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CROWDWORKING MONITOR NR. 1

Für das Verbundprojekt „Crowdworking Monitor“

Prof. Dr. Serfling

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CROWDWORKING MONITOR NR. 1

FÜR DAS VERBUNDPROJEKT "CROWDWORKING MONITOR"

VORGELEGT VON:

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1. Executive Summary (in German)

Dies ist der erste aus einer Serie von vier geplanten Forschungsberichten zur Verbreitung der Arbeitsform „Crowdworking“ in Deutschland. Als „Crowdworking“ definieren wir die Erledigung bezahlter temporärer Arbeitsaufträge, die über Internet-Plattformen oder Smartphone Apps vermittelt werden. Die Eingrenzung des Crowdworking Marktes und die Ermittlung der genauen Anzahl von Crowdworkern ist methodologisch schwierig, da der Markt für Crowdworking-Plattformen heterogen und volatil ist sowie statistisch valide Information über die Grundgesamtheit von Crowdworkern fehlen. Die wenigen Studien, die bisher zum deutschen Crowdworking Markt vorliegen, können aufgrund ihrer kleinen Stichprobenzahl (< 2200) nur erste Hinweise zur Erfassung des Phänomens liefern. Die einzige größer angelegte Studie für den deutschen Markt wurde mithilfe einer Telefonumfrage realisiert und beruht auf einer Stichprobe von 10.000 Teilnehmern[1].

Die vorliegenden Ergebnisse basieren auf einer kontinuierlichen Online-Erhebung die vom Online-Umfrage-Unternehmen Civey GmbH in Berlin durchgeführt wird. Die Rohdaten werden an der Hochschule Rhein-Waal ausgewertet. Gefördert wird das Vorhaben aus Mitteln des Bundesministeriums für Arbeit und Soziales. Ziel ist es, mit dieser Reihe von Untersuchungen zur Verbesserung der bislang begrenzten Datenbasis beizutragen. Da die Online-Erhebung mithilfe eines sog. HTML-Widgets auf zuletzt über 25.000 Webseiten, Blogs und Nachrichtenportalen (z. B. Spiegel Online, Welt.de, Cicero etc.) erfolgt, wird ein wachsendes Panel von Internetnutzern in Deutschland erreicht. Die vorliegende erste Ausgabe des Crowdworking-Monitors stellt die Ergebnisse der Erhebung bis zum Stichtag vom 15. April 2018 dar, zu dem rund 375.000 Internetnutzer befragt wurden. Dies stellt die bis dato größte Stichprobe einer Untersuchung zu Crowdworking in Deutschland dar.

Zur Eliminierung von Verzerrungen durch Mehrfach-abstimmungen und Internetnutzung werden die Stimmen registrierter Civey-Nutzer anhand soziodemografischer

[1] Bonin, Holger; Rinne, Ulf (2017): Report No. 80: Omnibusbefragung zur Verbesserung der Datenlage neuer Beschäftigungsformen. Kurzexpertise im Auftrag des Bundesministeriums für Arbeit und Soziales. Hg. v. IZA - Institute of Labor Economics. Bonn (Kurzexpertise, 80). Online verfügbar unter https://www.iza.org/de/publications/r/188/report-no-80-omnibusbefragung-zur-verbesserung-der-datenlage-neuer-beschaftigungsformen, zuletzt geprüft am 08.03.2018.

Merkmale unter Zuhilfenahme des Mikrozensus auf die Wahlbevölkerung der Bundesrepublik Deutschland hochgerechnet.

Wir definieren Crowdworker als natürliche Personen, die zumindest einen Teil ihres Einkommens durch die Erledigung bezahlter temporärer Arbeitsaufträge erzielen, die über Internet-Plattformen oder Smartphone-Apps vermittelt werden. Eine Organisation von Arbeitsaufträgen, die firmenintern stattfindet, ist damit ausgeschlossen. Arbeitsaufträge können sowohl online als auch in der realen Welt durchgeführt werden. Um die Teilnehmerinnen und Teilnehmer als Crowdworker zu identifizieren, wurde die Frage gestellt: "**Arbeiten Sie für bezahlte Arbeitsaufträge, die Sie über Online-Plattformen oder -Marktplätze vermittelt bekommen?**".

Neben der Erhebung der soziodemographischen Charakteristika wurden von Mitte Dezember 2017 bis Mitte Januar 2018 weitere 25 Fragen in die Umfrage eingeführt, die die Arbeitszeit, Bezahlung, Tätigkeiten, Plattformen und die Motivation der als Crowdworker identifizierten Personen abfragen.

Die wichtigsten Ergebnisse:

- Ausmaß: Unsere Schätzung des Anteils der aktiven Crowdworker an der wahlberechtigten deutschen Bevölkerung liegt bei bis zu 4,8 %. Ähnliche Ergebnisse liegen für EU-Staaten vor. Von diesen erzielen rd. 70% ein Erwerbseinkommen (entsprechend 3,4% von allen). Bis zu weiteren 3 Prozent können sich Crowdworking zukünftig vorstellen – ein ebenso hoher Anteil hat dies in der Vergangenheit getan. Somit können bis zu 10,7% der Bevölkerung als Crowdworking-affin bezeichnet werden.
- Soziodemografie: Crowdworker sind eher jünger, alleinstehend und männlich, gut gebildet und leben häufiger in den Stadtstaaten. Im Bereich Microtasking sind überdurchschnittlich junge und weibliche Crowdworker zu finden. Zudem zeigt sich aber auch ein relativ höherer Anteil an Crowdworkern entweder mit Hauptschul- und keinem Abschluss.
- Arbeitszeiten: Crowdworker weisen deutliche Unterschiede hinsichtlich der Höhe der erzielten Einkünfte und der investierten Wochenarbeitszeit auf. 34 % arbeiten mehr als 30 Stunden pro Woche auf Plattformen, 24 % sogar mehr als 40 Stunden pro Woche. Für rund ein Drittel ist

Crowdworking also kein Nebenjob. Für die große Mehrheit ist Crowdworking eine von mehreren Einkünften und Beschäftigungsformen.

- Einkommen und Tätigkeiten: Die vorliegenden Befragungsergebnisse geben Hinweise auf eine deutliche Einkommensspreizung bei Crowdworkern: Während 40 % mehr als 1000 € brutto in der Woche verdienen, erhält ein Drittel weniger als 100 €. Als Grund wird in der sozialwissenschaftlichen Literatur vermutet, dass Personen mit niedrigem oder ohne Bildungsabschluss eher kurzfristige, so genannte Microtasks ausüben. Höher qualifizierte Crowdworker arbeiten häufig in den Bereichen Consulting, Design, Programmierung und Testing, oder verfolgen handwerkliche Tätigkeiten.
- Plattformmarkt: Unsere Auswahl an 13 Online-Dienstleistungs-Plattformen deckt nur weniger als ein Drittel des Marktes möglicher Plattformen ab, auf denen CW aktiv sind. Dies deutet auf eine hohe Zersplitterung des (internationalen) Plattformmarktes hin. Von den 13 angegebenen Plattformen haben 6 ihren Hauptsitz in Deutschland.
- Zufriedenheit: Die Hälfte der Crowdworker sind zufrieden oder eher zufrieden mit ihrer Crowdworker-Tätigkeit. Nur ein Teil der Crowdworker (23 %) sind mit ihrem Gehalt unzufrieden. Dies zeigt, dass für einen Teil der Crowdworker diese Beschäftigungsoption nicht nur eine Zwischenlösung darstellt.
- Ausblick: Da Civey kontinuierlich Daten zu Crowdworking erhebt, wird die Stichprobengröße weiter ansteigen, was die bereits vorgestellten Ergebnisse weiter präzisieren wird. Weiterhin soll untersucht werden, welche Typen von Crowdworkern und Erwerbsbiografien in der Stichprobe vorhanden sind. Anhand der neu erhobenen Daten können außerdem Entwicklungen im Markt festgestellt werden, die final in einem Crowdworking Sentiment Indicator aggregiert dargestellt werden soll.

2. Introduction

This is a first report out of a series of four planned reports within the joint research project “Crowdworking Monitor”. The purpose of the project is to investigate upon the size of the Crowdworking phenomenon in Germany, socio-demographics of Crowdworkers and their motivation, characteristics of crowdworking-platforms and -tasks, as well as its change within the two years of project duration. Thus, this project should contribute to the scarce empirical evidence base on the relatively young platform economy in Germany and should inform scholars, policy-makers and the wider audience alike about the significance of this evolving phenomenon.

Within this report, we initially focus on the empirical description of Crowdworking in Germany as we have been able to measure within the first six months based on an online survey. To lay the foundation, we present the current academic literature on the “platform economy” and develop a working definition of “crowdworking” as it is used within this project in chapter 3. Subsequently, chapter 4 presents the survey methodology and describes the resulting data. Chapter 5 details various aspects of crowdworking and compares it with results from existing studies. Section 1 thus gives an overview of relevant existing studies; section 2 estimates the size of the crowdworking-market in Germany; section 3 presents the measured socio-demographic characteristics of German crowdworkers; sections 4 and 5 are dedicated to the quantitative aspects of crowdworking, i.e. task duration, number of tasks and its remuneration; section 6 describes the types of platforms and its relevance in the market; sections 7 and 8 concern the motivational aspects of crowdworking and the resulting satisfaction. Finally, chapter 6 provides an outlook on future research within this project.

3. Towards a working-definition of crowdworking

A plethora of terminology

Platforms

In the hitherto young academic literature, there is a variety of terminology around the digital allocation of tasks along the value chain, e.g. “sharing economy”, “platform economy”, “on-demand economy”, “crowdsourcing”, “open source”, “gig economy”, to name but a few. While the term of “sharing economy” is all but misleading - since with a few exceptions, goods, assets, and services are not “shared” but sold or leased - terms like platform economy and gig economy are more focused. The term “platform” is used for a variety of digital intermediaries, including content providers such as *YouTube*, online communities such as *Facebook*, marketplaces such as *Amazon* or *eBay*, and

crowdworking providers such as *Amazon Mechanical Turk.* By making use of the term interchangeably with ‘website’, ‘company’, service’, ‘forum’ and ‘community’ different agendas are pursued (Gillespie 2010, p. 348). Sometimes companies explicitly frame their intermediaries as platforms, as the term implies neutrality and equal access (ibid.). In the following, we rely on the definition of Zysman und Kenney (2017, p. 333) and understand “platforms” as the technological innovation of a more or less centralized algorithmic architecture that matches supply and demand on a certain market and is intended to generate profit. This implies the facilitation of commercial transactions of goods and services. Hence, “platform economy” seems to be the (currently) most reliable of available terms to describe the recently ongoing transformation of parts of the economy.

Crowdsourcing

From a provider’s point of view, platforms serve to outsource value creation to an anonymous crowd. Jeff Howe keyed the term “crowdsourcing” in a 2006 *Popular Science* article for the online magazine "Wired" (Howe 2006). Crowdsourcing is a form of outsourcing through an open call for tenders via an online platform to an anonymous mass of contributors (Durward et al. 2016b, S. 41). Hensel et al. distinguish between paid and unpaid work when defining crowdsourcing, and thus equate the concept of crowdsourcing with that of crowdworking (Hensel et al. 2016, p. 164). This can be misleading, as crowdsourcing can also be a phenomenon of voluntary participation, as in the production of open-source products (Blohm et al. 2013, p. 201). Platforms such as Wikipedia are based on the contributions of masses of volunteers who contribute work, and the platform relies on the many small contributions of individuals. Online portals where many people contribute ratings and reviews, such as *TripAdvisor* or *Booking.com*, work similarly. In IT, crowdsourcing is often used to test specific applications. Thanks to large numbers of volunteer testers, errors can be found and corrected. Furthermore, the field of open-source software development relies heavily on voluntary contributions (Durward et al. 2016b, S. 45).

