REPORT:

PORTABILITY OF REPUTATION AND TRANSACTION DATA FOR GIG WORKERS

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Research partners:

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Summary

The gig economy lowers the threshold for entry into the labor market. The concept of workers and customers finding each other through online platforms for short (one-day) gigs is on the rise and is receiving a lot of attention. Even though politicians and advocates worry about issues such as security, insurance and fair pay, they do see the benefits.

Those who find a so-called gig via platforms are also known as platform workers. By working via a platform they build up a profile that contains data such as tasks completed, number of customers, and customer reviews. This helps generate trust among (potential) customers in the platform worker. A solid profile generally leads to more work and better earnings.

Platform gigs are a good way to get started on the labor market, but then what? At the moment, platform workers cannot transfer their data to other platforms. They also cannot use their profile to find gigs outside the gig economy. Though the case has been made - in research - for the 'portability' of this data, in practice this is not taking place.

This exploratory research focuses on the following question:

"Can the portability of reputation and transaction data contribute to the employability of a worker in the labor market, both within and outside the gig economy?"

Research first of all shows that platform workers are open to the idea of transferring their data to other platforms and to work and customer relations outside the gig economy. This would be, in particular, reputation and transaction data.

Furthermore, it has become clear that imported data contributes to the confidence a customer has in a platform worker. This is, in any case, the situation for the first transactions whereby customers handpick the platform worker themselves. In the case of automatic matches such as meal delivery services and taxis, it is less likely that an imported profile will contribute to the customer's confidence. After all, in this case, it is not the customer but an algorithm that makes the choice.

Were the platforms to work together on sharing this data, this would probably prove to be successful. This has become apparent from the analysis of failed initiatives when it comes to sharing reputation and transaction data. A further question arises

as to how the system should be safeguarded; should it become part of a public infrastructure or should this be left to the market?

The portability of reputation and transaction data is in keeping with international trends. For instance, various so-called 'career wallets' have been developed; a type of digital safe in which the workers themselves manage their own relevant data. Furthermore, international recruiters agree that technical competencies and social skills reveal a lot more about a person's suitability for a job or gig than diplomas do. It would be interesting to look into how gig platforms could join this movement of creating matches based on skills. This would allow platforms to enhance data and to connect workers to gigs in various sectors ('cross-sector matching').

This exploratory research contributes to the knowledge regarding the question under investigation. The insights have led to the development of a pilot of a 'gigCV' with six Dutch gig platforms. This pilot will be launched in December 2021 and will be evaluated towards the end of 2022.

Introduction and problem definition

More and more, workers and customers are finding each other via online platforms. It is expected that the number of persons who work via so-called gig platforms will be increasing strongly over the coming years[1]. Platforms in the gig economy make it easier to match demand and supply when it comes to paid, short (and often one-time) gigs. These could be both gigs that are carried out on a physical location or online gigs. The whole process takes place within the context of the platform; from the start of the collaboration to the payment for this gig.

The gig economy is a controversial topic. The legal status of the worker is unclear, and the automatic decision processes are insufficiently transparent, as is the impact of algorithmic management. At the same time, researchers of among others the Social Economic Council of the Netherlands[2] (SER), the International Labor Organization[3] (ILO) and The Netherlands Institute for Social Research[4] (SCP) of the Netherlands have come to the conclusion that gig platforms offer a lot of opportunities. For instance, generally speaking, they give platform workers a lot of autonomy and flexibility. Platforms facilitate the finding of work, also for people are insufficiently connected to the labor market. This way, platforms lower the entry threshold to the labor market.

Accumulating reputation and transaction data
Those who work via gig platform construct a profile with information on customer satisfaction regarding previous gigs (ratings and reviews) and factual data about completed transactions (such as showing up for the gig, number of gigs, etc.). The most popular system of evaluation is a grading on a scale of one to five stars in combination with a written review. A positive review in combination with factual data about the transaction (henceforth to be referred to as transaction data) contribute to the confidence a subsequent potential customer will have in the worker. More confidence leads to more gigs and sometimes higher earnings. Some researchers even go so far[5] as to predict that this online reputation could, at some point, replace a diploma. In any case, it is likely that a worker with 200 positive reviews will be more attractive to a customer than a candidate without reviews.

