "Very unimportant" (5). However, to make the scale for this variable more intuitively understandable, the order was reversed for the analysis. Hence, a high value of 5 ("Very important") now means high emphasis, whereas a low value of 1 ("Very unimportant") now means low emphasis. In order to measure the emphasis people put on the working conditions when they give feedback, the three items dealing with the working conditions ("The future prospects of the workers to get hired again", "The worker's reputation", and "The income security of the worker") were combined into a new mean variable which will serve as the main independent variable in the analysis. This new variable consists of the mean values of the three items. Thanks to the recoding of the scale, a high mean value means a greater emphasis on the working conditions and a lower mean value means a weaker emphasis on the working conditions.

This approach has the benefit that it allows to measure the *Emphasis people put on the working conditions* in two ways: on the one hand, it measures directly the importance on a 5-point-Likert scale ranging from "Very important" to "Very unimportant" and additionally. On the other hand, it also allows for comparing the relative strength of the working condition related factors with more general user satisfaction-oriented factors. The inclusion of these other factors may also limit a possible social desirability bias to some extent as the questions concerning the working conditions are only some among others.

For the three items measuring the emphasis on the working conditions ("The future prospects of the workers to get hired again", "The worker's reputation", and "The income security of the worker") a Cronbach's alpha value of  $\alpha = .818$  indicates that the internal consistency of the items is acceptable. Additionally, it makes sense to check the consistency of all factors combined (i.e. the general quality factors as well as the working condition factors). The Cronbach's alpha value  $\alpha = .548$  is considerably lower in this case, which underlines the argument that the working condition related factors are consistent in itself. Additionally, a factor analysis was performed with SPSS (see Appendix I). For all considerations combined (i.e. the general quality factors as well as the working condition factors), SPSS recognized 3 factors. Combined, the three factors can explain 67,7 % of the variance in the answer choices. The first factor, which explains 35,5 % of the variance, loads relatively high on the working condition related items. The second factor, which explains 20,0 % of the variance, loads high on the general service quality aspects. And the third factor, which explains 15,2 % of the variance, only loads high on the one item, namely "the general service quality". This makes sense as this item was considered to be important by nearly all the respondents as it is a very general statement. Hence, this item was somehow independent of the specific considerations concerning the working conditions. Apart from this, one can clearly distinguish between two factors that explain most of the variance: the working conditions related ones as well as the general service quality factors. When the first item ("Overall satisfaction with the working conditions") is not included in the factor analysis, there are only two factors left – namely, a working condition-related factor and a service quality-related factor. Together, both factors then explain 61,2 % of the variance.

As described above, the variable *Emphasis on the general service factors* was created as well to compare the main dependent variable with the other factors that can be considered as general service factors. It is constructed out of the mean values of the three-general service-related items: "Price-performance ratio", "Punctuality", and "Kindness of the platform worker".

### 3.7 The Independent Variables

#### Impact of the Rating on the working conditions

In the survey, the question about the Emphasis on the working conditions was followed by another one that consisted of just the same answer categories and possible evaluations – expect that the question was reframed a bit: "Imagine, you would give feedback (if you not already do so). What do you think is the impact your feedback has on the following aspects?". For answering this question people could, again, evaluate the impact of the above mentioned factors on a five-point-Likert scale ranging from: "Much impact" (1), "Some impact" (2), "Neither much nor little impact" (3), "Rather little impact" (4) and "Little impact" (5). Here, again, the scale was recoded, so that a high value means much impact and a low value means low impact. Also, the three items concerning the working conditions were combined into a mean variable that consists of the mean values of the three items. For the three items measuring the emphasis on the working conditions, the Cronbach's alpha value of  $\alpha = .806$  is slightly lower than in the previous question but still acceptable. When checking the internal consistency for all items together, the Cronbach's alpha value is slightly higher with  $\alpha = .820$ . So, when it comes to the question how much impact the own feedback has, all the factors combined are more consistent than just the working condition related factors. A factor analysis revealed that SPSS recognises two factors that can together explain 66,3 % of the variance (see Appendix I). The factor loadings are not as clearly matching the working condition-related factors or the service quality-factors as it was the case for the variable *Emphasis people put on the working conditions*". However, this result seems likely because people might think that their feedback has or has not some impact in general, maybe they do not distinguish between impact on working conditions and impact on service quality. Instead, they might think that their feedback either has some impact or not (on all aspects).

Equally to the *Emphasis* variables, a second Impact variable was created for the *Impact on the general service factors*. Again, this variable is calculated of the mean *Impact* values of the three items measuring the general service factors: "Price-performance ratio", "Punctuality", and "Kindness of the platform worker".

#### People's perceptions about the working conditions of platform workers

One important independent variable is *People's perceptions about the working conditions of platform workers*. This variable was measured by the following question: "To what extent do you agree to the following statements?". Again, people could agree or disagree on a five-point-

Likert scale, with: Strongly agree (1), Somewhat agree (2), Neither agree nor disagree (3), Somewhat disagree (4), Strongly disagree (5). The following statements had to be evaluated: a) "Platform workers have a hard time to make a living from their income", b) " Platform workers are under pressure to get good ratings from consumers.", c) "Platform workers have great struggles to get hired again in the future", d) " Platform workers have little bargaining power towards customers and towards the platform", e) " Consumers can exercise much power over the platform workers". The Cronbach's alpha value of  $\alpha = .768$  is just acceptable. In order to prepare the *Perceptions about the working conditions* for the analysis, a new variable consisting of the means of the different questions was created, which will be used in the analysis. To make this mean value intuitively understandable, the variables were recoded in the same way as the variables measuring the working conditions, so that a value of 5 means strong support and a value of 1 means weak support for protests.

### **Most used platforms**

The respondents were also asked about the most used platform. Therefore, they were asked to choose only one service they use most often. Different services that are popular in Germany were listed below the question. The list contained several different services, such as typical food or drink delivery services, like Deliveroo or Lieferheld, as well as some digital services such as Amazon Mechanical Turk. For the analysis, a distinction between typical "low-skill" platform jobs and "high-skill" platform jobs would have made sense. One can argue that easy tasks such as drink or food delivery tasks might fall into the category of low-skilled platforms, whereas platforms where people offer more sophisticated services such as web development or design (as they are offered, for instance, at Upwork) are rather high-skilled platforms. However, the vast majority of respondents choose drink or food delivery services as the most often used ones. In total, the drink delivery service Flaschenpost.de as well as the food delivery services Lieferando, Lieferheld, Deliveroo and Foodora made up 94.5 % of all the selected services. This has also implications for the findings of this paper because the respondents were asked to fill out the survey questions with one platform in mind that they use most often. Furthermore, the homogeneity of the selected platform types has the consequence that it does not make sense to differentiate between different platform types. Since all delivery services require more or less the same skills, a comparison of high-skilled or low-skilled jobs is not useful anymore (hypothesis H3). The same is true for a comparison between local vs. global services because nearly all selected services are local services (hypothesis H4). Unfortunately, this means that Hypotheses H3 and H4 cannot be tested anymore.

### **Awareness and support for protests**

The *awareness of protests* was measured based on Herbert (2018). A little text was presented that contained information about previous protests of platform workers where they protested against low payment, no insurance and no possibility to organize themselves in labour unions. First, people were asked if they have heard of such protests before. The answer categories were "Yes" (1), "No" (0), and "I do not know" (3). For the analysis, a dummy variable was created, allowing for the following options: "Yes" (1) and "No" (0). "I do not know", which 5,5 % of the respondents selected, was combined to "No" (0).

A follow-up question asked to what extent people *support these protests* or not. This question was asked to all respondents. Since there was a little introduction in the previous question that informed participants about the protests, everyone could also state his or her opinion on the protests - no matter if they have heard about protests before or not. The answer categories were presented on a five-point-Likert scale, ranging from: "Strong support" (1), "Rather support" (2), "Might or might not support" (3), "Rather not support" (4), "Do not support at all" (5). For the analysis, the scale was reserved so that a high value, e.g. 5, now indicated a high support for protests, whereas a low value, e.g. 2, indicated weak support for protests.

### **Frequency of use**

Hypothesis H5 deals with the frequency of use or to be more precise, with a comparison between tasks that are performed on a regular basis vs. services that are only done once or seldomly. In order to measure the frequency of the use, people were asked at the beginning how often they use the platform economy (if they use it at all). Items were measured on a five-point-Likert scale, ranging from "I do not know what the platform economy is" (1), "I have heard about the platform economy, but I do not use it" (2), "I do use platform economy service(s) sometimes" (3), "I use platform economy services often" (4), "I use platform economy services very often" (5). Since in the final sample only contains participants who use the platform economy, a dummy variable was created with the following categories: answerer category 3 was recoded to *Use sometimes* (0) and categories 4 and 5 were recoded as *Use often* (1).

### **Feedback behaviour**

In order to measure if the respondents participated in feedback ratings in reality, a little explanation about online reputation feedback systems in the platform economy was presented, which described basic functions such as reviews or star-ratings. Then, the following question was asked: "Thinking of Platform "[most used platform]", do you use a reputation feedback

function to give feedback about the performance of the worker/ provider?". The answer categories were "I give feedback very often" (1), "I give often feedback" (2), "I give sometimes feedback" (3), "I give feedback seldomly" (4), "I never give feedback" (5). Since for the analysis it is of main interest to distinguish between those who do give feedback and those who do not, a dummy variable was created. The answer categories 1 to 4 were recoded to "Give feedback" (1), and the category 5 was recoded as (0).

### **General rating strategy**

Those, who indicated that they do give feedback, were asked if they have a "general rating strategy" when they give feedback. Respondents could choose the following answer categories: "Yes, I usually give rather positive feedback" (1), "No, I always evaluate every service individually" (2), "Yes, I usually give rather negative feedback" (3), "I do not know" (4). Because the question of interest for the analysis is, whether some people tend to give positive feedback or not, the categories were recoded as follows: answer category 1 was coded as "General positive feedback" (1), and categories 2 to 4 were recoded as "No general positive feedback" (0).