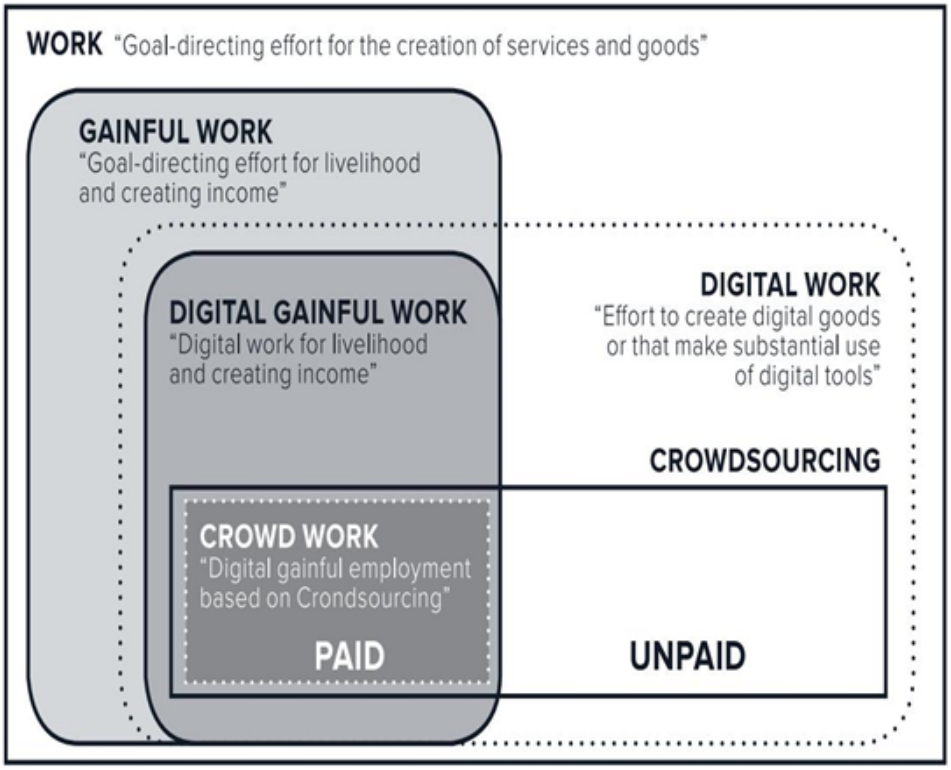
Thus, crowdsourcing must be differentiated from crowdworking in that it reflects, in particular, an organizational form of the supply side and, secondly, does not necessarily include paid activities. The term crowdworking is hence used exclusively for paid activities and deals specifically with the perspective of the worker. Crowdworking activities can be published by the supply side within a company, thus internally, or externally to an

anonymous crowd. Blohm et al. report on IBM's software program, the so-called "Liquid program", which uses a crowdworking platform to distribute work within the company better (Blohm et al. 2014, p. 54).

Crowdsourcing vs crowdworking

The following figure 1 presents the relationship between crowdworking and crowdsourcing.

Figure 1: Classification of crowdworking



Source: (Durward et al. 2016b)

Gig work as a sub-category

Terms that are used in close vicinity to Crowdworking are gig-work or gig-economy, see:

> *"The gig economy involves exchange of labour for money between individuals or companies via digital platforms that actively facilitate matching between providers and customers, on a short-term and payment by task basis." (Lepanjuuri et al. 2018, p. 12, 2018)*

Here, the term "gig" is borrowed from the music industry, in which musicians are paid for performing "gigs" and emphasizes the spontaneous, prompt and short-termed nature of contracts as well as the local flexibility of tasks and assignments. Even though, some authors do not use gig work exclusively for work assignments that are allocated through online platforms (see e.g. Bracha und Burke 2016, p. 2), it is clear that the work product is

delivered offline or in the real world. As a consequence, some authors distinguish between activities that are implemented online and activities that are implemented offline. Bonin and Rinne (2017) define crowdworking as tasks that are implemented online, whereas the so-called “platform work” refers to assignments done in the real world (Bonin und Rinne 2017, p. 6). We find this strict distinction to be misleading, as we see that many crowdworkers implement assignments both online and offline.

Our working-definition of crowdworking

Consequently, we define crowdworkers as natural persons who earn at least part of their income by completing paid temporary work assignments allocated through internet platforms or smartphone apps, which are implemented either online or offline. We exclude internal crowdworking platforms, as they only affect the employees of specific companies and thus represent a distinct target group with a separate set of characteristics and needs. Hence, with regards to the employment status, crowdworkers can be self-employed, as well as full- or part-time employees, but also inactive persons like students or pensioners. This constitutes a challenge in classifying crowdworkers in the conventional classification schemes for labor market and social policies.

Types of platforms and tasks

Fixed price, competition, collaboration, auction

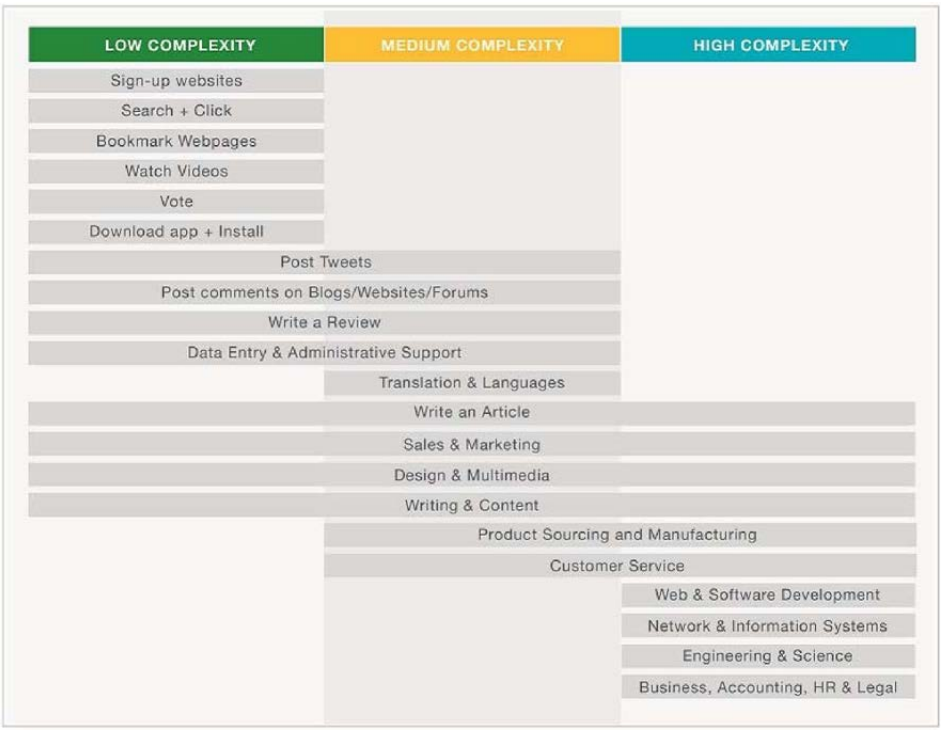
Depending on the nature of the activity, there are various types of task-allocation procedures that are used on crowdworking platforms. For example, some activities are reimbursed by a fixed price (Kuba 2016, p. 82). This can be set for the entire work process or an hourly wage. Another variation is competitive tendering. Here, a particular task is described and submissions of solutions are prompted. Only the best or a top few contributions will end up being paid. Other variations provide vouchers as a reward or function via an auction (ibid.). Collaborative models divide larger work packages into smaller microtasks and outsource them to many individuals or directly to teams. The results are then aggregated either by the crowdworker herself or the employer (Bundesministerium für Arbeit und Soziales 2017, p. 58; Durward et al. 2016a, p. 285).

Degree of task complexity

The types of activities can be anywhere from low complexity (“clickwork”, microwork) to high complexity ("online freelancing" such as in the field of design or consulting) (Kuek et al. 2015, S. 1–2). *Amazon Mechanical Turk* is considered the first platform explicitly designed for microtasks. Since 2006, it has been opened up to all companies that want to outsource microtasks to

crowdworkers. The activities are small tasks, so-called “Human Intelligence Tasks” (HIT), which do not require a high level of education; they include activities such as categorizing and tagging text or images, proofreading, checking data records, etc. (Haberfellner 2015, p. 81–82; (Kaufmann et al. 2011, p. 1). By decomposing complex processes into subtasks, the level of complexity is reduced, and an increasing Taylorization can be observed. All tasks that are outsourced as microtasks cannot yet be automated by algorithms (or cannot be automated cost-effectively) (Haberfellner 2015, p. 82). Crowdworkers themselves also act as intermediaries: so-called “crowd aggregators” divide the tasks to be completed into even smaller tasks, which they pass on to other crowdworkers, and then profitably deliver the aggregated result (Durward et al. 2016b, p. 50). Kuek et al. have published the following figure, which presents the main activities that are done via crowdworking (online) and classifies them according to their degree of complexity:

Figure 2: Categorisation of crowdworking activities by complexity



Source: Kuek et al., 2015, p. 13

Based on a market analysis, Leimeister et. al differentiate between the following five prevailing platform types in Germany: microtask, marketplace, design, test, and innovation platforms (Leimeister et al. 2016b). As described above, **microtask platforms** offer small, low-complexity jobs that are mostly given to individual

Microtask, marketplace, design, testing and innovation platforms

crowdworkers. In addition to *Amazon Mechanical Turk*, the platforms *clickworker* and *mylittlejob* are other examples of microtask platforms that operate in Germany. **Marketplace-type platforms** require a higher degree of interaction between crowdworkers and customers since they involve highly complex activities, which require more coordination. Crowdworkers offering their services on these platforms are well-educated in specialized areas. The client often pre-selects the most suitable crowdworkers based on their online profiles. Instead of working on sub-tasks the selected crowdworkers are in charge of smaller projects in diverse areas such as translating, editing or programming, which are usually remunerated with a fixed price. Marketplace platforms are the most common type of crowdworking platforms; examples of this type of platform are *Freelancer.com* and *Twago*. **Design platforms** work in a similar way to marketplaces, as clients require professionals trained in design. Crowdworkers have more autonomy, as they can set their own prices for their work-products and services. Examples of this kind of platform are *99designs* or *designonclick.de*. **Testing platforms** focus on testing products and services; these are often software applications where testing is of medium- to high- complexity. Well-known platforms here are *testbirds.de* and *applause.com*. **Innovation platforms** are unique because the end result is not explicitly specified and crowdworkers often collaborate in a creative, solution-finding process. Because the customer does not pre-select the crowdworker, the crowdworkers can decide with whom they wish to collaborate. The best-known platform in Germany of this type is *jovoto.* (Leimeister et al. 2016b).