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[1] In the SER report 'How does the platform economy work' an estimation is made that, depending on the applied definition, between 0.8 and 12 percent of the Dutch labor population carries out gigs through an online platform.

[2] https://www.ser.nl/nl/Publicaties/hoe-werkt-platformeconomie

[3] https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_630603.pdf

[4] https://www.scp.nl/actueel/nieuws/2021/01/15/platformwerk-biedt-flexibiliteit-en-ruimte-maar-ook-onrust-en-onzekerheid

[5] Herrmann, Andrea M., Petra Zaal, Maryse M. H. Chappin and Brita Schemmann (2019). "Does Education Still Matter in Online Labor Markets?" In *Perspectives on the Sharing Economy*. Eds. Dominika Wruk, Achim Oberg, and Indre Maurer. Newcastle upon Tyne: Cambridge Scholars Publishing: pp. 64-71.

Once working via platforms becomes more commonplace, the importance of having a good reputation will increase for workers. At the moment, platforms manage this reputation and transaction data, but more and more experts are in favor of making the workers themselves responsible for managing their own online reputation. Among others, the ILO-rapport 'World Employment and Social Outlook'[6] and a policy document[7] submitted before the Dutch parliament in 2020 go into this topic. The concept of allowing workers to take their reputation and transaction data to other platforms is supported by the introduction of the General Data Protection Regulation in 2016.

Prospects after entering the labor market
Even though working via platforms is a low-threshold way of entering the labor market, critics point out that it does not offer a lot of prospects. It is a nice leg up, but then what? The ability to take along reputation and transaction data to other platforms as well as other employers and customers outside the gig economy could be one solution. This is the concept that has led to this research.

It is quite conceivable that the ability to take along data will prove to be to the advantage of the worker, but a lot of what has been said about this subject is based on suppositions and there are still a lot of questions about the practicality of it all. Such as: is the management of the system surrounding the portability of reputation and transaction data something that should be left to the market or something that the government should take care of? Does a transferred or imported rating truly contribute to the confidence an employer or customer might have in the worker? In order to answer these questions, I, Martijn Arets, started my research in April 2020.

The main research question is:

"Can the portability of reputation and transaction data contribute to the employability of a worker in the labor market, both within and outside the gig economy?"

Methodology
In order to find an answer to this question I consulted literature on this topic, interviewed 38 specialists, organized two workshops with the stakeholders and actively participated in the international debate on the topic of the sharing of data by platform workers.

[6] https://www.ilo.org/global/research/global-reports/weso/2021/WCMS_771749/lang--en/index.htm
[7] https://www.pvda.nl/wp-content/uploads/2019/06/Initiatiefnota-De-herovering-van-de-platformeconomie.pdf

In order to understand the context of the main question, I've taken into account how reputation systems work, arguments in favor and against the transfer of this data, as well as the business cases of earlier initiatives. I have also looked into how reputation scores can be improved with transaction data and skills and how they can be made compatible with career wallets.

The next step: pilot and research
This research gave rise to a pilot that was given the name 'KlusCV' and 'GigCV', which will be launched in December 2021. During the course of this pilot, we will be testing important questions and suppositions in practice. In September 2022, the pilot will be evaluated.

Parallel to the preparation of this pilot, a number of 'sub' research projects were carried out, such as a survey among platform workers (RC=1,114) and an online experiment among gig platform customers (RC=188). This report also includes the preliminary results of these two research projects and the intermediate findings generated by the pilot. A complete analysis will be presented in various academic papers in the coming years.

With this research I hope to provide a constructive contribution to the debate surrounding the portability of reputation and transaction data for platform workers. I hope you enjoy reading this report.

Martijn Arets
Independent platform expert and researcher

PART 1:

context of platform work and reputation systems

In order to understand under which conditions the portability of reputation and transaction data can bring added value, it is important to understand the gig economy. The first section of this report will go into the current state of affairs of the gig economy and the characteristics of the reputation system that the platforms make use of.