### **Socio-demographic and political variables**

The *Level of education* was measured with the question "What is your current level of education? If you are currently enrolled, choose the item describing your situation best." With this framing, a student who is currently enrolled in a Bachelor program, would then pick "Bachelor/ master" and not only the highest already achieved item, like a high-school degree. This way, it can be assured that students are represented well in the survey as they make a big group of the participants. The answer categories were measured on a five-point-Likert scale with the following options: "Not finished school at all" (1), "Primary education" (2), "High school" (3), "Vocational Training" (4), "Bachelor/ Master or higher" (5). For the analysis, the question of interest is whether people are higher-educated or not. Therefore, a dummy variable was created. The answer choices 1 to 4 were recoded as "no higher education" (0), and "Bachelor / Master or higher" (5) was coded a "higher education (1). This relatively bold approach was chosen because hypothesis H6 is explicitly about the effect of higher education at the university level. Nevertheless, one should keep in mind that the creation of this dummy variable "codes away" some information, such as the more nuanced differences between the participants who have received "vocational training" and those who have a "high school diploma".

*Interest in politics* was measured with the question to what extent people agree to the following statement: "On average, other people are better informed about politics as I am". Respondents could, again, indicate how much they agree with this statement on a five-point-Likert scale: "Strongly agree" (1), "Somewhat agree" (2), "Neither agree nor disagree" (3), "Somewhat Disagree" (4) and "Strongly disagree" (5). Following this answer logic, respondents who indicate that they do not agree with the statement, are better informed about politics, compared to those who agree to the statement. Hence, a high value of on the scale means that people are interested in politics, whereas a low value means that people are not very interested in politics.

The *political orientation* was measured on a left-right scale, where people could indicate their political position on a scale ranging from 0 (left) to 10 (right). Although this variable is technically an ordinal scale, it will be treated as an interval variable in the analysis for pragmatic reasons. Hence, a low value indicated that a person is rather left-wing oriented, and a high value indicated that a person is rather right-wing oriented.

*Gender* was measured with the answer categories "Male" (0), "Female" (2), "Diverse" (3), and "I do not want to tell" (4). As no respondent choose the option "diverse" and only very few "I do not want to tell", the latter was combined together with "male" into one group. This makes it possible to use a dummy variable which consist of "men" (0) and "women" (1). Also, this approach allows to compare the effect of "being women" compared to not being women as it is necessary to test hypothesis H7.

The *subjective social class* was measured with the question "Some people talk about social classes in a society, whereby they refer to a division of a society based on social and economic status. In which of the social classes would you place yourself?": People could choose from "Working Class" (1), "Lower Middle Class" (2), "Middle Class" (3), "Upper Middle Class" (4), and "Upper Class" (5) and "I do not know" (6). Each class category was recoded into separate dummy variable (e. g. middle class (1), not middle class (0)). Because only very few respondents selected the *working class* (7,3 % in the online sample and none in the offline sample), this class was combined with *lower middle class* into the group *lower class*. This approach was used in order to still be able to test hypothesis H 10 which deals with the effect of being working class. Hence, the following dummy variables were created: Lower class (1) and Not lower class (0); Middle class (1) and Not middle class (0); Upper middle class (1) and

Not upper middle class (0), as well as No class indicated (1) and Other classes (0). However, the focus in the analysis will be primarily on the first *Lower* class category.

### **Control Variable Age**

As the typical socio-demographic control variables such as gender, political orientation, and (subjective) social class were already included in the hypotheses, they do not count as control variables here. However, the age (in years) of the respondents will be used as a control variable. The *age* was measured with the question: "How old are you?", where people could enter a four-digit number indicating their birth year. In order to use the actual age of the respondents, the entered number was subtracted from "2019", which resulted in the variable Age in years. Doing so, the new variable contains the age in years (although with this approach, the actual age might be in some cases not precisely right). In order to compare the age distribution of the sample with the population of Münster, different age groups were created to compare them with the general population of Münster. The following age groups were used: 18 – 29; 30 – 49; 50 – 64. Unfortunately, the sample contained no respondents with an age between 0 -17; 65 – 79 and 80 and older.

### **Missing variables**

Unfortunately, not all hypotheses that have been developed in the theoretical framework can be tested in the analysis because the sample did not provide enough data on all aspects. This holds for the platform specific characteristics of the hypotheses H3, H4, H5. As described above, hypothesis H3 and H4 cannot be tested because the sample does not provide a great variety in the platform characteristics that would allow for a comparison between high- vs. low-skilled jobs (H3) and between local vs. global services (H4). Also, hypothesis H5 cannot be tested either as it is about a comparison between services that are performed on a regular basis compared to ones that are only used once. Unfortunately, the survey only included a question about the platform that is most often used but not exactly how often this platform is used, which makes a comparison impossible. Therefore, hypothesis H5 unfortunately not be tested either.

**Table 2.** Descriptive Statistics and Frequencies

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Frequency</b>
Emphasis on working conditions	91	1,00	5,00	3,03	0,92	-
Emphasis on service factors	91	2,67	5,00	3,95	0,60	-
Impact of rating on working conditions	91	1,00	5,00	2,94	1,02	-
Impact of rating on general service factors	91	1,67	5,00	3,28	0,85	-
Perceptions of working conditions	91	1,80	5,00	3,64	0,69	-
Support for protests	91	2,00	5,00	4,07	0,92	-
Left-right orientation	91	0,00	7,00	4,02	1,45	-
Informed about politics	91	1,00	5,00	3,35	0,91	-
<b>Use of platform economy</b>	91					
Use sometimes						64,80%
Use often						35,20%
<b>Social Class</b>	91					
Working class & lower middle class						13,20%
Middle class						42,90%
Upper middle class						35,20%
Missing						8,80%
<b>Level of education</b>	91					
Higher-educated						59,30%
Not higher-educated						40,70%
<b>Awareness of Protests</b>	91					
Aware						53,90%
Not aware						46,10%
<b>Gender</b>	91					
Female						50,50%
Male						49,50%
<b>Feedback</b>	91					
Give feedback						53,80%
Give no feedback						46,20%
<b>Feedback strategy</b>	91					
Positive feedback						19,80%
No positive feedback						80,20%
<b>Age</b>	91					
18 - 29						62,60%
30 - 49						27,50%
50 - 64						9,90%

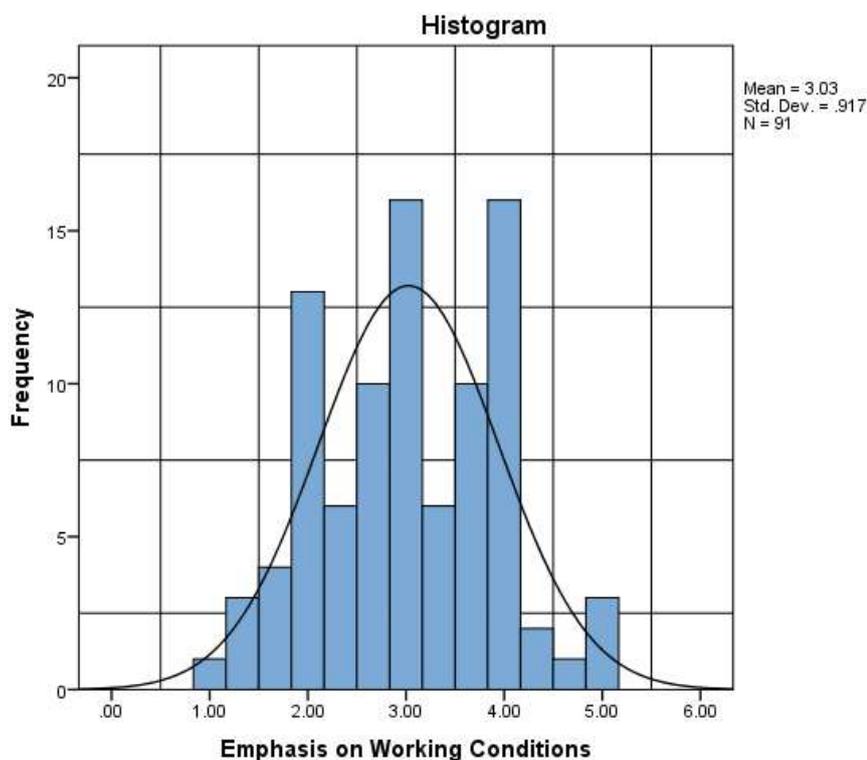
## 4 Analysis

In this section, the data will be systematically analysed. The analytical strategy of the analysis consists of two main steps: In a first step, the bivariate correlations of the different variables will be analysed. In a second step, a regression analysis will be conducted in order to test the developed hypothesis so that they can either be accepted or rejected.

### 4.1 The dependent variable *Emphasis on the working conditions*

Figure 1. displays the distribution of the main dependent variable *Emphasis on the Working Condition in Feedback ratings*. In the survey, participants could state how much they emphasize working-conditions-related factors and general-service-related factors when they give feedback ratings. The variable is measured on a five-point-Likert scale, ranging from 1 (Not Important) to 5 (Very important). A value of 3 means *Neither unimportant, nor important*. As discussed earlier, the variable used for the analysis was constructed out of the mean values of the three working-condition-related items in the survey. The mean of the distribution is with 3.03 ("*Neither important, nor unimportant*") almost in the middle. In total, 58.2 % of the respondents have a score of 3.00 or less. Hence, the majority of the respondents do not emphasize the working conditions. In turn, about 41.2 % of the respondents stress the working conditions at least a bit by having a value greater than 3.00.