For the identification of the most important crowdworking platforms on the German market, we conducted internet research and compiled a list of a total of 87 actively operating crowdworking platforms that are contracting German users. More than half (50) of these platforms maintain a German version of their portal, 32 even have a German postal address. Only 13 platforms specialized explicitly tasks performed in the real world. Our assessment of the importance of their market share is based on the published number of crowdworkers and/or annual turnover. This procedure is cumbersome since many platforms do only publish the total number of registered crowdworkers, not differentiated by activity status or country. We applied additional plausibility checks that led to the result that we excluded e.g. the two largest gig-economy platforms *Uber* and *AirBnB*, from the list, since *Uber* does not provide the full range of its services in Germany due to regulatory restrictions and *AirBnB* is not offering

crowdworking services in its narrow sense. Due to the survey-questionnaire restrictions of the Civey Widget, we had to select seven platforms for crowdworking (in the narrow definition, i.e. only online) and crowdworking in the broader definition, i.e. also assignments implemented offline. Tables 1 and 2 below show the selected platforms and their size. However, our aim to target relevant parts of the German Crowdworking Market failed. Our seven provided answer options only covered 21% of offline workers and 26% of online workers, as will be discussed in the results-section below. This under coverage might result from either (a) a misconducted survey of existing platforms and their importance in Germany or (b) a strong fragmentation of the crowdworking platform market.

Table 1: The largest crowdworking platforms operating in the German market allocating tasks performed online

Platform	Crowdworker	Included in survey?	Business volume	Headquarter in Germany	German version of Website
Freelancer	20,000,000	Yes			yes
99designs	1,260,000	Yes		Berlin	yes
Clickworker	1,000,000	Yes		Essen	yes
Crowdflower	5,000,000	Yes	10 mill US $		no
Guru	1,500,000	Yes			no
Upwork		Yes			
DesignCrowd	606,929	No			yes
AppJobber	300,000	No		Darm-stadt	yes
Applause	300,000	No		Berlin	yes
MyLittlejob	250,587	No	1 mill €	Hamburg	yes
Testbirds	250,000	No	Seven-digit amount (€)	München	yes
Twago	225,000	No		Berlin	yes

Source: website of the respective platform

Table 2: The largest crowdworking platforms operating in the German market allocating tasks performed offline

Platform	Crowdworker	Included in survey?	Business volume	Headquarter in Germany	German version of website
Uber	7,000,000	No	6,8 bill US $		yes
Airbnb	3,000,000	No			yes
Streetspotr	600,000	Yes	1	Nürnberg	
MyHammer	60,000	Yes	9,5 mill €	Berlin	yes
Deliveroo	30,000	Yes			yes
Helpling	10,000	Yes	More than 32 bill € in Europe	Berlin	yes
Mila	8,000	Yes			yes
Foodora	6,000	Yes			yes
Lieferando Express	1,000	Yes			yes

Source: website of the respective platform

4. Survey methodology and data

4.1. Survey method and sampling

The data for this study is continuously collected by the Opinion Polling and Market Research Company Civey GmbH in Berlin through an open-access web-panel. Civey has developed a procedure that enables pollsters to reach a large and diverse panel of internet users in shortest time and thus also enables representative, real-time surveys on the Internet. In cooperation with numerous media partners, surveys are conducted across a network of more than 25,000 websites. In these websites, an HTML-widget is included that invites visitors to take part in Civey Polls. In order to do so, a Civey-login is needed and together with the creation of a Civey account, some basic sociodemographic data of the user needs to be unveiled. An algorithm plays out survey questions to relevant users in order to reduce the selection bias by quasi-randomization. Thus, only the answers (votes) of registered Civey-Users are considered for whom sufficient demographic data is available.

In a second step, the resulting sample of surveyed respondents is post-stratified along the socio-demographic characteristics of age, gender, state (Bundesland), population density at ZIP-code level,

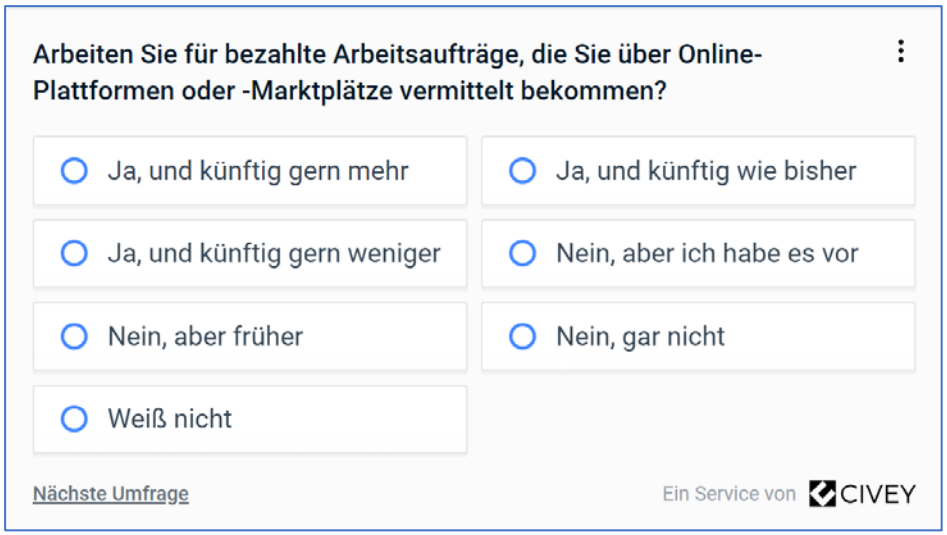
purchasing power at ZIP-code level, and political-orientation with population weights derived from the German census (Mikrozensus) and other sources. The underlying population is the German federal electorate, such as only German nationals of the age 18 and above are included. The resulting post-stratified non-probability sample shall be representative with regards to gender, age and regional characteristics. However, there still exists a selection bias with regards to other sociodemographics such as education, marital and employment status, which shall be considered in course of the research project as samples sizes increase. Even though both crowdworker and Civey users belong to the same sub-group of "Internet users in Germany" (regardless of access via PC, laptop, tablet or smartphone) which makes an online panel an ideal survey instrument, the second type of selection bias remains: This bias pertains to the unobservable attitudes towards internet usage of Civey users, who use mainly blogs and news sites, and crowdworkers, who evidently use crowdworking platforms. Furthermore, compared to the population, both groups can be expected to have a higher affinity towards internet usage. This possible positive correlation in Crowdworking-affinity and Online/Civey-Poll affinity might lead to slightly upward biased estimates of the population share of crowdworkers. However, due to the lack of an official statistical grid on crowdworkers, e.g. through the inclusion of this topic in the census of the Federal Statistical Office, there is no basis of which suspected observable and unobservable sample biases could be corrected. Within this research project, various validation procedures are carried out and will be further developed. Nonetheless, the results presented here do not meet the strict requirement in order to be called representative. However, based on the large sample size and the consistency of the main results with other existing studies, we see these as being highly indicative.

4.2. Data

In order to identify crowdworkers among Civey users, the polling question No. 1043 asks “Do you perform paid work tasks allocated through online platforms or marketplaces?” (in German: “Arbeiten Sie für bezahlte Arbeitsaufträge, die Sie über Online-Plattformen oder -Marktplätze vermittelt bekommen?) Together with six answer-options, thereof three „yes“ with indication of a tendency for the future amount of crowdwork (willingly (1) more, (2) the same or (3) less), two no options with indication of (4) future intention to crowdwork or (5) past crowdworking experience and

(6) a remaining definite “no” (i.e. not at all). Additionally, a “don’t know”-option is provided in order to avoid misleading random responses or panel attrition. An eighth reaction that might be evoked is to click on the “skip” button on the survey widget, which can be seen as item-nonresponse but is not yet analyzed in this report. Figure 3 shows the identification question in Civeys HTML-widget.

Figure 3: HTML-widget with identification question no. 1043

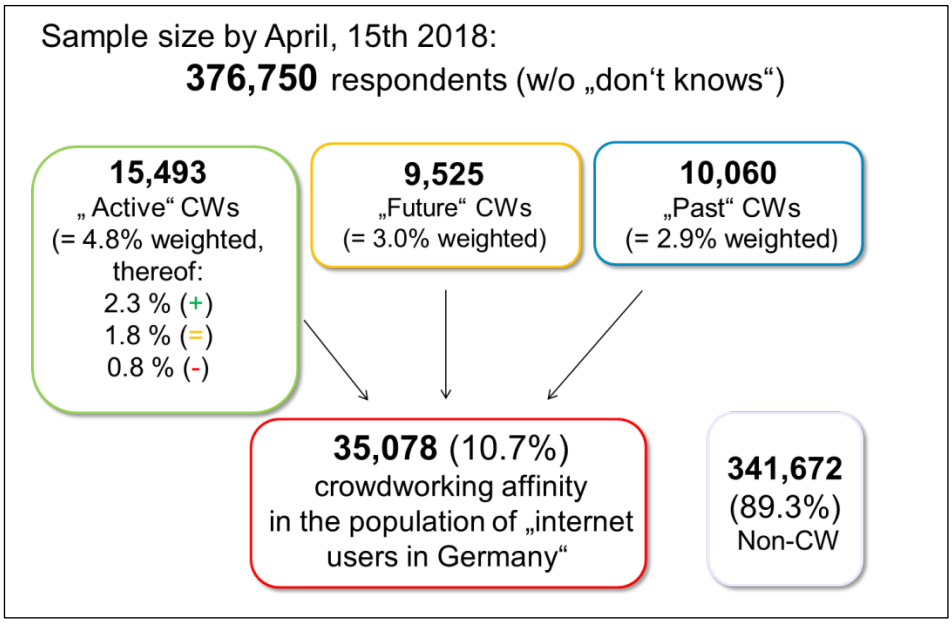


Source: https://widget.civey.com/1043

For this report, only valid Civey users for whom sufficient socio-demographic data is known and who took part in this question between its implementation in July 2017 and April 15, 2018, is considered with their latest response.

The resulting sample size of this Crowdworking identification item (i.e. Civey Poll #1043) in our online-survey consisted on April 15th, 2018 of 376,750 respondents. To the authors best knowledge, this is the largest sample size for the German crowdworking market thus far. Excluding 11,582 “don’t know” answers, 15,493 of all the respondents can be characterized as **active** crowdworkers, which amounts to weighted 4.8 % of the German electorate. Weighted 3.0 % could imagine working as crowdworkers in the **future**, and another 2.9 % claimed to have performed crowdworking assignments in the **past**. Including past, present and future crowdworkers this amounts to a **crowdworking affinity** of 10.7 % in total.

Figure 4: Sample size and CW-categories



Source: own calculation

In order to further investigate the situation of crowdworkers, as well as their reasons for starting, executing, and terminating their work, 25 additional questions have been developed that are selectively addressed by the Civey algorithm to the identified (active, past or future) crowdworkers. The development of these survey questions underwent several rounds of reconcilement and adjustment of the project management, Civey, and the BMAS' contact person and were successively selected and released in the Civey panel from December 22, 2017, to January 15, 2018. The question texts, answer options, target group, sample size and results can be seen in Table A1 in the Annex. It should be noted that the presented percentage shares of the answer options base on the number of valid answers without "don't know", while the share of don't know-answers bases on the total number of valid answers as presented in the sample size for each question in Table A1. Furthermore, the Civey Question ID is stated, via which the corresponding survey can be accessed through the following URL: https://widget.civey.com/[ID#]. Here, there is a likely deviation between the results presented in the civey-widget and this study due to two reasons: the Civey-widget presents the results for a quota-sample of the latest 5.000 respondents only, while our study presents the weighted results for the latest answer of all out of 376,750 respondents identified active, past and future crowdworkers.