1. Gig economy

Broadly defined, a platform is "an open digital service that facilitates interactions and where possible transactions between two or more different but nonetheless mutually dependent groups of users of goods, services and or information, whereby this digital service usually does not offer these products itself[8]".

Platforms come in all shapes and sizes. This exploratory research will look into, in particular, gig economy platforms and platform workers. Platform workers are "those who carry out one-time physical tasks (gigs), whereby the gig is done in return for payment and has been agreed upon via an online platform (being a website or an app). [9]"

In the gig economy, individual customers - both consumers and organizations - and individual workers find each other via an online platform for short term gigs. Well-known examples of such gig platforms are the taxi app Uber and the meal delivery platform Deliveroo[10] - but the gig economy encompasses a lot more than just that[11]. In 2020, the Dutch Social Economic Council (SER) published the research entitled 'How Does the Platform Economy Work'[12], in which it came to the conclusion that there are at least 125 gig platforms in the Netherlands. See illustration 1. On the website Platformwerk[13], there is an extensive overview of these platforms, including information on how they work.

2. What makes gig economy platforms different?

Platforms and the type of work that they facilitate are not new. Millions of job seekers have found a job or a gig via online job boards or social media. Already since 1994, the organization called HomeWorks has been connecting cleaners to homeowners. The same goes for temporary jobs: for years already, employment bureaus have been big players in the Dutch labor market, contributing an annual several billion euros of income.

[8] https://www.cbs.nl/nl-nl/achtergrond/2020/38/meer-zicht-op-online-platformen-in-nederland

[9] Free translation of the definitino given by Frenken, K.; van Slageren, J. (2018) ESB-Dossier, volume 103, pp. 27 - 31

[10] Boudreau en Hagio, 2009

[11] https://esb.nu/esb/20047499/kluseconomie-is-meer-dan-uber-en-deliveroo

[12] https://www.ser.nl/-/media/ser/downloads/adviezen/2020/platformeconomie-hoe-werkt.pdf

[13] https://www.ser.nl/-/media/ser/downloads/adviezen/2020/platformeconomie-hoe-werkt.pdf

So what makes the gig economy different? To start with, the entire process takes place within one single digital environment; from the request and booking of a gig to the payment and evaluation of this gig. Contrary to employment bureaus, the gig economy platforms do not make use of human intermediaries[14]. They do not have opening hours. The users arrange everything themselves via the gig platform. This gives them a lot of autonomy. The users appreciate how the platform offers them flexibility, both in terms of when they work and where they work. It gives them access to work whenever it is convenient for them[15]. Often the platform gig is a side job, or it allows them to generate an income aside from their regular job. It often involves short gigs, ranging from a few minutes to a day. The gig workers are relatively young: 68% of the gig workers that carry out a job on a physical location range in age from 18 to 34[16].

An important feature for this research is the fact that the majority of platforms act as intermediaries for jobs for which a diploma is not required. Consequently, many platforms are an extremely low-threshold way of finding work for people who are not connected to the labor market.

How do the gig platforms distinguish among themselves? It is important to know the four variables, in order to understand - later on in this report - under which circumstances the portability of reputation data can be of added value.

2.1. Onsite or online
The first distinguishing feature among platforms is the location on which the gig is carried out. Many well-known platforms act as intermediaries in gigs in which the worker has to go to a physical location; This is the so-called onsite gig economy. A cleaner works in the house of the customer, a taxi driver has to pick up their customer.

A less-known sector of the gig economy is the online gig economy, also known as 'crowd work'. These workers only need a computer and an Internet connection in order to work via this type of platform. Some of these gigs require special skills, such as those of translators and programmers. Yet other gig platforms offer tasks that require multiple workers, such as the filling out of surveys or the recognition and labeling of photographs.

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[14] https://www.zipconomy.nl/2021/01/uitzendbureaus-versus-klusplatformen-nieuwe-wijn-in-oude-zakken-of-oude-wijn-in-nieuwe-zakken/

[15] It is important to note the following when it comes to this flexibility: research shows that the more dependent a worker is on a platform, the less they feel they have flexibility and autonomy.