**Figure 1.** Histogram Displaying the Emphasis on the Working Conditions in Feedback Ratings



In the analysis, only those cases were included that contained information for all questions relevant for the rating behaviour. This means that this smaller sample (N=91) only consist of those people who actively use the platform economy. However, it must be noted that only about half of these people indicated that they actually make use of the feedback rating functions of platform services in reality, which means that the other half does not give feedback in reality (however they were also asked which aspects they would emphasize if they would give feedback theoretically). Since a separate sample for those who actually give feedback would be too small for a meaningful analysis, the two groups are being analysed together. Furthermore, one can argue that actually both samples consist only of stated opinions because the survey did not measure the actual feedback behaviour in an experimental way but only bases on the stated opinions of the participants. Nonetheless, a separate dummy variable that differentiates between those who actually give feedback and those who do not, will be included in the analysis to see if there are meaningful differences.

#### **4.2 Bivariate correlations**

In this first section, the bivariate correlations of the dependent variable and the independent variables will be analysed. To see if the *Emphasis on the working conditions* are really seen as a separate thing for consumers (as the factor analysis suggested, see Appendix II), a second dependent variable will be analysed as well: The *Emphasis on general service factors*. This variable is constructed of the three items price-performance ratio, punctuality, as well as kindness in communication of the worker.

For the continuous variables measured on a metric scale, a frequently used correlation coefficient like Pearson's  $r$  could be the first choice. However, as an analysis revealed, the dependent variables are not normally distributed but have a little skewness in the distribution. Because Pearson's  $r$  requires a normal distribution, another correlation coefficient was used: Spearman's Rank-order (Spearman's  $\rho$ ). This coefficient does not require normally distributed variables. The Spearman's  $\rho$  coefficient can be interpreted in the same way: the correlation coefficient can have values from -1 to 1. A value of 1 means a perfect linear monotonic correlation, whereas a value of 0 indicated that there is no linear monotonic correlation between two variables. The results of the bivariate correlations between the dependent variables *Emphasis on working conditions* and *Emphasis on general service factors* and the independent continuous variables are displayed in Table 1. When interpreting the correlation coefficients, the following rule of thumb will be applied. Correlations between 0.0 to 0.2 will be considered as *very weak*, ones between 0.2 to 0.4 as *weak*; ones between 0.4 to

0.6 as *moderately strong*, ones between 0.6 to 0.8 as *strong*, and ones between 0.8 to 1.0 as *very strong*.

**Table 3.** Correlations between *Emphasis on working conditions / Emphasis on general service factors* in feedback ratings and Independent Variables

	Emphasis on working conditions	Emphasis on general service factors
Perceptions of working conditions	.39**	.19*
Political orientation (left-right wing)	-.33**	-.12
Impact of rating on working conditions	.45**	-.12
Impact of rating on service factors	.26**	.10
Support for protests	.34**	.06
Interested in politics	.21*	-.07
Age (in years)	.23*	-.05
Emphasis on general service factors	.03	-

Significant at \*0.05 level (one-tailed), \*\*0.01 level (one-tailed)  
Spearman's rho, listwise N =91

First, the associations between the main dependent variable *Emphasis on the working conditions* and the independent variables will be examined. For the *Perceptions of working conditions* there is a weak positive monotonic correlation of  $\rho = .390$  which is statistically significant at the 0.01 level (one-tailed). This result means that participants who have more negative perceptions of the working conditions in the platform economy, slightly emphasize the working conditions when they give feedback. For the *political orientation (left-right-wing)* the analysis revealed a weak negative monotonic correlation of  $\rho = -.332$  and a significance at the 0.01 level (one-tailed). This means that participants who tend to be more left-wing oriented, slightly emphasize the working conditions. The *Impact of rating on working conditions* has a moderately strong positive monotonic correlation of  $\rho = .452$  which is significant at the 0.01 level (one-tailed). This result can be interpreted as follows: People who

believe that their feedback will have more impact on the actual working conditions of the platform workers also tend to emphasize the working conditions a bit more when they give feedback. For the *Impact of rating on service factors* the analysis showed a weak positive monotonic correlation of  $\rho = .260$  that is statistically significant at the 0.01 level (one-tailed). This result means that people who believe that their feedback has more impact on the general service, also emphasize the working conditions slightly when they give feedback. A weak positive monotonic correlation of  $\rho = .336$  was also found for the *Support for protests*. Hence, this result shows that people who expressed support for platform-related worker protests, reported a slightly higher emphasis the working conditions when they give feedback. For the variable *Interest in politics* the analysis revealed a weak positive monotonic correlation of  $\rho = .209$  which is statistically significant at the 0.05 level (one-tailed). Consequently, this means that participants who expressed that they are interested in politics, emphasize the working conditions slightly. Finally, the variable *Age in years* showed a weak positive monotonic correlation of  $\rho = .228$  which is statistically significant at the 0.05 level (one-tailed). This means that older people emphasized expressed a slightly higher emphasis on the working conditions when they give feedback.

For the second dependent variable *Emphasis on general service factors* the analysis revealed that only for the *Perceptions of working conditions* there is a very weak positive monotonic correlation with a value of  $\rho = .187$  which is significant at the 0.05 level (one-tailed). Hence, people who indicated that they have more negative perceptions of the working conditions, emphasize the general service factors very slightly when they give feedback. All the other independent variables only have very weak values of  $\rho < .200$  and none of them is statistically significant. Furthermore, the analysis revealed no statistically significant correlation between the two dependent variables. Consequently, it seems indeed to be the case that assume that the *Emphasis on working conditions* and the *Emphasis on general service factors* are actually two different variables that measure different things. These findings also strengthen the internal consistency of the measurement as the independent variables cannot explain both dependent variables equally well.

### **4.3 Independent sample t-tests**

In order to meaningfully analyse the relationship between the categorical variables and the dependent variables, independent sample t-tests will be conducted. In a t-test, the mean values on the dependent variable for two categories of the independent (dummy) variable will be compared to see if they substantially differ from each other or not. A t-test does not provide correlation coefficient; however, the means difference between the two categories of the

independent variable can already indicate how big the difference is and whether it is statistically significant. In this analysis, the focus will be on the following aspects: the mean values on the dependent variable for the two categories of the independent dummy variables; the mean differences; and the significance (p-value) at the two significance levels 0.05 (95 % level), and 0.01 (99 % level).

The findings for the t-tests for the two dependent variables and the independent variables are displayed in Table 2. Since the *Emphasis on the working conditions* is the main dependent variable of interest, the focus will be on the findings for this variable. In order to interpret the mean values for the *Emphasis on the working conditions* for different groups, it makes sense to recall the 5-point-Likert- scale on which the emphasis was measured: it ranged from 1 (No emphasis) to 5 (Very much emphasis). Hence, a high mean value indicates much emphasis and a low mean value indicates little emphasis on the working conditions.

The mean value for the *Emphasis on the working conditions* for women is 3.31 compared to a mean value of 2.72 for men and people who did not indicate their gender. The mean difference of 0.592 is significant at the 0.01 level (two-tailed). This means that, on a 95 % significance level, women emphasize the working conditions more than men do.

When it comes to the *Awareness of protests*, the analysis reveals that people who are not aware of protests have a mean value of 2.77, while people who are aware of protests have a mean value of 3.04. On a 95 % significance level, people who are aware of protests emphasize the working conditions more with a mean difference of 0.422.

Finally, for the variable *Give feedback* there are significant differences observable. Those who do not give feedback in reality have a mean value of 2.61 compared to a mean value of 3.37 for those who do give feedback in reality. On a 99 % significance level, people who give feedback in reality emphasize the working conditions more with a mean difference of 0.755 compared to those who do not give feedback in reality.

For the variable *higher-educated* as well as for different *social class* dummy variables, the analysis revealed no statistical significance. Higher educated people emphasize the working conditions with a mean value 3.04 compared to a mean value of 2.99 for people who are not higher educated. People who consider themselves as being working class or lower-middle class have a mean value of 3.41 compared to 2.96 for all others. People who consider themselves as being part of the middle class have a mean value of 3.17 compared to 2.91 for all others. And people who consider themselves as being upper middle class have a mean value of 2.79

compared to 3.15 for all others. Finally, those who did not indicate their social class have a mean value of 2.62 compared to 3.06 for all others.

For the second dependent variable, the *Emphasis on general service factors*, the analysis revealed only two significant mean differences. This variable was also measured on a five-point-Likert scale, ranging from 1 (No emphasis) to 5 (Very much emphasis). The significant findings are the following: women emphasize the general service factors with a mean value of 4.08 compared to 3.81 for men. On a 95 % significance level, women emphasize the general service factors more compared to men with a mean difference of 0.272. Interestingly, also for the dummy variable *being working class* there is a significant mean difference observable. People who consider themselves as being working class or lower-middle class, emphasize the general service factors with a mean value of 4,27 compared to a mean emphasis of 3.90 for all other groups. This means that – on a 95 % significance level – people who consider themselves as being part of the working class or lower middle class emphasize the general service factors more with a mean difference of 0.374.