Most of the survey-questions relate to active crowdworkers, while the question of the reasons for ending CW activity (question no. 17) exclusively addresses the former crowdworkers. Future crowdworkers will only be asked about the (presumed) main reason for accepting paid work orders brokered through platforms (Question #10). To complement the results of the identification question # 1043, the question of the number of persons in the household performing such activities was included (question no. 1). This, as well as questions about caring for a loved one and general job satisfaction (questions no. 23 and no. 24), are regard to all of the crowdworking-inclined survey participants. Questions number 4, 8, 11, 12, 15 and 20 are used to quantitatively measure the crowdworking sector and to approximate gross pay and net hours (excluding job-search time).

Questions 2, 3, and 9 serve to further identify the type of crowd, gig, or platform work. In order to measure the reach (or market share) of the individual platforms, question 7 distinguishes between (a) platforms where the work output is provided digitally via the platform (crowdworking in a narrow sense) and (b) platforms on which the customer can order placements or process payments, but where the real work takes place offline (gig or platform work, crowdworking in a wider sense). For the a-priori approximation of the respective largest platforms in both sub-areas was carried out on the basis of a comprehensive literature review and the self-information of the platform providers in terms of size (revenue and number of users) compiled. If no direct data was available for German-speaking countries, these were then estimated on the basis of other characteristics (for example, there is a German-language website). The seven largest platforms were asked to answer question 7a and 7b, but due to the high fragmentation of crowdworking platforms, it was expected to see an overwhelming majority of both questions answered with "other."

Questions 18 and 19 refer to two aspects of the satisfaction of crowdworking: one being from the point of view of the customer, and the other from the crowdworkers’ perspective with regards to their payments.

Because many of Civey's 35,000 crowdworking-inclined persons were identified in the few weeks after activating question 1043 in July 2017, and because the questions were asked semi-annually, i.e. with a re-vote range of 180 days, in order to reduce cluster effects, it has been decided that in each month, only one-sixth of the identified sample shall be interviewed.

5. Results

5.1. Available data and studies

Only one larger survey study for Germany so far

To date, very few empirical studies on the crowdworking market in Germany have been conducted. There exist several studies that attempt to estimate and measure the size and significance of crowdworking in Germany. Most of these rely on quite small sample sizes (< 2.200) and focus solely on specific aspects of crowdworking (Leimeister et al. 2016a)[2]. While Leimeister et al. include all types of platforms in their sample aside from innovation platforms and offline tasks, the sample of Bertschek et al. relies on only two selected microtask platforms. Huws and Joyce do not exclude any platforms in their survey; however, the scarce details presented in their research methodology do not allow for an assessment of the study's scientific rigor (Huws und Joyce 2016, p. 4). To the best knowledge of the author, to date, there has been only one quantitative study with a significant sample size that attempts to identify and interview crowdworkers. This study was commissioned by the German Federal Ministry of Labor and Social Affairs (BMAS) and was conducted by Bonin and Rinne (2017). The study relies on a survey sample of 10,000 adults and makes use of the computer-assisted telephone interviewing (CATI) technique.

Even though the majority of available studies do not provide representative results concerning crowdworking in Germany, the data can be considered as indicative of certain phenomena and therewith provide evidence as to certain trends. In the following paragraphs, the first results of our crowdworking survey will be presented and contrasted with the available empirical data, reflecting on similarities and differences and providing tentative explanations concerning deviations, while taking into account the sampling strategy, reliability of the data and likely biases of the results.

5.2. Size of the crowdworking phenomenon in Germany

up to 4.8 % active crowdworkers in Germany

Based on the identification item (i.e. Civey Poll #1043) in our online-survey, 15,493 of all the 376,750 respondents can be characterized as active crowdworkers, which amounts up to 4.8 % (weighted) of the German electorate. Another up to 3.0 % could be seen as a pool of possible future crowdworkers, and another 2.9 % claimed to have performed crowdworking tasks. These results

[2] Bertschek et al. surveyed 408 crowdworkers on two different plattforms (Bertschek et al. 2016, p. 3), Huws and Joyce's study relies on a sample of 2180 crowdworkers (Huws und Joyce 2016, p. 4), Leimeister et al. based their questionnaires on a qualitative pre-study and received 434 fully completed questionnares for their study (Leimeister et al. 2016a, p. 28).

are likely being upward biased, due to an assumed positive correlation of respondents in their unobservable characteristics towards internet usage. Hence, our results should likely indicate an upper bound of crowdworking shares compared to the total population. Summing across all three groups, we find up to 10.7% of the German electorate being somehow related to crowdworking.
As a comparison, Groen et al. estimate that of all total active workers in the European Union 5.88 % are crowdworkers (Groen et al. 2017, p. 351). Even though this number is comparable to the share of identified active crowdworkers in our survey, the denominator is different: since it is not a precondition that crowdworkers are part of the labor-force, since e.g. pensioners can perform crowdworking activities as a side-job, we find it more feasible to relate the amount of crowdworker as a share of the total population. (However, for this report with preliminary results we needed to restrict our universe to the German federal electorate).
Bonin and Rinne (2017) found that approximately 2.9 % of the German working population are active crowdworkers. However, their study faced a number of methodological issues, which let them conclude that these results are upward-biased. The authors state that many of the respondents could not name a platform on which they are active, and others indicated activities which cannot be considered as crowdworking (such as selling goods on eBay). Having cleansed their interview data, the authors estimate that only 0.85 % can be counted as active crowdworkers, which accounts for approximately 1 million Germans (Bonin und Rinne 2017, p. 9). Our extrapolation, being 5.8 %, is significantly higher. This might be due to an upward-bias resulting from the fact that respondents are voluntarily taking part in an online survey. As only socio-demographic characteristics can be used for constructing the population-weights, unobserved characteristics such as intrinsic motivation and characteristics that are observable but are lacking of a statistical grid for the population, e.g. attitudes towards social activities on the internet and interest in digitization cannot be considered. If we assume that the likelihood of taking part in the online survey is positively correlated with being actively involved in crowdworking, this will result in an upward-biased estimation of the population share of crowdworkers.
The study published by Huws and Joyce reports that 14 % of all respondents have managed to find jobs via crowdworking platforms. As this number relies on a small sample size and includes past and active crowdworkers, it cannot provide any

reliable estimation towards the actual number of active crowdworkers (Huws und Joyce 2016, p. 1-2).

5.3. Sociodemographic characteristics

The following paragraphs summarize our findings with regards to the socio-demographics of respondents with an affinity towards crowdworking (CW affinity) in our survey, i.e. active, future and past crowdworkers, as well as non-crowdworkers and all respondents (total). The following standardized tables present in the first row the overall share of the respective crowdworker-type from the total (i.e. all respondents without don't know option) to past-crowdworkers. The total is the sum of non-crowdworkers and respondents with crowdworking-affinity. The share of crowdworking-affinity is the sum of the shares of active, future and past crowdworkers.

From the second row onwards, the table presents in column 1 (total) the population share (in per cent) of the respective socio-demographic category that sums row-wise over all categories up to 100%. Columns 2-6 present the deviation of population share for each type of (non-) crowdworkers from the total population share of respective socio-demographic category (in percentage points). These sum up row-wise to 0. In some tables, additional information is presented in the bottom row.

5.3.1. Gender and age

With regards to gender, our data suggest that men have a slightly higher crowdworking affinity than women; however, among the active crowdworkers this effect is not discernible as women are mainly underrepresented in the past- and future-crowdworkers groups.

Concerning the age, our data reveals that there is an inverse linear trend of attitudes towards crowdworking and age: the younger the age group, the higher the share of crowdworking affinity and active CW compared to its population share. Whereas below the age of 40 crowdworkers are overrepresented, this trend reverts above 40. This does not mean in turn that there are few active CW older than 40: In total 58 % are aged 40 and older, whereas 42 % of all active crowdworkers are younger than 40.

This pattern is also reflected in the average age of active crowdworkers with 44 years compared to 50.9 for non-crowdworkers. Evidently, future crowdworkers are younger with 42.5 years, and past crowdworkers are with 50.7 on average as old as declared non-crowdworkers. (see table 3).

Table 3: Gender and age

	Do you perform paid work tasks allocated through online platforms or market places?					
	All	Non-CW	CW Affinity	Active CW	Future CW	Past CW
Total	100.0 %	89.3%	10.7%	4.8%	3.0%	2.9%
Gender:						
Women	51.7%	0.1	-1.6	0.2	-3.2	-3.0
Men	48.3%	-0.1	1.6	-0.2	3.2	3.0
Age:						
18-21	7.7%	-1.8	3.1	4.0	4.8	0.0
22-29	10.7%	-0.7	3.5	2.5	7.5	1.1
30-39	14.7%	-0.3	2.4	2.5	3.7	0.8
40-49	16.7%	0.3	-0.2	2.3	-1.0	-3.8
50-64	25.0%	1.1	-3.2	-1.6	-2.7	-6.3
65+	25.0%	1.6	-6.2	-10.6	-12.2	7.7
Addendum: Avg. age	49.7	51.0	45.5	44.2	42.7	50.8

Source: own calculation

Crowdworking more common among men

All other studies agree that men are slightly more represented among crowdworkers than women (Bonin und Rinne 2017, p. 13; Leimeister et al. 2016a, p. 32; Huws and Joyce 2016, p. 3; Bertschek et al. 2016, p. 4). However, this result might be due to the selection of platforms and types of tasks that are investigated in these studies. Thus, we differentiated gender by the type of tasks implemented.

We can see that there are significant differences between the genders: men provide crafting services twice as often as women and are also more likely to provide consulting or programming services. In turn, women are more likely to be writers. (see table 4 below).

Table 4: Type of task by gender in %

	What types of tasks that were allocated through online platforms or market places did you mainly perform?								
	Design	**Crafting**	**Programming**	**Testing**	**Writing**	**Consulting**	**Other**	**Don't know**	**Total**
Gender:									
Women	4.2	5.2	5.3	5.5	12.4	15.6	28.5	23.4	100
Men	5.8	12.4	7.6	5.6	8.3	19.9	26.3	14.0	100

Source: own calculation

Women are more prone to engage in microtasking

In Leimeister et al.'s study men are specifically more likely to work on microtask platforms than women: two-thirds of all crowdworkers on these platforms are men (Leimeister et al. 2016a, S. 32). Our findings state the opposite. As we do not explicitly identify "microtask-platforms" as a platform type in our survey, we rely on the "average task duration" (cf. Question no. 20, see table A1 in the appendix) and differentiate it by gender. The result is that women are overrepresented in all tasks with a duration of less than a working day (i.e. 10 hours). Only when tasks take a week or longer, the share of men exceeds that of women (cf. table 5 below).