[16] https://www.ser.nl/-/media/ser/downloads/adviezen/2020/platformeconomie-hoe-werkt-kluseconomie.pdf
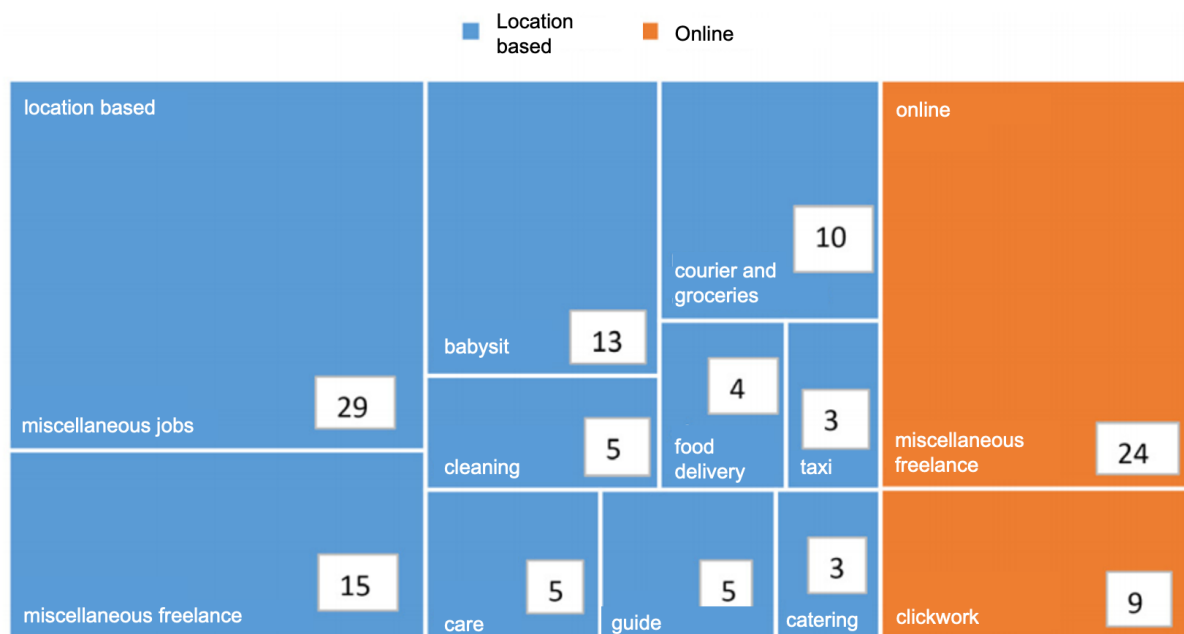
Figure 1: image from the Dutch SER repport: 'hoe werkt de kluseconomie?'

2.2. Consumer or business

The second variable regards the type of client or customer; is this a private person or a company? The best-known platforms have private persons as customers, take for instance the taxi app Uber or the cleaning platform Helpling.

Nonetheless, more and more platforms are focusing on companies and organizations. Take, for instance, platforms that compete with employment bureaus. There are also gig platforms on which organizations can find individual suppliers of professional services. Examples include Temper, Youbahn, Fiverr and Upwork.

2.3. One-time or repeat tasks

A third variable regards the type of transaction; is it one-time or for repeat tasks? If you order a taxi, you will always get a different driver. In order to offer quick service, what is of importance in this situation is the location of the driver in relation to where the client is at that point in time. It is not of importance whether the driver and the customer know each other, as the transaction is generally one-time.

On the contrary, on other platforms, it could prove convenient if the gig worker and the customer could be brought in contact with each other again for a subsequent gig. This could be the case for platforms that mediate for home cleaning jobs and child sitters. Also companies often work with the same person for multiple gigs. The

customer could even go so far as to create a pool with favorite platform workers who are to be given preference should he place a request for a new gig.

2.4. Handpicked or algorithmic match

A fourth important distinction among platforms is the way in which the platform worker and the client are brought into contact with each other. There are two ways; a (semi) handpicked match or an algorithmic match. In the first situation, the customer places a request for a gig, which elicits a response from interested platform workers after which the customer handpicks a preferred worker.