**Table 4.** Outcomes Independent Sample t-Test between “Emphasis on working conditions” (a) / “Emphasis on general service factors” (b) and Independent Variables

Categories	Emphasis on working conditions		Emphasis on general service factors	
	Means (N)	Mean Diff.	Means (N)	Mean Diff.
Male (0); Female (1)	2.72 (45); 3.31 (46)	-.592**	3.81 (45); 4.08 (45)	-.272**
Lower-educated (0); Higher-educated (1)	2.99 (37); 3.04 (54)	-.058	3.9 (27); 3.93 (54)	.034
Not aware of protests (0); Aware (1)	2.77 (37); 3.19 (54)	-.422**	3.90 (37); 3.98 (54)	-.071
Higher classes <sup>3</sup> (0); Working class (1)	2.96 (79); 3.41 (12)	-.450	3.90 (79); 4.27 (12)	-.374**
Do not give feedback (0); Give feedback (1)	2.61 (42); 3.37 (49)	-.755***	3.96 (42); 3.93 (49)	.029

For all variables the equality of variances is assumed (Levene’s Test Significance >0.05). Significant at \*\*0.05 and \*\*\*0.01 level (two-tailed)

<sup>3</sup> For both dependent variables, the results for the middle class, the upper-middle class and those who did not indicate a class are all not significant. The results can be found in the Appendix IV

## Other expectations

Besides the discussed direct effects on the main dependent variable, there are also three other hypotheses (H1, H14, H16) or rather expectations that have been developed in the theoretical framework but that are not directly connected to the *Emphasis on the working conditions*. Hence, these variables will not be included in the regression analysis, however, an independent sample t-test will be conducted in the same way as just done. The results are displayed in Table 3.

Hypothesis H1 established a relationship between the *General Impact of Ratings* and the *Participation in Feedback Ratings*, arguing that people who believe that their ratings matter, also give feedback (at all) compared to those who think that it does not matter if they give feedback. Those who do not give feedback in reality have a mean value of 2.72 on the *Impact scale* compared to a mean value of 3.52 for those who do give feedback in reality. On a 99 % significance level, people who give feedback in reality emphasize the General Impact of Feedback Ratings more with a mean difference of .793 compared to those who do not give feedback in reality. Hence, the expectation made in H1 can be accepted.

Hypothesis H13 stated that people who have more positive perceptions about the working conditions in the platform economy, will use the services more frequently. Interestingly, the analysis revealed that the opposite seems to be the case: Those who use the platform economy sometimes have a mean value of 3.61 about the perceptions of the working conditions, whereas those who use the services often have a mean value of 3.79. It is important to keep in mind, that a higher value on the Perceptions score means more negative perceptions about the working conditions in the platform economy. However, the mean difference of .089 is not significant. Hence, the expectation must be rejected.

Finally, H15 stated that people who have more negative perception about the working conditions will give more positive feedback (positive feedback strategy) compared to those who have more positive perceptions about the platform economy. The t-tests show that those who do not give positive feedback by default, have a mean value on the Perception score of 3.52, compared to 4.14 for those who usually give positive feedback. On a 99 % significance level, people who give positive feedback have with a mean difference of .625 more negative perceptions about the working conditions in the platform economy compared to those who do not give feedback positive feedback. Therefore, the expectation can be accepted.

**Table 5.** Outcomes Independent Sample t-Test between “General impact of feedback on all service/ working related factors” (a) / “Perceptions of working conditions” (b) and Independent Variables

	Categories	General Impact of rating		Perceptions of working conditions	
		Means (N)	Mean Diff.	Means (N)	Mean Diff.
Feedback	Don't give feedback (0); Give feedback (1)	2.72 (42); 3.52 (49)	-.793***	-	-
Rating strategy	No positive feedback (0); Positive feedback (1)	-	-	3.52 (73); 4.14 (18)	-.625***
Frequency of Use	Use sometimes (0); Use often (1)	-	-	3.61 (59); 3.79 (32)	-.089

For all variables the equality of variances is assumed (Levene's Test Significance >0.05). Significant at \*\*0.05 and \*\*\*0.01 level (two-tailed)

#### 4.4 Regression analysis

In the following, a series of linear regression analyses will be conducted to finally accept or reject the developed hypotheses. A regression analysis has the advantage that the relative impact of each independent variable on the dependent variable can be analysed. In this section, the following coefficients will be used to analyse the models:  $R^2$ , Adjusted  $R^2$ , the unstandardized b coefficient and the p-values. The model fit is determined by  $R^2$  value, which gives the percentage of the variance in the dependent variable that can be explained by the independent variables. The Adjusted  $R^2$  value is used in order to compare different regression models with one another. The unstandardized b coefficient gives the change in the dependent variable that is caused by change of one unit in the independent variable. The size of the p-value determines the significance of the effect at the 95 % ( $p < 0.05$ ) and the 99% ( $p < 0.01$ ) confidence interval (Pollock, 2016).

#### Pre-test to determine independent variables to be included

As a rule of thumb, for each independent variable in a regression analysis, there should be 10 cases. Hence, a sample size of  $N = 91$  allows for 9 independent variables in one regression model. However, the bivariate correlations and the t-tests revealed that more than 9 variables

are significant, the decision which variables are being included in the final model will be made on the basis of three preliminary-regression models, where several regression analyses are run in order to find out which variables have an significant effect on the dependent variable. The pre-models tested the effects of the all the independent variables developed in the theoretical framework. In total, four pre-models all had the dependent variable *Emphasis on working conditions* but had different independent variables, namely for each model the variables out of the four categories: a) socio-demographics, b) political orientation, c) platform characteristics, d) as well as knowledge and perceptions about the platform economy. The results of these pre-models are displayed in Table 3. (Appendix III). The four different pre-models revealed that, in each of the tests, some variables were found to have a significant effect on the dependent variable. These are: *Being female*, *Political orientation (left-right)*, *Impact of feedback on working conditions*, *Give actively feedback*, *Use platform economy often*, and the control variable *Age*. Hence, these variables will be included as the independent variables in the final regression model.

### **Final regression model(s)**

Model 1. has the dependent variable *Emphasis on working conditions*, whereas Model 2 has the *Emphasis on the general service factors* as the dependent variable. Each model is estimated twice. First with the independent variables *Being female*, *Political orientation (left-right)*, *Give actively feedback*, *Use platform economy often*, and *Age*. Secondly, the variable *Impact of feedback on working conditions* will be added as another independent variable to the models. The latter variable is added separately because this variable could maybe measure very much of the variance in the model (as yet another pre-test revealed). The results of this series of final models are displayed in Table 4.

Before conducting checking each hypothesis, a look at the 4 different models makes sense. In order to compare the models, the  $R^2$  value can be used. Model 1a, which has the dependent variable *Emphasis on working conditions*, explains 29.0 % of the variance in the dependent variable. When in model 1b the independent variable *Impact on working conditions* is added, the model explains 36.6 % of the variance of the dependent variable. Both models are statistically significant. Model 2a and 2b, have the dependent variable *Emphasis on general service factors*. These models have a very weak model fit: Model 2a only explains only 6.3 % of the variance in the dependent variable, and Model 2b explains 6.4 % of the variance. Moreover, both models are not statistically significant. These results show mainly two things. First, the variables *Emphasis on working conditions* and *Emphasis on general service factors*

do measure different things – as also the factor analysis suggested. Secondly, in model 2a it does matter if the *Impact of the feedback on the working conditions* is included in the model because then the independent variable *Use often/sometimes* becomes insignificant. However, the whole model is not significant.

### **Hypothesis testing**

In the following, each hypothesis will be tested in order to be either accepted or rejected on the basis on the linear regression analysis. A hypothesis will be accepted when the results are in line with the theoretically formulated direction and if the results are statistically significant. A hypothesis will be rejected when the results are not in line with the theoretically formulated direction and/ or the results are not statistically significant.

### **The direct effect of "*Impact of the feedback*" (H2)**

Hypothesis H2 argues that people who believe that their own feedback has a great impact on the working conditions, will also emphasize the working conditions more when rating. Model 1a is relevant for this hypothesis. Model 1b shows that, keeping all other conditions constant, people who have a higher "impact score", emphasize the working conditions with 0.30 points more compared to people who score lower on the "Impact of the feedback" score. The result is statistically significant at the 0.05 (95 %) level. Hence, H2 can be accepted.

### **Not included Variables (H3, H4, H5)**

As discussed in the data and methods section the hypothesis H3, H4, H5 that primarily deal with different platform characteristics, could not be included in the analysis because the available data did not allow for a meaningful comparison between different types of services since nearly all respondents selected food or drink delivery services.

### **The direct effect of education (H6)**

Hypothesis H6 dealt with the effect of higher-education on the emphasis on the working conditions, assuming that higher-educated people (university students / degree holders) are more likely to emphasize the working conditions compared to people who are not higher-educated. Since neither the t-tests nor the pre-regression (Appendix III) models revealed any statistically significant effect of education on the *Emphasis on the working conditions*, it was not included in the final models. Hence, H6 must be rejected.

**Table 4.** Regression analysis for a) Emphasis on working conditions/"Emphasis on general service factors" and Independent variables

	<i>Emphasis on working conditions</i>						<i>Emphasis on general service factors</i>					
	Model 1a			Model 1b			Model 2a			Model 2b		
	B	Std. Error		B	Std. Error		B	Std. Error		B	Std. Error	
<i>Constant</i>	2.435	.362		1.754	.398		4.059	.274		4.230	.318	
<i>Female</i>	.404*	.172		.408*	.162		.294*	.130		.293*	.130	
<i>Left-right</i>	-.130*	.058		-.135*	.055		-.041	.044		-.040	.044	
<i>Age</i>	.017*	.008		.018*	.007		.002	.006		.001	.006	
<i>Give feedback</i>	.532*	.170		.214	.187		-.071	.129		.008	.149	
<i>Use often</i>	.217	.175		.132	.167		-.283*	.133		-.262	.134	
<i>Impact of feedbacks on work. cond.</i>	-	-		.303*	.090		-	-		-.076	.072	
<i>R<sup>2</sup></i>		.329			.409			.115			.127	
<i>Adjusted R<sup>2</sup></i>		.290			.366			.063			.064	

Significance at the \*95%, \*\*99% level

### **The direct effect of gender (H7)**

Hypothesis H7 assumes that *women* are more likely to emphasize the working conditions compared to men (and other genders). Model 1b reveals that, keeping all other conditions constant, women emphasize the working conditions with 0.408 points more compared to men. The result is statistically significant at the 0.05 (95%) level. Therefore, H7 can be accepted.