Table 5: Task duration (cumulated) by gender in %

Task duration:	**< 5 min**	**<15 min**	**< 1hr**	**< 4 hrs.**	**< 10 hrs.**	**< 1 week**	**<infinite**
Gender:							
Women	17,1	25,7	51,6	59,7	70,8	79,9	100,0
Men	9,6	19,7	35,9	50,1	62,8	82,4	100,0
Total	13,3	22,7	43,7	54,8	66,8	81,2	100,0

Source: own calculation

Crowdworkers are more represented in the younger population segments

Nonetheless, all studies confirm that crowdworkers are more represented in the younger population segments than in older ones. However, in contrast to our study, Huws and Joyce claim that a fifth of all crowdworkers is between 16 and 24 years old (Huws und Joyce 2016, p. 3). Leimeister et al. found out that especially on microtask platforms, younger crowdworkers can be

found. The average crowdworker on a microtask platform is 29 years old, whereas on marketplace platforms crowdworkers are on average 37 years (Leimeister et al. 2016a, S. 32). Bertschek et al. report exactly the same age average of 29 years resulting from their research on microtask platforms (Bertschek et al. 2016, p. 4).

Microtaskers are younger than average

We find a similar trend in our sample. By looking at the average age of crowdworkers and the task duration, we find that the share of microtaskers (with an average task duration of less than 15 minutes) on total crowdworkers is declining constantly from one third in the age group 18-21 to 16,5% in the age group of 50-64 years. Only for the elderly of 65 years and above the share of microtaskers is with 28% again significantly higher. This is also reflected by the average age differentiated by task duration: those who perform tasks with an average duration of 15 minutes are on average one year younger than other crowdworkers. The finding of Leimeister et al.'s overly young microtaskers can be explained by the selected sample, where the overall age average is 36 years, whilst it is 44 for active crowdworkers in our sample.

5.3.2. Region

Crowdworking is a more urban phenomenon

Crowdworking is more common in urban areas and slightly more common in East Germany than in the West. Among active crowdworkers, there are 2 % more of them residing in one of Germany's so-called city-states (i.e. Berlin, Hamburg, Bremen) than in the average population distribution. Whereas among past crowdworkers East and North Germans are slightly overrepresented, among future crowdworkers they are underrepresented. A future increase in crowdworking can thus be expected in the South and the West of Germany, where to date crowdworking is underrepresented, as well as in the city-states. (see table 6 below).

Future CW potential in Western and Southern Germany

In contrast to that, Huws and Joyce claim that the geographic distribution of crowdworkers does not differ from the general population distribution in Germany (Huws und Joyce 2016, p. 3), whereas Bonin and Rinne as well as Bertschek et al. confirm our findings and report a higher share in urban areas (Bonin und Rinne 2017, p. 13; Bertschek et al. 2016, p. 7). Bonin and Rinne point out that this is due to the fact that the share of young and well-educated people (amongst which crodworkers are overrepresented) is generally higher in urban areas (Bonin und Rinne 2017, p. 13).

Table 6: Region

	Do you perform paid work tasks allocated through online platforms or market places?					
	All	Non-CW	CW Affinity	Active CW	Future CW	Past CW
Total	100%	89.3%	10.7%	4.8%	3.0%	2.9%
East/West:						
East	20.7%	0.1	0.0	1.9	-4.8	1.9
West	79.3%	-0.1	0.0	-1.9	4.8	-1.9
Region:						
City states	8.6%	-0.2	1.9	2.1	3.3	0.3
East	16.2%	0.2	-0.7	0.7	-4.9	1.5
North	16.6%	-0.1	-0.1	1.0	-2.2	0.1
South	28.2%	0.0	-0.6	-2.7	2.9	-0.7
West	30.4%	0.2	-0.6	-1.1	0.9	-1.2

Source: own calculation

5.3.3. Family status

Crowdworking is no job perspective for married persons

The share of divorced, single or widowed crowdworkers is higher than in the general population. Overall 48 % of active, past and future crowdworkers are not married. Accordingly, amongst future crowdworkers, the group of singles deviates with +11.6 percentage points most from the population share. Taking into consideration that crowdworkers are on average younger than the general population, this finding was expectable. What is, however, striking, is that marriage seems to be a hindrance in taking over crowdworking tasks particularly when it comes to a prospective crowdworker career. Here the share of married respondents is 13.7 percentage points lower than its population average, for married active crowdworkers it is 6.7 points lower. Inversely, widows are overrepresented by 6 points amongst the active crowdworkers in our sample. (see table 7 below).

Table 7: Family status

	Do you perform paid work tasks allocated through online platforms or market places?					
	All	Non-CW	CW Affinity	Active CW	Future CW	Past CW
Total	100%	89.3%	10.7%	4.8%	3.0%	2.9%
Family status						
divorced	7.9%	-0.2	2.8	2.4	2.9	3.2
married	59.1%	2.5	-7.7	-6.7	-13.7	-3.1
single	26.5%	-1.6	2.0	-1.2	11.6	-3.0
widowed	5.2%	-0.6	3.1	5.8	-1.2	3.1

Source: own calculation

Crowdworkers tend to be single

With regard to the family status, our findings diverge from the reviewed studies. Leimeister's proportion of non-married crowdworkers is 61 %, much higher than in our sample-- and there are no widowed crowdworkers in their study (Leimeister et al. 2016a). For microtasking platforms, Bertschek et al. report that 76 % of all respondents are single (Bertschek et al. 2016, p. 3). This might be explained by the fact that microtaskers are more likely to be younger than other crowdworkers.

5.3.4. Highest education

Many crowdworkers are highly educated

Concerning crowdworkers' educational background our survey results corroborate the findings from the literature in saying that crowdworkers are, on average, highly educated. 64 % of all active crowdworkers graduated from high school with the university entrance qualification (Abitur), whereas only 24 % graduated after 9 or 10 years of schooling (and thus without university entrance qualification). However, our data also shows that there are slightly less high school graduates among active crowdworkers than in the general population. In addition, the number of crowdworkers without graduation is higher than expected: among active crowdworkers there are 6 percentage points more high school dropouts than in the average population. (see table 8 below).

Table 8: Highest education

	Do you perform paid work tasks allocated through online platforms or market places?					
	All	Non-CW	CW Affinity	Active CW	Future CW	Past CW
Total	100%	89.3%	10.7%	4.8%	3.0%	2.9%
Highest education:						
12-13 years	66.0%	1.2	-1.1	-2.4	0.4	-0.7
9 years	6.8%	-0.2	1.5	3.4	-1.9	1.7
No graduation	2.2%	-1.0	3.0	5.7	0.1	1.5
10 years	19.7%	0.9	-4.1	-6.4	-3.6	-0.7
Pupil	3.7%	-0.9	1.0	-0.2	5.2	-1.6

Source: own calculation

Bonin and Rinne found that the share of crowdworkers increases in line with the level of education (Bonin und Rinne 2017, p. 13). According to Leimeister et al. almost half of all crowdworkers (48 %) have a university degree; Bertschek et al. report of 41 % (Leimeister et al. 2016, p. 35; Bertschek et al. 2016, p. 5). Depending on the platform, this effect is expectedly more or less significant: microtaskers are generally less educated than crowdworkers who work on design platforms (Leimeister et al. 2016, p. 35). With regards to online- or offline-crowdwork, we find differences along the highest educational attainment. While pupils are very keen on being involved in online crowdwork, all other educational groups tend to perform tasks offline. Here, school-leaving certificate holders with 12-13 yrs. are the least likely offline-workers while 9-10 yrs. education increase the likelihood to be involved in offline-work.

5.3.5. Employment status

Large share of self-employed crowdworkers

The majority (32%) of active crowdworkers declares themselves as being self-employed, while the share of full-time employees (27%) is lower than the share of all respondents. This result seems to be plausible due to the nature of tasks that are distributed via platforms. Additionally, there are slightly more students (9 % of the active crowdworkers) and unemployed (8 % of the active crowdworkers) and fewer pensioners amongst crowdworkers than in the overall respondents' population. This

could be explained by the fact that crowdworkers are on average younger and assignments with lower complexity, such as microtasks, could be an appealing side job for students and a small, temporary job for those who are unemployed. The finding that active crowdworkers are less-likely to be part-time employed hints to the possibility that there might be mainly other reasons such as childcare, that consume the remaining time and preventing them from becoming full-time employed and/or crowdworkers. (see table 9 below).

Table 9: Employment status

	Do you perform paid work tasks allocated through online platforms or market places?					
	All	**Non-CW**	**CW Affinity**	**Active CW**	**Future CW**	**Past CW**
Total	100%	89.3 %	10.7%	4.8%	3.0%	2.9%
Employment status:						
Full-time	38.6%	2.0	-9.9	-12.1	-5.7	-10.5
Not working	6.4%	-1.2	1.0	-0.7	6.7	-2.0
Part-time	8.7%	0.6	-2.7	-3.8	-2.3	-1.4
Pension	24.0%	1.4	-5.5	-11.4	-11.0	10.1
Self-employed	12.2%	-1.0	11.3	20.4	5.0	2.8
Student	6.4%	-0.9	2.4	2.6	4.7	-0.2
Unemployed	2.9%	-0.9	3.5	5.2	2.9	1.2

Source: own calculation

In Leimeister et al. a larger proportion (38 %) of crowdworkers is self-employed, and a smaller share is employed full-time (20 %). The unemployed make up 6 %, which is much more similar to our results (Leimeister et al. 2016, p. 40). Bonin and Rinne did not include the employment status in their survey.

If we differentiate by type of crowdworking activity, the share of self-employed crowdworkers for consulting, design and crafting services amounts to around 50 %. Programming (40 %), writing (25 %) and testing (6 %) are executed less by self-employed crowdworkers. Compared to the other activities, crowdworkers who work as programmers, are more often unemployed or students. Full-time employment varies between a fifth (designers)

and slightly more than a third (testing), as it can be seen in table 10 below.

Table 10: Type of task by employment status in %

	What types of tasks that were allocated through online platforms or market places did you mainly perform?							
	Consulting	**Design**	**Testing**	**Crafting**	**Programming**	**Writing**	**Don't know**	**Other**
Employment Status:								
Full-time	27.9	21.4	38.0	29.9	24.9	27.0	32.1	18.0
Part-time	3.5	2.9	2.0	2.0	0.6	3.1	1.9	5.8
Self-Employed	48.5	53.6	6.2	47.3	40.4	24.9	12.6	37.6
Student	5.2	2.1	21.0	3.0	8.4	2.9	7.6	2.0
Retired	13.0	7.2	18.0	7.9	10.9	14.2	8.9	21.7
Unemployed	0.7	2.6	6.1	4.9	12.7	1.5	4.2	12.3
Inactive	1.1	10.3	8.6	5.0	2.1	26.3	32.8	2.6
Total	100	100	100	100	100	100	100	100

Source: own calculation

These findings are partially corroborated by Leimeister et al. In their sample testers are also more likely to work for someone else (42 %), whereas amongst designers, the majority are self-employed (53 %). When it comes to microtasking the majority of crowdworkers are students (44 %) and employees (30 %), while only 9 % are self-employed and 3 % unemployed (ibid.). Bertschek et al. do not confirm these findings: Among the surveyed microstaskers, 39 % are employed, and 31 % are students/trainees, whereas 8 % are employed and, 7 % are unemployed. (Bertschek et al. 2016, p. 4). The deviations might be explained by non-representative sampling strategies.