In the case of an algorithmic match, the platform's system decides - based on a variety of variables - which platform worker will be given the gig. This is generally how platforms with an on-demand model work. Examples that come to mind are meal delivery platforms and taxi apps. A customer who wants to go from A to B or who wants to have a pizza as quickly as possible does not want to choose who will carry out the job. The platform well then select the most suitable and quickest available platform worker.

Finally, there are other differences between platforms that are of less relevance for this report. For instance, there may be a difference in who sets the price (the client, the worker, the platform, or a combination thereof), the legal status of the platform worker (self-employed, freelancer, employee, or someone who is working for an employment agency), and the type of skills required of the platform worker.

On location work

Uber	*Helpling*
amazon mechanical turk	**fiverr**®

Algorithmic match / Worker accepts or rejects

Manual match / Client chooses worker

Location independent work
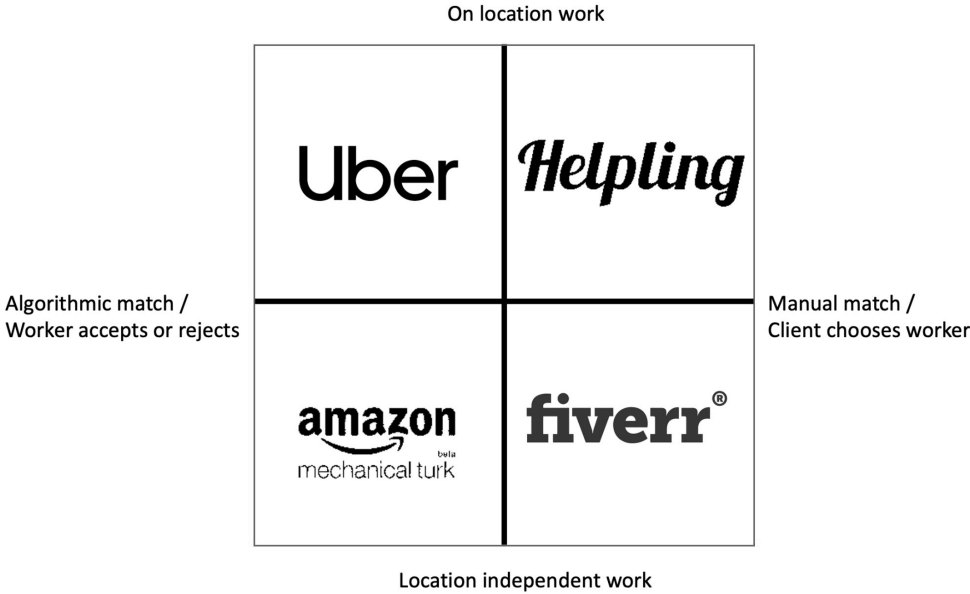
3. Reputation scores and transaction data

In the world of the online platform economy, trust is of importance. Platforms often carry out a variety of checks before a platform worker is allowed to carry out a gig. This is especially the case for gig platforms that involve an offline transaction. They check, for instance, the veracity of the proof of identification and the specific documents that are required for the gig, such as for instance a driver's license.

On most platforms, the customer and the platform worker give each other a rating after each gig. This report will focus on ratings given to platform workers by customers. Those who work via a gig economy platform construct a personal profile with information on customer satisfaction (ratings and reviews) and factual data about the completed transactions (did the worker show up and number of gigs). The most popular type of evaluation is a grading on a scale of one to five stars in combination with a written review. A positive rating in combination with factual data (henceforth to be referred to as transaction data) contribute to the confidence a potential subsequent customer may have in the worker. More confidence leads to more gigs[17] and sometimes better earnings[18].

3.1. The newbie-problem

Due to the fact that reviews are so important, many platforms and their users are forced to cope with the so-called 'newbie dilemma'. If there are a lot of platform workers who have a good reputation score, it will be hard for newcomers to obtain their first gig[19]. Research shows that new users try to deal with this challenge by asking a much lower price than platform workers with a high reputation score[20].

For platforms, the newbie dilemma is both a problem as well as a potential strategic advantage. Platforms indicate that the newbie dilemma limits the growth in the number of users. At the same time, platforms expect that users will be less inclined to switch to a competing platform as soon as they have accumulated a good reputation.