### **The direct effect of Interest in politics (H8)**

Hypothesis H8 is about the effect of being *interest in politics* on the *Emphasis on the working conditions*, arguing that people who are interested in politics are more likely to emphasize the working conditions. Although this variable showed a weak statistically significant correlation with the Emphasis on the working conditions, the preliminary-regression model showed that there is no significant effect on the dependent variable. Therefore, the variable was not included in the final models and H8 must be rejected.

### **The direct effect of political orientation (H9)**

Hypothesis H9 assumed that people with a *left-wing political orientation* are more likely to emphasize the working conditions compared to more right-wing oriented people. And indeed, Model 1b reveals that, keeping all other conditions constant, more right-wing people score - 0.135 points less on the emphasis on working conditions scale. Vice versa, this means that more left-wing orientated participant score higher on the emphasis score. This result is significant at the 0.05 (95 %) level. Hence, H9 can be accepted.

### **The direct effect of social class (H10)**

Hypothesis H10 is about the effect of the social class of the participants on the emphasis on the working conditions. H10 assumed that people who consider themselves as being part of the *working class*, are more likely to emphasize the working conditions when giving feedback. Since the t-tests did not reveal any significant effect for any of different social class groups and also the preliminary-regression model did not reveal a significant effect on the dependent variable, the social class was not included in the final model. Therefore, H10 must be rejected.

### **The direct effect of awareness of protests (H11)**

Hypothesis H11 assumes that people who are aware of protests among platform workers, are more likely to emphasize the working conditions compared to people who are not aware of the protests. The t-tests revealed that there are significant mean differences for the score on the *Emphasis scale* between people who are aware of protests and those who are not . However,

the preliminary-regression model showed no significant effect of awareness of protests on the emphasis on working conditions. Hence, the variable was not included in the final model. Therefore, H11 must be rejected.

### **The direct effect of support for protests (H12)**

Hypothesis H12 is about the effect of *support for protests*, assuming that people who support protests are more likely to emphasize the working conditions compared to those who are not supporting the protests. Again, the bivariate analysis revealed a weak correlation between support for protest and the emphasis on the working conditions. But the preliminary-regression model did not show a significant effect. Hence, it was not included in the final models. Consequently, H12 must be rejected.

### **The direct effect of perceptions of working conditions (H14)**

Hypothesis H14 argues that people who have more *negative perceptions about the working conditions* of platform workers, are more likely to emphasize the working conditions when they give feedback. Again, the correlation analysis revealed that there is a weak significant correlation between this variable and the dependent variable. However, the preliminary-regression model did not show any significant effect on the dependent variable, and therefore, the variable was not included in the final models. Hence, H14 must be rejected.

### **The direct effect of age (control variable)**

The control variable *age* did have an effect on the *Emphasis on the working conditions*. The analysis revealed that, keeping all other conditions constant, older people score 0.018 points higher on the scale for the emphasis on the working conditions compared to younger people. The effect is statistically significant at the 0.05 (95 % level).

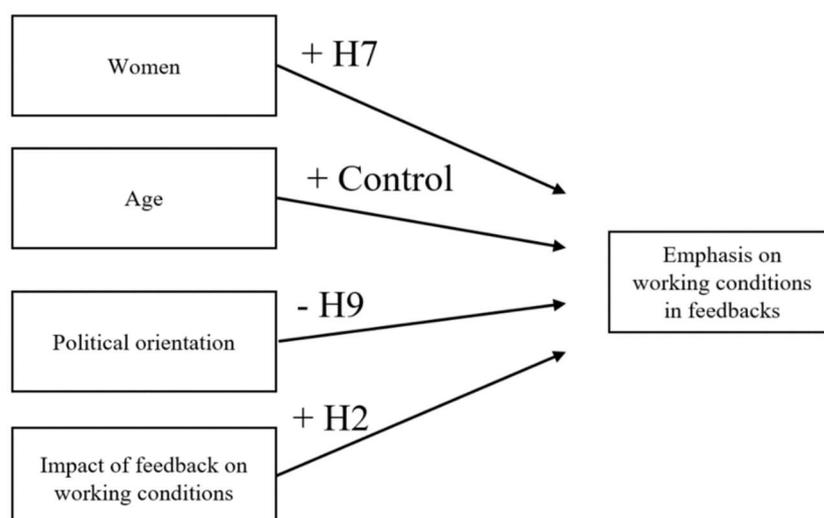
### **The direct effect of frequency of use**

The preliminary-regression analysis revealed a significant effect of the variable *Use platform economy often* on the *Emphasis on working conditions*, meaning that people who use the platform economy often, emphasize the working conditions more compared to people who use it sometimes. In the final model 1b, however, the effect of b 0.303 is not statistically significant anymore. The effect is only significant in Model 2a, where the dependent variable is the *Emphasis on the general service factors* and when the *Impact of feedback on working conditions* is not included in the model. However, the whole Model 2a is not statistically significant.

### The direct effect of "Give feedback in reality"

The dummy variable *Give feedback in reality* was included in the models to examine if it is relevant if the participants actually give feedback in reality or not. The t-tests revealed that there are significant mean differences between the group of those who give feedback in reality and those who give not. The final analysis revealed that the final Model 1b the effect is not statistically significant. However, things change when the variable independent *Impact of feedback on working conditions* is not included in the (Model 1a). In this case, *Give feedback in reality* becomes significant on the 0.05 (95%) level. Keeping all other conditions constant, people who give feedback in reality, score 0.532 points higher on the scale for *Emphasis on working conditions*. Interestingly, the variable *Give feedback* is therefore the only one that differs substantially in the Models 1a and 1b.

A collinearity check revealed no problems with collinearity in the final models. Neither any of the tolerance values were under a threshold of 0.2; nor were for any variable the Variance Inflation Factor (VIF) close to a threshold of 5 (see Appendix III). Hence, it can be concluded that there is no sign for collinearity in this model. In conclusion, the analysis revealed that there are statistically significant effects for the variables *gender*, *political orientation* (left-right), and *Impact of feedback on working conditions*, as well as for the control variable *age*. This means that hypotheses H2, H7, and H9 can be accepted. Furthermore, also the frequency of use (*Use often*) is significant when the *Impact* variable is excluded (Model 1a). However, the hypotheses H6, H8, H10, H11, H12, and H14 must be rejected. Hypotheses H3, H4, and H5 could not be tested in this analysis due to a lack of data. The hypotheses H1, H14 and H16 only bivariate correlations could be analysed, of which two showed a significant effect.



## 5 Conclusions and Discussion

This paper dealt with the research question to what extent a) platform specific characteristics, b) social demographic characteristics, and c) knowledge about the working conditions of platform workers can explain the emphasis people put on the working conditions of platform workers when they give feedback in platform services. Concerning the *platform specific characteristics (a)* this study could, unfortunately, not test many hypotheses because of a lack of data on different platform types. This is because the vast majority of participants used local delivery services, and therefore, there was not much variation in the data concerning the different platform types of local vs. global and high-skilled vs. low-skilled services. Due to the described difficulties a final answer concerning the effect of the *platform specific characteristics*, cannot be given.

When it comes to the *socio-demographic characteristics (b)*, this study could find that women consider the working conditions more than men do. This result is in line with previous findings in the literature which suggest that *women* tend to be more altruistic compared to men (Eckel, 1998; Starr, 2009). And since feedback ratings can potentially harm the platform worker's reputation, an altruistic person would therefore consider the working conditions more than a non-altruistic person. This effect is also related to the finding that politically more *left-wing-oriented* people emphasize the working conditions more compared to more right-wing-oriented people as the protection of worker's interests is a typical issue of left-wing politics. Finally, also the control variable *age* was found to be significant in this study: Older people slightly more emphasize the working conditions compared to younger people. However, the *subjective social class* as well as *higher education* did not show any significant effects in the regression analysis.

For *knowledge and perceptions about the working conditions of platform workers (c)* hypothesis H2 could be confirmed: People who believe that their own feedback rating will have a great impact on the working conditions, are more likely to emphasize the working conditions of platform workers when they give feedback compared to those who do not believe that their rating will have much impact. The confirmation of this hypothesis can be seen an important indicator that the ratings are somehow internally consistent because people who think that their feedback matters more, also do care more about it, and vice versa. Connecting this finding with the idea of a rational voter (Downs, 1957) one could conclude that consumers in this study only consider the working conditions in feedback ratings when they believe that doing so will actually have an effect resulting from it. Furthermore, this result shows that obviously some

consumers find feedback reputation systems more convincing than others. This is an interesting insight for the literature on the trust-creating effects of feedback reputation systems because such systems may not create trust among all users Filippas et al. (2018).

In contrast to Herbert (2018) who found that the awareness of protests among platform workers has a significant effect on the willingness to pay more (WTP) for a service, this study could not find a direct effect of the awareness of the support for platform-related protests on the dependent variable. However, there are significant differences in the mean values of the *Emphasis on the working conditions* between those who are aware and those who are not aware of the protests. Furthermore, there are significant mean differences in the *Emphasis on the working conditions* between those who give feedback in reality and those who do not. People who give feedback in reality emphasize the working conditions by about 0.75 points more (on a scale from 1 to 5) compared to those who do not give feedback. Interestingly, this variable was also statistically significant in one regression model when the *Impact of the rating on the working conditions* was excluded. Concerning the perceptions of working conditions, this study could not find evidence that people who have more negative perceptions of the working conditions would tend to emphasize the working conditions more when they give feedback

In total, the three factors (platform specific characteristics, socio-demographics, and knowledge and perceptions) can only to a limited extent explain the *Emphasis people put on the working conditions when they give feedback*. The possible reasons why this study could not fully explain the Emphasis on the working conditions, are manifold. One of the most important limitations is certainly the limited size of the sample in terms of quality and quantity. Especially the lack of diversity concerning the different platform characteristics played a role here because some hypotheses could not be tested. However, another reason for the little variety in the platform characteristics could be that many participants picked delivery services because they are the most "visible" ones (cf. Schmidt, 2017). Nonetheless, the limited sample size is an issue because prevented a comparison between different sample groups in the regression analysis. Without limited time and resources, a more sophisticated sampling strategy may would have resulted in a larger sample. Such a sample could have made an analysis between different types of platform services possible. Furthermore, would have the benefit that it could contain more participants who actually do give feedback in the platform economy in reality. With a larger sample, it would also be advisable to split the participants into two groups: those who actually give feedback and those who do not. Hence, future research projects should aim to further improve

the sample quality. An even larger-scaled offline (probability) sampling approach could be a promising because this increases the chances of a more diverse sample.