5.4. Crowdworked hours and task duration

More crowdworkers implement their work offline

Our first survey results indicate that 27 % of all active crowdworkers[3] execute their work solely in the real world, compared to 17 % that work only online. Conversely, two-thirds of crowdworkers are involved in mixed forms (cf. question no. 2, table A1). For 27 % of the respondents, crowdworking is the main source of income, whereas for 23 % it is only an additional source of income (cf. question no. 5, table A1).

Bonin and Rinne's results differ in this respect: 31 % indicated that they regularly make money by engaging in crowdworking, whereas 68 % have an irregular income through crowdworking only. The difference could be explained by the wording: Earning regularly does not necessarily mean that the amount of money constitutes the main source of income. The authors then further differentiate between tasks that are carried out offline and online. Whereas for half of the workers who carry out their jobs offline, crowdworking is their main source of income, for crowdworkers who work online, this is not the case. This might have to do with the fact that specific tasks such as microtasks can only be found online, whereas offline workers can make use of other means in order to be contracted. (Bonin und Rinne 2017, p. 13-16).

In Leimeister et al, 28 % of crowdworkers for marketplace platforms, 19 % for design platforms and 14 % for testing platforms state that crowdworking is their main source of income (Leimeister et al. 2016, S. 48). Huws and Joyce report that 18 % of all crowdworkers earn at least half of their income through crowdworking; for 55 % of respondents, it is less than half and for 2 %, it is the only source of income (27 % did not want to answer the question) (Huws und Joyce 2016, p. 1-2).

Varying work hours and task duration

On average, the active crowdworkers in our sample work 25 hours per week as crowdworkers. 32 % work 40 hours or more per week, while 26 % work less than 5 hours. The average number of completed assignments per week is 20. The standard deviation is high though, as 34 % state that they complete more than 30 tasks per week, as opposed to 39 %, who complete less than 5 tasks per week (cf. question no. 15, table A1). This shows that the difference in work habits between those who engage in less complex tasks versus those who implement tasks of high complexity is quite elaborate.

Accordingly, 23 % of our respondents claim to need one week or longer to complete an assignment, whereas 47 % stated to need

[3] If not explicitly stated otherwise, by referring to crowdworkers only the active crowdworkers are meant in the following paragraphs.

less than an hour (amongst which 22 % need only up to 5 minutes, cf. question no- 20, table A1). The average time of 20 hours to complete an assignment thus does not represent the large variation in task duration and should be interpreted carefully.
In Bertschek et al., 78 % of all surveyed microtaskers did not work more than two hours per week on online platforms, whereas in Leimeister et al.'s sample, microtaskers work 7 hours per week on average (the median is 5 hours) (Leimeister et al. 2016, p. 51; Bertschek et al. 2016, p. 8). The median time to complete one task is 10 minutes (ibid.). This demonstrates that microtasking is usually done as a side job.
Crowdworkers, who are active on marketplace platforms spend (according to Leimeister et al.) an average of 17 hours on crowdworking, while designers spend 14 hours, and testers spend 8 hours. If we only take a look at those for whom crowdworking serves as their main source of income, the numbers are higher: on marketplace platforms, the average weekly working time is 31 hours and on design platforms 29 hours (Leimeister et al. 2016, p. 51). The analysis needs to differentiate between different platform types, as well as between those who engage in full-time versus part-time crowdworking, to deliver meaningful results.

Another problem that is specified by Kuba concerns the unpaid search times. In order to find a suitable job, workers spend up to a quarter of their working time unpaid (Kuba 2016, p. 88). Our survey indicates that search time for a task is 33 minutes on average. Whereas 50% need up to 30 minutes to find a task, 15 % need between 30 and 60 minutes, and 25 % need more than an hour. If we take into consideration that our respondents work on average 25 hours per week, the average search time of 33 minutes seems adequate (cf. question no. 11, table A1). The assumption that crowdworkers spend nearly a quarter of their work time to look for their next assignment advanced by Kuba is therefore not confirmed in our data (Kuba 2016, p. 88).

The average crowdworker surveyed in our study received their first crowdworking job 3.4 years ago. 39 % started more than five years ago, while only 8 % started during the last year. In our sample, the majority (57 %) started crowdworking more than three years ago. However, the numbers diverge for crowdworkers who work primarily online versus those who work offline. 36 % of those who only work offline have started crowdworking within the last year, whereas this is only true for 18 % of crowdworkers who work online offline. Among the crowdworkers who work only offline, 40

% have started crowdworking more than five years ago (see Table 11 below).

Table 11: First crowdworking assignment by online vs. offline crowdwork in %

		When was the first time you performed a paid work task allocated through an online platform or an online market place?								
Did you perform CW tasks mostly online or offline?		>5 years ago	3-5 years ago	2-5 years ago	1-2 years ago	0.5-1 year ago	4 weeks–0.5 year ago	4 weeks ago and less	Don't know	Total
	Only online	33.2	9.4	7.8	4.7	3.4	7.9	23.6	9.8	100
	Mostly only	36.8	13.4	15.0	20.8	3.0	1.7	3.3	6.0	100
	Both	59.1	8.1	7.6	7.4	2.2	0.8	8.5	6.3	100
	Mostly offline	28.2	13.0	23.7	6.6	4.2	3.5	2.9	17.8	100
	Only offline	40.5	15.5	7.7	6.4	2.6	3.6	10.6	13.2	100
	Don't know	4.9	0.8	0.7	1.5	0.5	7.8	3.9	79.9	100

Source: own calculation

Bonin and Rinne confirm this phenomenon: 40 % of their respondents started crowdworking (online) in the last year, whereas this is only true for 29 % of the crowdworkers, who implement offline (Bonin und Rinne 2017, p. 17). This might be due to the fact that the latter worked in the same realm even before work was distributed via online platforms and that these are full-time jobs (which is different than in the field of microtasking) (Bonin und Rinne 2017, p. 16).

5.5. Crowdworking remuneration

Income varies depending on nature of assignment

The majority of crowdworkers (69 %) are paid, while only 14 % claim to be remunerated by vouchers (cf. question no. 16, table A1). On average the crowdworker in our sample earn 808 € gross per week. Again, the high variation points towards heterogeneity in remuneration between more complex jobs and microtasking: while 40 % obtain more than 1,000€ per week, a quarter earns less than 25 € a week, and a third earns less than 100 € per week (cf. question no. 12, table A1).

In Bertschek et al., the majority of microtaskers (68 %) earns even only 20 € net on average per week, which amounts to a monthly income of 100 € (Bertschek et al. 2016, p. 9). In Leimeister et al.'s sample microtaskers stated to earn 144 € per month on average (Leimeister et al. 2016, p. 43). However, crowdworkers who work for marketplace and design platforms earn more than 600 € on average (ibid.). In Leimeister et al., earnings are comparably lower than in our sample: 30 % of all crowdworkers earn less than 100 € per month, 26 % earn less than 300 and 14 % earn less than 500 €. In conclusion, this means that in Leimeister et al.'s sample 70 % of all respondents earn less than 500 € per month through crowdworking. (Leimeister et al. 2016, p. 45). Only among crowdworkers on market place (26 %) and design platforms (19 %), there are a significant number of workers who earn more than 1000 € per month (Leimeister et al. 2016, p. 46). Accordingly, for most crowdworkers, crowdworking is just an additional source of income.

5.6. Platforms and type of tasks

When it comes to the nature of crowdworking tasks, 14 % of all crowdworkers provide consulting services, and the same share provides crafting or programming services as well. 11 % are writers, while 8 % work as designers or as testers. A third of all respondents claim to do other tasks (cf. question no. 9, table A1). This means that there are either other tasks that were not provided as an answer-option in the questionnaire, or that respondents consider other tasks to mean crowdworking activities which were not part of the definition used for this study. Similarly, the indication of the used platform has to be interpreted with caution: more than two-thirds of all respondents indicated to use another platform than mentioned in the answer options. Thus, the coverage of the platform questions no. 7a and 7b (cf. table A1) is between 21-26% of the market. This could indicate that either the seven provided platforms were badly selected or the platform market is highly fragmented resulting low market shares. While the platforms that allocate services provided in the real world, scored between 1-4 %, amongst the platforms providing services online *freelancer* (7 %) and *guru* (6 %) were mentioned most often.

38 % claim to need specific knowledge to implement their assignments

Huws and Joyce found that when it comes to crowdwork that is carried out online, most of the respondents are carrying out office work, IT or creative work, whereas offline work comprises mostly of ride-hailing, delivery services and personal service work. Most of the participants chose multiple tasks (Huws and Joyce, 2016, p. 3). Leimeister et al. indicated that their sample is biased due to the

high participation of students working on the platform *mylittlejob*. If these answers are excluded from the sample the authors found that the majority of respondents is active on marketplace platforms (55 %), 17 % on design platforms, 14 % on microtasking platforms and 12 % on test platforms (Leimeister et al. 2016, p. 29).
Regarding the complexity of tasks, 38 % indicated that they need specific knowledge to execute their tasks, compared to 17 %, who claimed only to need general knowledge (cf. question no. 3, table A1). Furthermore, our results show that the skill level is correlated to the task duration: those who claim to need specific skills, also spend considerably more time on a task. Similarly, the level of education is higher among those who claim to need specific skills to complete their tasks. Bonin and Rinne's results differ significantly in this respect: only 28 % of the crowdworkers surveyed claimed to need specific knowledge, whereas 56 % responded to complete simple tasks only (Bonin und Rinne 2017, p. 14).

Table 12: Number of platforms and tasks

		What types of tasks that were allocated through online platforms or market places did you mainly perform?							
		Consulting	**Design**	**Crafting**	**Programming**	**Writing**	**Testing**	**Other**	**Don't know**
On how many platforms do you usually look for paid work tasks?	**>4**	19.4	36.8	23.4	38.3	10.0	33.4	18.0	9.3
	1	27.1	18.5	20.0	11.8	14.8	12.2	32.8	3.6
	2	23.2	35.0	19.0	22.1	8.4	8.2	20.2	2.5
	3	14.8	6.5	14.7	18.9	13.5	17.9	7.2	1.1
	4	3.0	0.5	9.4	3.5	0.1	18.9	2.1	0.7
	Don't know	12.5	2.8	13.4	5.5	53.1	9.6	18.9	82.8
	Total	100	100	100	100	100	100	100	100

Source: own calculation

Our survey found that crowdworkers work on average on 3.4 different platforms. However, nearly a third (28 %) of all respondents are only active on one platform (cf. question no. 21, table A1). In contrast to that, Leimeister et al. report an average of only two platforms. Apart from the small sample (n= 248), another explanation might be the high standard deviation: Testers are active on up to 25 platforms, whereas other platform users report up to 10 different platforms they use (Leimeister et al. 2016a, S. 31).
Our results show that not only testers but also programmers and designers are very likely to be active on more than four platforms. Testers, writers and programmers are also the least likely to be only active on one or two platforms. The opposite is true for designers and consultants. Approximately half of all respondents in these groups work on only one or two platforms, as it can be seen from table 12 above.