It is important to note that the newbie dilemma appears to primarily be a problem for platforms that work with handpicked matches. Once an algorithm makes the matches, the missing reputation score is less important. This is because the platform can set up the algorithm in such a way that platform workers who do not

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[17] Diekmann, A. *et al.* (2014) 'Reputation Formation and the Evolution of Cooperation in Anonymous Online Markets', *American Sociological Review*, 79(1), pp. 65–85.

[18] A limited number of platforms allow the workers to set their own rate. Even when they can set their own rate, external factors - such as scarcity - will have an impact on the range of the rates.

[19] Dellarocas, C. (2010). Online reputation systems: How to design one that does what you need. *MIT Sloan Management Review, 51*(3), 33–38

[20] Frey, V., van de Rijt, A. Arbitrary Inequality in Reputation Systems. *Sci Rep* **6,** 38304 (2016). https://doi.org/10.1038/srep38304

have a score are also assigned gigs. In this way, the algorithm helps them build up a reputation. In many cases, the customer can - if so desired - decline the proposed match.

3.2. Reliability and reputation scores

While reputation scores contribute to a relationship of trust between the users, there has been some criticism regarding these scores. For instance, reputation scores are also used for automated decisions on platforms. Those who know that an Uber driver needs a score of at least 4.6 in order to continue driving via the platform, can wonder what a scale of one to five really represents. Research[21] also shows the ratings are generally skewed, yielding almost only 4-plus star ratings. The same research shows that profiles with low ratings generally tend to simply disappear. These users then make a new profile and thus start with a clean slate[22].

Also the fact that every platform develops its own rules when it comes to their reputation system creates controversy. The method of determining the total score is unclear nor do the systems take into account cultural influences. Whether or not the reviews are fair is not always clear. Customers have been known to threaten a bad review in order to exact extra services[23]. Also platform workers have been known to ask their customers to split up a project into various smaller projects, in order to generate multiple positive ratings in one go. Furthermore, there are platforms that, for instance, give experienced users the option of removing a negative review[24], thus creating a greater difference between newbie and experienced workers.

In other words, reputation scores can exacerbate but also reduce unequal treatment. Research shows that users with a migration background need more time to build up a reputation, because - in the beginning - they are less likely to be a match[25]. At the same time, it has become clear that platform workers with a good reputation score are less likely to experience discrimination. Once one has accumulated a good number of positive ratings, ethnicity becomes less important[26].

3.3. Practical problems

It is conceivable that the growth of the gig economy will lead to practical problems when it comes to ratings. Take, for instance, someone in HR who hires an average of 10 warehouse employees a day via a platform. This customer will not have sufficient

[21] Teubner, T., Hawlitschek, F., & Dann, D. (2017). Price determinants on Airbnb: How reputation pays off in the sharing economy. *Journal of Self-Governance and Management Economics*, *5*(4), 53-80.
[22] Teubner, T., & Glaser, F. (2018). Up or out—The dynamics of star rating scores on Airbnb.
[23] https://www.emerce.nl/achtergrond/review-chantagemiddel
[24] https://support.upwork.com/hc/en-us/articles/219801228-Top-Rated-Perk-Feedback-Removal#jss
[25] Kas, J., Corten, R., Van de Rijt, A., (2021). The role of reputation systems in digital discrimination. *Socio-economic review*.
[26] Kas, J., Corten, R., Van de Rijt, A., (2021). The role of reputation systems in digital discrimination. *Socio-economic review*.

insight into the performance of these 10 platform workers to write a suitable review for each of them. And even if they did have this insight, chances are slim that this HR staff member would have the time or the inclination to write all these individual ratings every day.

Furthermore, it is good to realize that customers often give one single rating for a complete package of services. This way, the rating will not only cover the performance of the worker, but also the quality of the services rendered by the platform.

Finally, the reputation score provides little insight into the context of the gig. For instance, if the customer is late in ordering their taxi, there is a traffic jam and the customer therefore misses their flight, chances are small that they will award the driver five stars, while the taxi driver performed their job excellently.