For the socio-demographic variables that were insignificant, the overrepresentation of higher-educated participants might have played a role. Again, using a larger and more diverse sample in terms of the socio-economic characteristics, would be a very important suggestion for future research.

### **Additional remarks**

The statistical analysis (factor analysis and different linear regression models) revealed that there are indeed observable differences between the "*Emphasis on the working conditions*" and the "*Emphasis on the general service factors*" – and that those two factors are not treated as "the same thing". However, it is, of course, possible that biases did influence the results. For instance, for the part of the sample that was conducted offline, the researcher came to the impression that for quite a large proportion of the respondents it was a relatively novel idea to take the working conditions into account when giving feedback. Interestingly, many of these participants would nevertheless say that the working conditions matter to them. This contradiction might indicate an attitude-behaviour gap as well as to the existence of a social-desirability bias. Avoiding these kinds of biases is not easy in the context of survey research. Therefore, in order to limit the effect of such biases, an experimental research design could be a solution because the respondent does not only give a stated opinion but shows his or her real behaviour.

Another issue to keep in mind is that the findings of this study are specifically related to delivery platforms as most participants selected these platforms. When it comes to the external validity of this study, it is important to keep in mind that generalisations of the findings can only be made with caution since the sample does not exactly represent the general population of Münster. In particular, the sample is partly biased by an overrepresentation of higher-educated and younger people as well as the underrepresentation of working-class people. This shows once more that future research should consider the sample quality as an important issue.

In sum, this study did a first step in the direction of combining research on feedback reputation systems with working condition related issues. Since the two fields are highly related (but still understudied), future research should further investigate the issue.

## 6 References

- Andorfer, V. A., & Liebe, U. (2012). Research on Fair Trade Consumption—A Review. *Journal of Business Ethics, 106*(4), 415–435. <https://doi.org/10.1007/s10551-011-1008-5>
- Babbie, E. R. (2014). *The basics of social research* (6. ed.). Belmont, Calif.: Wadsworth Cengage Learning.
- Bair, J., Dickson, M. A., & Miller, D. (2016, c2014). *Workers' rights and labor compliance in global supply chains: Is a social label the answer?* ([Pbk. ed.]). *Routledge studies in business ethics: [7]*. New York: Routledge.
- Berg, J. (2016). *Income Security in the On-Demand Economy: Findings and Policy Lessons from a Survey of Crowdworkers*.
- Braaas-Garza, P., Capraro, V., & Rascon, E. (2018). Gender Differences in Altruism on Mechanical Turk: Expectations and Actual Behaviour. *SSRN Electronic Journal*. Advance online publication. <https://doi.org/10.2139/ssrn.2796221>
- Chen, J. (2015). Your Job Success Score on Upwork - Upwork Blog. Retrieved from <https://www.upwork.com/blog/2015/06/job-success-score-upwork/>
- Christiano, A., & Neimand, A. (2017). Stop Raising Awareness Already. *Stanford Social Innovation Review, Spring 2017*, 34–41.
- City of Münster. (2018). *Münster. Data and Facts*. Retrieved from [https://www.stadt-muenster.de/fileadmin//user\\_upload/stadt-muenster/61\\_stadtentwicklung/pdf/zahlen/Faltblatt\\_Muenster\\_im\\_Spiegel\\_2018\\_en.pdf](https://www.stadt-muenster.de/fileadmin//user_upload/stadt-muenster/61_stadtentwicklung/pdf/zahlen/Faltblatt_Muenster_im_Spiegel_2018_en.pdf)
- Cook, N. (2015). The Insecure World of Freelancing. Millions of workers now go it alone— who will provide them with basic labor protections? Retrieved from <https://www.theatlantic.com/business/archive/2015/07/building-social-safety-net-freelancers/399551/>
- Dellarocas, C. N. (2003). The Digitization of Word-of-Mouth: Promise and Challenges of Online Feedback Mechanisms. *SSRN Electronic Journal*. Advance online publication. <https://doi.org/10.2139/ssrn.393042>
- Deutsche Welle. Uber drivers on strike worldwide | DW | 08.05.2019. Retrieved from <https://www.dw.com/en/uber-drivers-on-strike-worldwide/av-48665563>

- Deutschlandfunk.de. (2019). Reformpläne für den Fahrdienstmarkt - Taxifahrer gegen Uber und Co. Retrieved from [https://www.deutschlandfunk.de/reformplaene-fuer-den-fahrdienstmarkt-taxifahrer-gegen-uber.1773.de.html?dram:article\\_id=441924](https://www.deutschlandfunk.de/reformplaene-fuer-den-fahrdienstmarkt-taxifahrer-gegen-uber.1773.de.html?dram:article_id=441924)
- Downs, A. (1957). An Economic Theory of Political Action in a Democracy. *Journal of Political Economy*, 65(2), 135–150. <https://doi.org/10.1086/257897>
- Drahokoupil, J., & Fabo, B. (2016). The platform economy and the disruption of the employment relationship: ETUI Policy Brief N°5/2016.
- Eckel, C. C., & Grossman, P. J. (1998). Are Women Less Selfish Than Men?: Evidence From Dictator Experiments. *The Economic Journal*, 108(448), 726–735. <https://doi.org/10.1111/1468-0297.00311>
- European Commission. (2016). *A European agenda for the collaborative economy*. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0356&from=EN>
- Filippas, A., Horton, J. J., & Golden, J. (2018). Reputation Inflation. Advance online publication. <https://doi.org/10.2139/ssrn.3136473>
- Groen, W. de, Maselli, I., & Fabo, B. (2016). *The Digital Market for Local Services: A One-Night Stand for Workers? An Example from the On-Demand Economy*.
- Hamari, J., Sjöklint, M., & Ukkonen, A. (2016). The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology*, 67(9), 2047–2059. <https://doi.org/10.1002/asi.23552>
- Hampton, A. J., Fisher Boyd, A. N., & Sprecher, S. (2018). You're like me and I like you. *Journal of Social and Personal Relationships*, 29, 026540751879041. <https://doi.org/10.1177/0265407518790411>
- Hausemer, P., Rzepecka, J., Dragulin, M., Vitiello, S., Rabuel, L., Nunu, M., . . . Baines, L. (2017). Exploratory study of consumer issues in online peer-to-peer platform markets. Retrieved from [https://ec.europa.eu/newsroom/document.cfm?doc\\_id=45245](https://ec.europa.eu/newsroom/document.cfm?doc_id=45245)
- Hawlitsek, F., Teubner, T., & Weinhardt, C. (2016). Trust in the Sharing Economy. *Die Unternehmung – Swiss Journal of Business Research and Practice*, 70. <https://doi.org/10.5771/0042-059X-2016-1-26>

- Herbert, P. L. (2018). *Individual Social Responsibility?: Consumers in the Platform Economy and their Support for Workers' Access to Social Protection* (Bachelor Thesis). University of Twente, Enschede. Retrieved from [https://essay.utwente.nl/75851/1/Herbert\\_BA\\_BMS.pdf](https://essay.utwente.nl/75851/1/Herbert_BA_BMS.pdf)
- Hessenschau.de. (2019). Taxi-Korso-Protest gegen Uber & Co. Retrieved from <https://www.hessenschau.de/wirtschaft/taxi-korso-protest-gegen-uber--co,taxifahrer-uber-protest-frankfurt-100.html>
- Hu, N., Pavlou, P. A., & Zhang, J. (2013). *Overcoming the J-Shaped Distribution of Product Reviews*.
- International Labour Organization. (2018). *Job quality in the platform economy: Issue Brief, no. 5*.
- Katz, L., & Krueger, A. (2016). *The Rise and Nature of Alternative Work Arrangements in the United States, 1995-2015*. Cambridge, MA. <https://doi.org/10.3386/w22667>
- Kenney, M., & Zysman, J. (2016). The Rise of the Platform Economy | Issues in Science and Technology. Retrieved from <https://issues.org/the-rise-of-the-platform-economy/>
- Khanna, H. (2018). The Psychology of Rating Systems – Hacker Noon. Retrieved from <https://hackernoon.com/the-psychology-of-rating-systems-3103e26fddd8>
- Möhlmann, M., & Geissinger, A. Trust in the Sharing Economy: Platform-Mediated Peer Trust.
- Pesole, A., Urzì Brancati, M. C., Fernández-Macías, E., Biagi, F., & González Vázquez, I. (2018). *Platform workers in Europe: Evidence from the COLLEEM survey. JRC science for policy report*. Luxembourg: Publications Office of the European Union. <https://doi.org/10.2760/742789>
- Pettersen, L. (2017). Rating mechanisms among participants in sharing economy platforms. *First Monday*, 22(12). <https://doi.org/10.5210/fm.v22i12.7908>
- Pollock, P. H. (2016). *The essentials of political analysis* (5th ed.). Los Angeles, Calif: SAGE.
- Rand, D. G., Brescoll, V., Everett, J., Capraro, V., & Barcelo, H. (2016). *Social Heuristics and Social Roles: Intuition Favors Altruism for Women But Not for Men*.
- Schmidt, F. A. (2017). *Digital labour markets in the platform economy: Mapping the political challenges of crowd work and gig work. Good society - social democracy #2017 plus*. Bonn: Friedrich-Ebert-Stiftung, Division for Economic and Social Policy.