5.7. Motivation towards crowdworking

Crowdwork is not a very recent phenomenon

The motivation of crowdworkers can generally be divided into extrinsic and intrinsic motivations (Blohm et al., 2014, p. 60). In the few publications in which the motivation of crowdworkers is discussed, the authors assume that extrinsic motivation, i.e. monetary remuneration, is the main factor for engaging in crowdworking (Blohm et al., 2014, p.60, Durward et al. 2016a, p. 282; Leimeister et al., 2016b, p. 61). However, Blohm et al. point out that intrinsic motivation is also a high priority for crowdworkers; in addition to social exchange and learning, self-determined work and the enjoyment of the work are also mentioned as important factors (Blohm et al., 2014, p. 60). In a study on Amazon Mechanical Turk, the authors assume that their respondents only mentioned remuneration as the most critical factor, because this is the socially desirable answer (Kaufmann et al., 2011, p. 7). The extent to which this bias actually occurs is incomprehensible based on the given data. In addition to payment, the authors also found that the category "fun work" was voted for by the majority. Among other things, this includes the flexibility about the tasks and the aspect of simply killing time (Kaufmann et al., 2011, p. 8). This is confirmed by the study conducted by Bertschek et al., which also deals with crowdworkers for Amazon Mechanical Turk. The flexibility, with regard to the place and time of the work, was indicated as the main motivation to use the platform (Bertschek et al 2016, p. 9). The freedom to choose the work content itself was chosen by 61% as the reason for crowdworking. Only about a quarter claim to be dependent on the money (although the

question of whether the payment motivates crowdwork was never explicitly asked) (ibid.).

Crowdworkers are intrinsically motivated

Our data support the hypothesis that intrinsic motivation is more important than extrinsic motivation. Only 8 % of all respondents claimed that remuneration was the most important factor for engaging in crowdworking. 16 % mentioned the ease and fast-access to the work assignments as a criterion and another 14 % liked the fact that crowdworking can be done on the side. What is striking is that 16 % claim that they do not have any other possibility to earn money (cf. question no. 10, table A1). While many see it as a leisure activity, there is a number of crowdworkers that seem to be financially dependent on this kind of work. While the majority of microtaskers see crowdworking as a leisure activity (55%) rather than a main source of income, it can be assumed that crowdworkers' tendencies for working in the design and marketplace platforms are different. Neither Leimeister et al. nor Bonin and Rinne asked questions about the motivation for crowdworking. Thus, there is still need for further research in this area.

5.8. Job satisfaction

Half of the respondents are satisfied with their crowdworking job

Half of our respondents state that they are “satisfied” or “rather satisfied” with their crowdworking job. 20 % are undecided, whereas a third are “dissatisfied” or “rather dissatisfied” (cf. question no. 13, table A1). When asking past crowdworkers why they stopped crowdworking, 16 % indicate that the pay was too low and 14 % specify that they find the work to be uninteresting. 10 % claim to have found another job. However, a third stated that there was another reason (cf. question no. 17, table A1) which needs further investigation. When it comes to satisfaction in terms of remuneration, the situation is different: 38 % are satisfied, as opposed to 23 %, who are unsatisfied (cf. question no. 24, table A1).

Of particular importance to crowdworkers are the personal ratings they receive from clients and platform administrators. Crowdworkers can increase their chances of employment through an attractive profile, platform rank, and employer evaluation (Leimeister et al 2016a, p. 63). On average, the employer’s rating is perceived to be the most important criterion for achieving a good reputation in the platform economy. Half of all crowdworkers surveyed by us are satisfied with the ratings they received after having completed their tasks, while only 7 % were unsatisfied (cf. question no. 18, table A1).

Leimeister et al. corroborate that the majority of crowdworkers are rather satisfied with the rating procedures, pay, and platform requirements (Leimeister et al., 2016a, p. 62). Workers are most satisfied with test platforms, while microtaskers were the least satisfied overall (ibid.). Satisfaction with the options for becoming further qualified is low across all platforms (Leimeister et al 2016a, p. 63). When asking about how satisfied workers were with receiving help in the case of any issues, testers and micro-taskers feel that platform operators genuinely care about their wellbeing (ibid.). When assessing the stress factors, it becomes clear that work on marketplace and design platforms is rated as cognitively strenuous (Leimeister et al 2016a, p. 63). Unclear work orders are most common on marketplace and microtask platforms (ibid.). Job satisfaction, in terms of remuneration, appreciation, and future prospects, is positive across all platforms (Leimeister et al 2016a, p. 63). The factor of appreciation is perceived to be the most positive, which the authors attribute to the possibility for reputation-building (ibid.). Of all three factors, satisfaction with the compensation is rated as the worst (but the average is still over 3.0 on the Likert scale). Crowdworkers on test platforms are generally the most satisfied, while designers are the most dissatisfied (Leimeister et al., 2016a, 63). In the study conducted by Leimeister et al., microtaskers are the second most satisfied group regarding pay satisfaction (Leimeister et al., 2016a, p. 63), which contradicts the results from the study by Bertschek et al.: The interviewed microtaskers perceive the treatment they receive from their employer to be 100% reasonable, but state that their pay is not fair (Bertschek et al 2016, p. 10). This could be due to the fact that the microtaskers state that the majority of the activities carried out do not correspond to their own qualifications (ibid.).

In general, the study by Bertschek et al. finds that only around 7% of participants are dissatisfied with crowdworking (Bertschek et al 2016, p. 10). In Leimeister et al., however, the microtaskers are the most dissatisfied group when it comes to guidelines, pay and ratings (Leimeister et al., 2016a, p. 63). In Bertschek et al., there is dissatisfaction with regard to the predictability of income (26%) and employment (29%) (Bertschek et al 2016, p. 10). Since different dimensions were tested in these studies, it is not possible to accurately compare the results. In the study by Bonin and Rinne (2017), no questions were asked about satisfaction.

Additional to the items that have been specifically surveyed for this report, we also analyzed relevant questions from the Civey-Panel concerning the identified crowdworkers. When asking about the possibility of working from home, half of all participants responded that they wished they could work from home more often. 20 % are satisfied with the situation, and 11 % would like to work less from home. A related question inquired about the work-life balance; 48 % feel that they are able to handle job and private issues fairly well, whereas 22 % state the opposite (results not presented here). Our survey also inquired about aspects that crowdworkers perceive to be the most important with regards to their work situation. The most frequently given answer was “varied tasks” (29 %), followed by “personal development” (19 %), and “job security” (14 %). Only 11 % rated a high salary as the most crucial aspect. Overall, respondents perceive their job to be an important part of their lives (70 %), while only 19 % do not attach much importance to their jobs. When asking about their overall job satisfaction, 55 % claim to be satisfied, whereas only 17 % are dissatisfied.

6. Outlook

This first report offers various insights into the German crowdworking market. The revealed heterogeneity of CW with respect to age, gender and education on the supply side and type of tasks and platforms, duration, search time and remuneration on the demand side constitute a need for further investigation. Here, the analysis of additional survey items from the general Civey-panel (up to 3.500 items) can lead to a clearer picture of the different types of crowdworkers active in the market.

As we continuously collect data through Civeys’ open access online panel, and sample sizes increase, we should be able to increase the precision of the market-size estimates and evaluate changes in the market-size as well as its determinants over time. Based on this additional data, we will design and test a CW-Sentiment Indicator („Crowdworking Climate“) that should depict the Transaction-volume, the conversion from future-to-active and active-to-past crowdworkers as well as aspects of income, education, health, flexibility, satisfaction, and social security.

Furthermore, we continuously monitor the data quality by plausibility checks and by analyzing respondent behavior concerning “don’t know” and item-nonresponse.

As new evidence becomes available in the literature, we will report on the comparison with our results. The second Crowdworking Monitor is planned to be finalized in November 2018.

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Annex

Table A1: Questionnaire for crowdworking-oriented respondents (25 items)

1. #2250	**No. of CWs in Household** **Wie viele Personen haben in Ihrem Haushalt im letzten Halbjahr für bezahlte, über Online-Plattformen vermittelte Aufträge gearbeitet?**				
		Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
	Drei oder mehr	30.8%	4.5%	1.0%	11.2%
	Zwei	6.4%	5.7%	3.4%	5.0%
	Eine	29.9%	13.0%	8.0%	16.3%
	Keine	32.9%	76.8%	87.6%	67.5%
	Weiß nicht / Don´t know (*)	10.6%	11.9%	15.1%	12.8%
	Stichprobengröße / Sample size 2,974				

2. #2191	**Work online or in real world?** **Haben Sie die Aufträge, die Ihnen über Online-Plattformen vermittelt wurden, online oder in der realen Welt erledigt?**				
		Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
	Ausschließlich online	17.1%			17.1%
	Überwiegend online	9.3%			9.3%
	Beides gleichermaßen	27.3%			27.3%
	Überwiegend real	18.8%			18.8%
	Ausschließlich real	27.5%			27.5%
	Weiß nicht / Don´t know (*)	18.6%			18.6%
	Stichprobengröße / Sample size 2,207				

3. #2194	**Required Skills: specialized or general?** **Benötigten Sie für die über Online-Plattformen vermittelten Aufträge spezielle Fachkenntnisse oder eher allgemeine Fähigkeiten?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Überwiegend Fachkenntnisse	47.0%			47.0%
Eher Fachkenntnisse	9.2%			9.2%
Beides gleichermaßen	21.7%			21.7%
Eher allgemeine Fähigkeiten	10.2%			10.2%
Überwiegend allgemeine Fähigkeiten	12.0%			12.0%
Weiß nicht / Don´t know (*)	14.0%			14.0%

Stichprobengröße / Sample size (N)
1,915

4. #2195	**No. of weeks during last half-year** **An wie vielen Wochen im letzten Halbjahr haben Sie für bezahlte, über Online-Plattformen vermittelte Aufträge gearbeitet?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
5 Wochen oder weniger	40.0%			40.0%
6 - 10 Wochen	8.1%			8.1%
11 - 15 Wochen	13.6%			13.6%
16 - 20 Wochen	11.2%			11.2%
21 - 26 Wochen	27.1%			27.1%
Weiß nicht / Don´t know (*)	28.9%			28.9%

Stichprobengröße / Sample size
2,023

5. #2214	**Earnings: main or incidental?** **Waren bezahlte Aufträge, die Ihnen über Online-Plattformen vermittelt wurden, im letzten Halbjahr Ihr Haupt- oder Nebenverdienst?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Eindeutig Hauptverdienst	22.3%			22.3%
Eher Hauptverdienst	9.8%			9.8%
Teil, teils	14.5%			14.5%
Eher Nebenverdienst	22.6%			22.6%
Eindeutig Nebenverdienst	30.7%			30.7%
Weiß nicht / Don´t know (*)	26.0%			26.0%

Stichprobengröße / Sample size
2,005

6. #2215	**First-time Crowdwork** **Wann haben Sie sich zum ersten Mal über eine Online-Plattform einen bezahlten Arbeitsauftrag besorgt?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Vor mehr als fünf Jahren	46.0%			46.0%
Vor drei bis fünf Jahren	12.4%			12.4%
Vor zwei bis drei Jahren	12.5%			12.5%
Vor eins bis zwei Jahren	9.4%			9.4%
Vor sechs Monaten bis einem Jahr	3.2%			3.2%
Vor vier Wochen bis sechs Monaten	4.9%			4.9%
Vor weniger als vier Wochen	11.5%			11.5%
Weiß nicht / Don´t know (*)	24.7%			24.7%