- Scholz, T. (2017). *Overworked and underpaid: How workers are disrupting the digital economy*. Cambridge, UK, Malden, MA: Polity Press.
- Spiegel Online.de. (2019). Subunternehmer-Gesetz für Zusteller: So sollen Paketboten vor Ausbeutung geschützt werden - SPIEGEL ONLINE - Wirtschaft. Retrieved from <https://www.spiegel.de/wirtschaft/soziales/was-das-subunternehmergesetz-fuer-paketboten-bedeutet-a-1267590.html>
- Starr, M. A. (2009). The social economics of ethical consumption: Theoretical considerations and empirical evidence. *The Journal of Socio-Economics*, 38(6), 916–925. <https://doi.org/10.1016/j.socec.2009.07.006>
- Stefano, V. de. (2015). The Rise of the 'Just-in-Time Workforce': On-Demand Work, Crowd Work and Labour Protection in the 'Gig-Economy'. *SSRN Electronic Journal*. Advance online publication. <https://doi.org/10.2139/ssrn.2682602>
- Tagesschau.de. (2019). FAQ: Was sich für Paketboten ändern soll. Retrieved from <https://www.tagesschau.de/wirtschaft/faq-paketboten-koalitionsausschuss-101.html>
- Taz.de. (2017). Die Revolte der neuen Dienstboten. Retrieved from <http://www.taz.de/!5428832/>
- Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Networked but Commodified: The (Dis)Embeddedness of Digital Labour in the Gig Economy. *Sociology*, 37(3), 003803851982890. <https://doi.org/10.1177/0038038519828906>
- Wood, A. J., Lehdonvirta, V., & Graham, M. (2018). Workers of the Internet unite? Online freelancer organisation among remote gig economy workers in six Asian and African countries. *New Technology, Work and Employment*, 33(2), 95–112. <https://doi.org/10.1111/ntwe.12112>
- ZEIT Online. (2019). Arbeitsbedingungen: "Das, was Deliveroo macht, ist rechtswidrig". Retrieved from <https://www.zeit.de/arbeit/2019-01/arbeitsbedingungen-deliveroo-foodora-mitarbeiter-fahrer-kontrolle>
- Zervas, G., Proserpio, D., & Byers, J. (2015). A First Look at Online Reputation on Airbnb, Where Every Stay is Above Average. Advance online publication. <https://doi.org/10.2139/ssrn.2554500>

## Appendix I: Factor analysis

**Table 1.** *Pattern Matrix of Factor analysis for Emphasis on several aspects when giving feedback (all items)*

Item	Factor 1	Factor 2	Factor 3
<b>General service</b>			
General service quality			0,878
<b>Service quality related factors</b>			
Punctuality		0,718	
Price performance ratio		0,757	
Communication & Kindness		0,537	
<b>Working condition related factors</b>			
Reputation of the worker	0,810		
Income security of the worker	0,889		
Future prospects of the worker to get hired again	0,867		

\*Only values above 0,5 were displayed

Total variance explained: 67,7%

Variance factor 1: 32,5 %

Variance factor 2: 20,0%

Variance factor 3: 15,2 %

**Table 2.** *Pattern Matrix of Factor analysis for Emphasis on several aspects when giving feedback (general service quality item excluded)*

Item	Factor 1	Factor 2
<b>Service quality related factors</b>		
Punctuality		0,666
Price performance ratio		0,761
Communication & Kindness		0,607
<b>Working condition related factors</b>		
Reputation of the worker	0,806	
Income security of the worker	0,878	
Future prospects of the worker to get hired again	0,879	

\*Only values above 0,5 were displayed

Total variance explained: 61,2%

Variance factor 1: 37,8%

Variance factor 2: 23,4%

**Table 3.** *Pattern Matrix of Factor analysis for Impact of rating on several aspects when giving feedback*

Item	Factor 1	Factor 2
<b>Service quality related factors</b>		
Overall service quality		0,863
Punctuality		0,667
Price performance ratio		0,833
Communication & Kindness	0,536	
<b>Working condition related factors</b>		
Reputation of the worker	0,823	
Income security of the worker	0,858	
Future prospects of the worker to get hired again	0,872	

\*Only values above 0,5 were displayed

Total variance explained: 66,3 %

Variance factor 1: 48,6 %

Variance factor 2: 17,7 %

## Appendix II: Independent T-tests for social classes

**Table 1.** Outcomes Independent Sample t-Test between “Emphasis on working conditions” (a) / “Emphasis on general service factors” (b) and Working Classes

Categories	Emphasis on working conditions		Emphasis on general service factors	
	Means (N)	Mean Diff.	Means (N)	Mean Diff.
Other classes <sup>2</sup> (0); Working class (1)	2.96 (79); 3.41 (12)	-.450	3.90 (79); 4.27 (12)	-.374**
Not middle class (0); Middle class (1)	2.91 (52); 3.17 (39)	-.269	3.90 (52); 4.01 (39)	-.113
Not upper middle class (0); upper middle class (1)	3.15 (59); 2.79 (32)	.360	4.03 (59); 3.79 (32)	-.247
Not no class (0); No class (1)	3.06 (83); 2.62 (8)	.439	3.96 (83); 3.79 (8)	.176

For all variables the equality of variances is assumed (Levene’s Test Significance >0.05).  
Significant at \*\*0.05 and \*\*\*0.01 level (two-tailed)

### Appendix III: Preliminary Regression Analysis

**Table 1.** Results for Emphasis on the working conditions. Model 1: Socio-demographic characteristics; Model 2: Political orientation

Model	1. Socio-demographics		2. Political orientation	
Constant	2.07		3.095	
	Model 1		Model 2	
	B	Std. E.	B	Std. E.
Female	.561*	.177	-	-
Higher educated	.080	.180	-	-
Working class	.124	.277	-	-
Upper middle class	-.377	.198	-	-
No class indicated	-.495	.324	-	-
Age	.025*	.008	-	-
Informed about politics	-	-	.181	.101
Left-right orientation	-	-	.168*	.064
Adj. R <sup>2</sup>	.192		.091	

Significance at 0.05\* level, at 0.01\*\* level

**Table 2.** Results for "Emphasis on the working conditions" Model 3: Knowledge and perceptions, Model 4: Platform characteristics

Model	3. Knowledge and Perceptions		4. Platform characteristics	
	B	Std. E	B	Std. E.
Constant		1.270 Model 3		2.881 Model 4
Awareness of protests	.060	.209	-	-
Support for protests	.118	.128	-	-
Perceptions of working conditions	.094	.184	-	-
Impact of rating on working conditions	.228*	.110	-	-
Give feedback	.425*	.199	-	-
Use sometimes	-	-	-	-
Use often	-	-	.410*	.198
Adj. R <sup>2</sup>		.242		.035

Significance at 0.05\* level, at 0.01\*\* level

## Appendix IV: Collinearity Diagnostics

**Table 1.** Results of Collinearity Analysis for Model 1a. Dependent Variable  
Emphasis on working conditions in feedback ratings

	Tolerance	Variance Inflation Factor
Female	.889	1.125
Age	.916	1.091
Political orientation (Left-right)	.929	1.077
Give feedback	.910	1.099
Use often	.937	1.068

**Table 2.** Results of Collinearity Analysis for Model 1b. Dependent Variable  
Emphasis on working conditions in feedback ratings

	Tolerance	Variance Inflation Factor
Female	.889	1.125
Age	.916	1.092
Political orientation (Left-right)	.928	1.078
Give feedback	.675	1.481
Use often	.916	1.092
Impact of working conditions	.704	1.420

## Appendix V: The Survey

---

### Start of Block: Default Question Block

Q20 In dieser Umfrage geht es um sogenannte Plattform-Ökonomie Dienste. Bei solchen Diensten werden die Dienstleister/ Anbieter mit den Kunden durch eine Plattform (Webseite oder App) miteinander verbunden. Das Ziel dieser Umfrage ist es, mehr über die Erfahrungen und Meinungen von Leuten bezüglich solcher Plattformen herauszufinden. Aber keine Sorge, auch Leute, die keine Plattform Dienste nutzen, können an der Umfrage teilnehmen. Diese Umfrage konzentriert sich auf einen bestimmten Typus von Plattform, nämlich Service-Plattformen, wo Dienste von Menschen angeboten werden (wie z. B. Lieferdienste wie Flaschenpost, Deliveroo aber auch Taxidienste wie Uber oder Reinigungsdienste).

Jedoch geht es in dieser Umfrage nicht um sogenannte "Sharing Economy" Dienste, wo Leute miteinander Dinge teilen, wie z. B. eine Wohnung (Airbnb) oder ein Auto (Blablacar).

Diese Umfrage dauert ca. 5 - 10 Minuten. Sie wird von Andre Klausmeyer durchgeführt und ist Teil einer Bachelorarbeit an der Faculty of Behavioural, Management and Social Sciences der University of Twente, Enschede. Die Teilnahme ist freiwillig und kann jederzeit abgebrochen werden. Die erhobenen Daten werden komplett anonym und vertraulich behandelt.

Für weitere Fragen kann der Forscher kontaktiert werden. Andre Klausmeyer (a.klausmeyer@student.utwente.nl).

Durch das Klicken des Buttons unten, stimme ich zu, dass ich diese Informationen gelesen habe und damit einverstanden bin.

### End of Block: Default Question Block

---

### Start of Block: Block 13

Q21 Leben Sie zurzeit in Münster?

- Ja (1)
- Nein (2)

*Skip To: End of Survey If Q21 = Nein*

### End of Block: Block 13

---

### Start of Block: Platform Use

Q1 Haben Sie schon einmal von der Plattform-Ökonomie gehört?

- Ich habe noch nie von der Plattform-Ökonomie gehört. (1)
- Ich habe schon von der Plattform-Ökonomie gehört, aber ich nutze sie nicht. (2)
- Ich nutze Plattform-Ökonomie Dienste manchmal. (3)
- Ich nutze Plattform-Ökonomie Dienste oft. (4)
- Ich nutze Plattform-Ökonomie Dienste sehr oft. (5)

*Skip To: End of Survey If Q1 = Ich habe noch nie von der Plattform-Ökonomie gehört.*

*Skip To: End of Block If Q1 = Ich habe schon von der Plattform-Ökonomie gehört, aber ich nutze sie nicht.*

**End of Block: Platform Use**

---

**Start of Block: Perceptions**

Q10 Inwiefern stimmen Sie den folgenden Aussagen zu?

	Stimme voll und ganz zu (1)	Stimme eher zu (2)	teils/teils (3)	Stimme eher nicht (4)	Stimme überhaupt nicht zu (5)
Plattform Arbeiter haben es schwer von ihrem Einkommen zu leben (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plattform Arbeiter haben Druck gute Bewertungen zu bekommen. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plattform Arbeiter haben damit zu kämpfen, in der Zukunft wieder Aufträge zu erhalten. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plattform Arbeiter haben wenige Möglichkeiten ihren Tarif auszuhandeln. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Konsumenten können viel Macht über Plattform Arbeiter ausüben. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Perceptions

Start of Block: Protests

Q11

In den vergangenen Jahren haben Plattform Arbeiter gegen die Arbeitsbedingungen, unter denen sie arbeiten, protestiert. Zum Beispiel ging es um geringen Lohn, fehlende soziale Absicherung oder die Möglichkeit sich in Gewerkschaften zu organisieren.

Haben Sie schon von solchen Protesten gehört?

- Ja. (1)
- Nein. (2)
- Ich weiß es nicht. (3)

End of Block: Protests

---

Start of Block: Protest Support

Q12 Unterstützen Sie solche Proteste (wie in der Frage zuvor beschrieben)?

- Unterstütze ich voll und ganz. (1)
- Unterstütze ich eher. (2)
- Ich bin unentschlossen. (3)
- Unterstütze ich eher nicht. (4)
- Unterstütze ich überhaupt nicht. (5)

End of Block: Protest Support

---

Start of Block: Informed about politics

Q13 Wie sehr stimmen Sie der folgenden Aussage über sich zu?

	Stimme voll und ganz zu (1)	Stimme eher zu (2)	teils/teils (3)	Stimme eher nicht zu (4)	Stimme überhaupt nicht zu (5)
Im Allgemeinen sind andere Leute besser über Politik informiert als ich. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Informed about politics

---

Start of Block: Demographics

Q14 In der Politik wird manchmal von "links" und "rechts" gesprochen. Wo würden Sie sich selbst auf einer Skale von 0 - 10 einordnen, wenn 0 "links" meint und 10 "rechts" meint?

0 1 2 3 4 5 6 7 8 9 10



Q15 Was beschreibt Ihre aktuelle Lebenssituation am besten?

- Hausfrau/mann (1)
- Angestellt (2)
- Selbstständig (3)
- Pensioniert (4)
- Schüler/ Student (5)
- Arbeitslos (6)
- Arbeitsunfähig (7)
- Nichts davon. (8)

Q16 Was ist Ihr höchster Bildungsabschluss. Wenn Sie zurzeit eine Ausbildung/ Studium absolvieren, wählen Sie den Abschluss der am besten daz passt.

- Keine Schulbildung abgeschlossen (1)
  - Grundschulabschluss (2)
  - Weiterführende Schule (Haupt-, Realschule, Gymnasium) (3)
  - Ausbildung (4)
  - Studium oder höher (5)
- 



Q17 In welchem Jahr sind Sie geboren?

---

Q18 Was ist Ihr Geschlecht?

- Männlich (1)
  - Weiblich (2)
  - Divers (3)
  - Keine Angabe. (4)
-

Q19 Manche Leute sprechen von "sozialen Klassen" in einer Gesellschaft, die auf dem sozio-ökonomischen Status basieren. Welcher "sozialen Klasse" würde Sie sich zuordnen?

- Arbeiterklasse (1)
- Untere Mittelklasse (2)
- Mittelklasse (3)
- Obere Mittelklasse (4)
- Oberklasse (5)
- Ich weiß es nicht. (6)

End of Block: Demographics

---

Start of Block: Block 15

Q22 Haben Sie diese Umfrage selbstständig online (am PC oder Handy) durchgeführt oder wurden Sie auf der Straße vom Autor dieser Studie angesprochen und durch die Fragen geleitet?

- Ich habe die Umfrage selbstständig am PC / Handy ausgefüllt. (1)
- Ich wurde auf der Straße angesprochen und durch die Umfrage geleitet. (2)

End of Block: Block 15

---

Start of Block: Platform Services

Q2 Welchen der folgenden Platform-Ökonomie Dienste nutzen Sie am häufigsten? Bitte wählen Sie nur einen Dienst aus, den Sie am häufigsten Nutzen. Hierbei geht es nur um Service Plattformen (wo

Sie eine Person beauftragen Dienste für Sie zu erledigen, wie z. B. einen Lieferservice oder eine Hausreinigung).

- Flaschenpost (1)
- Deliveroo (2)
- Lieferheld (3)
- Lieferando (4)
- Foodora (5)
- Takeaway (6)
- TaskRabbit (7)
- Clickworker (8)
- Cloudwork (9)
- Upwork (10)
- MyHammer (11)
- Freelance (12)
- Amazon Mechanical Turk (13)
- Helping (14)
- Ich nutze keine Plattform Dienste. (15)
- Anderer Dienst (16)

End of Block: Platform Services

---

Start of Block: Contact

Q7 Wenn Sie  $\{Q2/ChoiceGroup/SelectedChoices\}$  nutzen, was beschreibt Ihren Kontakt mit dem Arbeiter, also z.B. dem Lieferfahrer, am besten?

- Ich habe immer Kontakt mit der gleichen Person. (1)
- Ich habe oft Kontakt mit der gleichen Person. (2)
- Ich habe manchmal Kontakt mit der gleichen Person. (3)
- Ich habe selten Kontakt mit der gleichen Person. (4)
- Ich habe nie Kontakt mit der gleichen Person. (5)

End of Block: Contact

---

Start of Block: Feedback

Q4 Viele Plattformen nutzen Bewertungssysteme, bei denen die Kunden ihre Erfahrungen mit den Serviceanbietern (z. B. Lieferfahrer) bewerten können. Dies kann z. B. mittels Rezensionen oder einer Bewertung in 1 - 5 Sternen erfolgen. Wenn Sie an  $\{Q2/ChoiceGroup/SelectedChoices\}$  denken, nutzen Sie solch ein Bewertungssystem?

- Ja, ich gebe sehr häufig Feedback. (1)
- Ja, ich gebe häufig Feedback. (2)
- Ja, ich gebe manchmal Feedback. (3)
- Ja, ich gebe selten Feedback. (4)
- Nein, ich gebe kein Feedback. (5)

End of Block: Feedback

---

Start of Block: Emphasis

Q8 Wenn Sie Feedback bei  $\{Q2/ChoiceGroup/SelectedChoices\}$  geben (würden), wie wichtig sind dann folgende Überlegungen für Sie bei der Bewertung?

	Sehr wichtig (1)	Eher wichtig (2)	Weder wichtig, noch unwichtig (3)	Eher unwichtig (4)	Sehr unwichtig (5)
Generelle Qualität des Services (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pünktlichkeit (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reputation des Arbeiters (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preis-Leistungsverhältnis (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Einkommenssicherheit des Arbeiters (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kommunikation und Freundlichkeit des Arbeiters (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Die Zukunftsaussichten des Arbeiters wieder gebucht zu werden (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Emphasis

Start of Block: Impact

Q9

Viele Plattformen nutzen Bewertungssysteme, bei denen die Kunden ihre Erfahrungen mit den Serviceanbietern (z. B. Lieferfahrer) bewerten können. Dies kann z. B. mittels Rezensionen oder einer Bewertung in 1 - 5 Sternen erfolgen.

Stellen Sie sich vor, Sie geben Feedback zu einem Plattform-Angebot (falls Sie dies nicht bereits

regelmäßig tun). Was denken Sie, wie groß ist der Einfluss, den Ihre Bewertung auf folgende Aspekte hat?

	Viel Einfluss (1)	Etwas Einfluss (2)	Weder viel noch wenig Einfluss (3)	Wenig Einfluss (4)	Kein Einfluss (5)
Generelle Qualität des Services (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pünktlichkeit (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reputation des Arbeiters (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preis-Leistungsverhältnis (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Einkommenssicherheit des Arbeiters (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kommunikation und Freundlichkeit des Arbeiters (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Die Zukunftsaussichten des Arbeiters wieder gebucht zu werden (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Impact

---

Start of Block: Rating Strategy

Q6 Haben Sie eine "übliche Bewertungsstrategie", die Sie für  $\{Q2/ChoiceGroup/SelectedChoices\}$  benutzen?

- Ja, ich gebe üblicherweise positives Feedback. (1)
- Nein, ich bewerte von Fall zu Fall unterschiedlich. (2)
- Ja, ich gebe üblicherweise negatives Feedback. (3)
- Ich weiß es nicht. (4)

End of Block: Rating Strategy

---

Start of Block: Final Question Offline vs. online