Stichprobengröße / Sample size (N)
1,971

7.a) #2379	**Which Crowdworking-Platform? Von welcher Online-Plattform haben Sie zumeist Ihre bezahlten Arbeitsaufträge bezogen?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
99DESIGNS	3.0%			3.0%
CLICKWORKER	3.4%			3.4%
CROWDFLOWER	4.6%			4.6%
Eine andere	74.3%			74.3%
FREELANCER	7.1%			7.1%
GURU	6.2%			6.2%
UPWORK	1.3%			1.3%
Weiß nicht / Don´t know (*)	28.0%			28.0%

Stichprobengröße / Sample size
2,062

7.b) #2380	**Which Gig-working Platform? Von welcher Online-Dienstleistungsplattform haben Sie zumeist Ihre bezahlten Arbeitsaufträge bezogen?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
ANDERE	79.1%			79.1%
DELIVEROO	1.3%			1.3%
FOODORA	1.6%			1.6%
HELPLING	4.1%			4.1%
LIEFERANDO	4.0%			4.0%
MILA	3.0%			3.0%
MYHAMMER	3.4%			3.4%
STREETSPOTR	3.5%			3.5%
Weiß nicht / Don´t know (*)	24.0%			24.0%

Stichprobengröße / Sample size
2,042

8. #2216	**Hours per week worked** **Wie viele Stunden pro Woche haben Sie üblicherweise für über Online-Plattformen vermittlete Aufträge gearbeitet?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Mehr als 40 Stunden	24.3%			24.3%
30-40 Stunden	9.6%			9.6%
20-30 Stunden	8.1%			8.1%
15-20 Stunden	10.8%			10.8%
10-15 Stunden	6.5%			6.5%
5-10 Stunden	14.5%			14.5%
Weniger als fünf Stunden	26.1%			26.1%
Weiß nicht / Don´t know (*)	23.8%			23.8%

Stichprobengröße / Sample size
2,015

9. #2217	**Type of TasksWelche Art von Aufgaben haben Sie hauptsächlich für über Online-Plattformen vermittelte Aufträge ausgeführt?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Handwerkliche Tätigkeiten	10.8%			10.8%
Programmier-Tätigkeiten	8.0%			8.0%
Design-Tätigkeiten	6.1%			6.1%
Beratungstätigkeiten	21.8%			21.8%
Produkt- oder Softwaretests	6.9%			6.9%
Schreiben oder Übersetzen	12.8%			12.8%
Etwas anderes	33.7%			33.7%
Weiß nicht / Don´t know (*)	18.7%			18.7%

Stichprobengröße / Sample size
1,975

10. #2251	**Main reasons for Crowdwork** **Was ist für Sie der Hauptgrund, bezahlte Arbeitsaufträge über Online-Plattformen anzunehmen?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Schnelle Vermittlung, kurze Laufzeit	16.6%			16.6%
Flexible Arbeitszeit	9.2%			9.2%
Flexibler Arbeitsort	7.7%			7.7%
Kann ich nebenbei erledigen	15.0%			15.0%
Keine andere Arbeitsmöglichkeit	16.3%			16.3%
Ausprobieren neuer Arbeitsformen	7.7%			7.7%
Gute Bezahlung	8.9%			8.9%
Etwas anderes	18.6%			18.6%

Stichprobengröße / Sample size (N)
3,301

11. #2219	**Search time** **Wie lange haben Sie üblicherweise nach einem Arbeitsauftrag auf Online-Plattformen suchen müssen?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Länger als eine Stunde	25.1%			25.1%
45-60 Minuten	5.6%			5.6%
30-45 Minuten	9.0%			9.0%
15-30 Minuten	20.9%			20.9%
Bis zu 15 Minuten	39.4%			39.4%
Weiß nicht / Don´t know (*)	42.4%			42.4%

Stichprobengröße / Sample size
2,160

12. #2220	**Weekly gross earningsWie hoch war üblicherweise Ihr wöchentlicher Bruttoverdienst für über Online-Plattformen vermittelte Arbeitsaufträge?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Mehr als 1000 €	39.7%			39.7%
500 - 1000 €	9.5%			9.5%
200 - 500 €	14.0%			14.0%
100 - 200 €	9.0%			9.0%
50 - 100 €	3.1%			3.1%
25 - 50 €	2.6%			2.6%
Unter 25 €	22.0%			22.0%
Weiß nicht / Don´t know (*)	28.0%			28.0%

Stichprobengröße / Sample size
2,164

13. #2221	**Satisfaction of Crowdworking Tasks** **Wie zufrieden sind Sie insgesamt mit der Arbeit, die Ihnen über eine Online-Plattform vermittelt wurde?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Vollkommen zufrieden	20.7%			20.7%
Eher zufrieden	31.0%			31.0%
Unentschieden	19.2%			19.2%
Weniger zufrieden	10.7%			10.7%
Gar nicht zufrieden	18.4%			18.4%

Stichprobengröße / Sample size
2,204

15. #2222	**No. of CW-Tasks per week during last half-year** **Wie viele bezahlte, über Online-Plattformen vermittelte Arbeitsaufträge haben Sie im letzten Halbjahr pro Woche abgearbeitet?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Mehr als 30	27.6%			27.6%
26 - 30	2.6%			2.6%
21 - 25	2.5%			2.5%
16 - 20	3.9%			3.9%
Freq 5	5.2%			5.2%
Freq 6	15.1%			15.1%
Weniger als 5	43.0%			43.0%
Weiß nicht / Don´t know (*)	22.6%			22.6%

Stichprobengröße / Sample size
2,197

16. #2245	**Kind of RemunerationWie wurden die Aufträge, die Ihnen über Online-Plattformen vermittelt wurden, entlohnt (z.B. Geld, Gutscheine, Rabatte)?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Aufträge wurden nicht entlöhnt	8.1%			8.1%
Ausschließlich mit Geld	54.6%			54.6%
Überwiegend mit Geld	15.4%			15.4%
Teils Geld/teils Gutschein/Rabatte	6.4%			6.4%
Überwiegend mit Gutschein/Rabatten	5.3%			5.3%
Ausschließlich mit Gutschein/Rabatten	10.1%			10.1%
Weiß nicht / Don´t know (*)	16.8%			16.8%

Stichprobengröße / Sample size
2,156

17. #2410

Reasons for termination
Warum haben Sie aufgehört, für bezahlte Aufträge zu arbeiten, die über Online-Plattformen vermittelt werden?

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Anderer Grund			41.1%	41.1%
Geringes Ansehen der Arbeit			3.7%	3.7%
Andere Arbeit gefunden			12.0%	12.0%
Suchaufwand zu groß			3.2%	3.2%
Bezahlung zu gering			19.4%	19.4%
Arbeitsaufträge uninteressant			17.5%	17.5%
Nicht mit Familie vereinbar			3.2%	3.2%
Weiß nicht / Don´t know (*)			18.1%	18.1%

Stichprobengröße / Sample size
2,233

18. #2223

Customer Satisfaction with work result
Wie wurde die Arbeit, die Sie für online vermittelte Aufträge erledigt haben, von den Auftraggebern bewertet?

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Habe keine Bewertung erhalten	13.8%		26.8%	19.3%
Vollste Zufriedenheit	43.3%		29.8%	37.5%
Überwiegende Zufriedenheit	25.7%		27.2%	26.3%
Teils, teils	6.6%		8.6%	7.5%
Geringe Zufriedenheit	6.3%		4.4%	5.5%
Gar keine Zufriedenheit	4.3%		3.2%	3.8%
Weiß nicht / Don´t know (*)	17.6%		19.5%	18.5%

Stichprobengröße / Sample size
4,002

19. #2249	**Satisfaction with RemunerationWie zufrieden waren Sie üblicherweise mit der Bezahlung der Arbeitsaufträge, die Ihnen über Online-Plattformen vermittelt wurden?**				
		Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
	Volkommen zufrieden	22.8%			22.8%
	Überwiegend zufrieden	25.2%			25.2%
	Teils, teils	23.8%			23.8%
	Wenig zufrieden	12.1%			12.1%
	Gar nicht zufrieden	16.2%			16.2%
	Weiß nicht / Don´t know (*)	20.0%			20.0%

Stichprobengröße / Sample size
2,206

20. #2224	**Task Duration** **Wie lange brauchten Sie üblicherweise, um einen Arbeitsauftrag zu bearbeiten, der Ihnen über Online-Plattformen vermittelt wurde?**				
		Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
	Eine Woche oder länger	18.8%			18.8%
	Bis zu einer Woche	14.4%			14.4%
	Bis zu 10 Stunden	12.0%			12.0%
	Bis zu 4 Stunden	11.2%			11.2%
	Bis zu 1 Stunde	21.0%			21.0%
	Bis zu 15 Minuten	9.4%			9.4%
	Bis zu 5 Minuten	13.3%			13.3%
	Weiß nicht / Don´t know (*)	26.1%			26.1%

Stichprobengröße / Sample size
2,201

21. #2246	**No. of Platforms** **Von wie vielen verschiedenen Online-Plattformen haben Sie üblicherweise bezahlte Arbeitsaufträge bezogen?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Mehr als vier	29.2%			29.2%
Vier	29.5%			29.5%
Drei	23.7%			23.7%
Zwei	12.7%			12.7%
Eine	4.9%			4.9%
Weiß nicht / Don´t know (*)	28.5%			28.5%

Stichprobengröße / Sample size
2,176

22. #2247	**Self-determination of work-timeWie frei konnten Sie die Zeit selber festlegen, in der Sie die bezahlten, über Online-Plattformen vermittelten Aufträge erledigten?**

	Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
Vollkommen frei	38.3%		22.2%	31.3%
Überwiegend frei	21.2%		28.2%	24.2%
Teils, teils	11.6%		16.5%	13.7%
Weniger frei	8.7%		13.5%	10.8%
Gar nicht	20.2%		19.6%	19.9%
Weiß nicht / Don´t know (*)	20.1%		21.2%	20.6%

Stichprobengröße / Sample size
3,806

23. #2248	**Home-care for relatives (no.)** **Pflegen Sie aktuell einen oder mehrere Angehörige, die alt, behindert oder chronisch krank sind?**				
		Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
	Ja, drei oder mehr	31.4%	1.4%	8.5%	15.4%
	Ja, zwei	11.7%	24.9%	10.4%	13.7%
	Ja, einen	56.1%	71.5%	78.1%	68.9%
	Nein	0.7%	2.2%	2.9%	2.0%
	Weiß nicht / Don´t know (*)	0.7%	13.5%	1.7%	3.9%

Stichprobengröße / Sample size
19,673

24. #2252	**General Job Satisfaction** **Wie zufrieden sind Sie insgesamt mit Ihrer beruflichen Situation?**				
		Aktive / active	Zukünftige/ future	Ehemalige /past	Total/ total
	Ich bin nicht berufstätig	14.3%	16.4%	31.7%	22.6%
	Sehr zufrieden	28.8%	17.6%	10.4%	18.0%
	Eher zufrieden	23.8%	42.9%	42.6%	36.5%
	Unentschieden	6.3%	6.5%	5.6%	6.0%
	Weniger zufrieden	8.3%	10.7%	4.6%	7.2%
	Gar nicht zufrieden	18.5%	5.9%	5.1%	9.6%

Stichprobengröße / Sample size
15,883

Note:

(*) Share of don’t know-answers bases on the sample size; percentage shares of other answer-options base on valid answers without don’t knows.

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