3.4 Moving the focus from reputation to transaction data

Reputation scores are valuable. They offer some form of surety to the customer, as performances in the past can be seen as some form of guarantee for performances in the future. This way, reputation data generate more work and perhaps also higher earnings. However, it is clear that the way these scores are calculated is not perfect.

Platforms should take a critical look at which data they need from their users. Often, platforms copy each other's system, without verifying if, for instance, a profile photo is truly necessary for a successful transaction. They need to take into consideration the possible impact of these scores on the well-being and job satisfaction of those who are evaluated. In the episode 'Nosedive'[27] of the popular Netflix series 'Black Mirror' one can see how it shouldn't be done. In this TV series, the protagonist loses her privileges after a number of unfortunate actions and eventually ends up in jail after having lost her reputation.

As reputation data is controversial, I will also go into objective data in this report, called transaction data. These data are now also part of many platform workers' profiles. These are data on the number of gigs, the number of times the worker showed up, and applied skills. These data can be removed from the platform automatically. Thus, transaction data represent an objective way of boosting the customer's confidence in the worker.

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[27] https://en.wikipedia.org/wiki/Nosedive_(Black_Mirror)

PART 2:

Portability of reputation data: why, what, who and how?

As reputation and transaction data can contribute to the chances a platform worker has on the labor market, more and more parties are in favor of sharing these data with the worker. Among others, the ILO-rapport 'World Employment and Social Outlook'[28] and a policy document[29] submitted before the Dutch parliament in 2020 go into this topic. If a worker can manage their own data, then they are less dependent on one single platform.

This second part goes into what is known about data portability. I will discuss the value, desirability of, and previous attempts at, making reputation data transferable. I will also discuss the issue as to who should develop this portability and how it should be done.

The third part will go into how the data can be enhanced by including skills. Subsequently I will apply the lessons learned from this research to the development of a pilot that makes use of such a system.

4. Important questions

Three questions are central in this chapter. They have been generated by an exploratory research carried out by Jeroen Meijerink, assistant professor of Human Resource Management (HRM) at the University of Twente.

- Why?
  The answer to the question 'why' depends on whom it concerns. For platform workers, data portability is convenient and sometimes even necessary, as it will allow them to find work quicker on a new platform. They will be hired for gigs more easily if they can demonstrate that they are reliable. At the same time, data portability can lead to greater differences between those platform workers with, and those without, a reputation.

  Portability also represents potential benefits for the platforms; the more reliable the users, the more transactions there will be and the more successful the platform will be.

  Furthermore data portability makes sense for platform workers who are active on multiple, competing platforms. For instance, taxi drivers who work for both Uber and Lyft. In this case, the competing companies might not be so pleased with this option.

[28] https://www.ilo.org/global/research/global-reports/weso/2021/WCMS_771749/lang--en/index.htm
[29] https://www.pvda.nl/wp-content/uploads/2019/06/Initiatiefnota-De-herovering-van-de-platformeconomie.pdf

- What?
  Which data should be transferable? Each platform has its own review system; written reviews, stars, thumbs up or thumbs down. How do you 'translate' one system to the other?

  You could also choose to transfer the number of transactions. Research has shown that the income of a platform worker more strongly correlates with the number of gigs completed than with the number of stars.

Finally, form is of importance too. Data lose their value if they cannot be applied and are not valid on other platforms. Should you opt for personality traits and competencies, behavior (communication, response time) or do you only share results (productivity, customer satisfaction)?

- Who and how?
  Should platforms share their data or should this take place via a third party? How does the user feel about this? Should there be an opt in or opt out so that users can choose which data they share? Some platform workers might prefer to start out with a clean slate or would prefer not to share certain data on other platforms. Finally, it could be useful to share the data with parties who are not part of the platform economy. Sharing a 'certificate' of work carried out on platforms could be of interest to other employers or customers.

Possible answers to these three questions are central in the second part of this report.

4.1. Why? – The impact of an imported score

Little research has been done into the impact of an imported score on the confidence that a customer might have in a service provider. The available research goes into the importation of an online reputation on e-commerce platforms. During a workshop that I organized as part of this research[30], professor Timm Teubner - of 'Trust in Digital Services' - shared the first results of his study 'Bring Your Own Stars - Reputation Portability Between Online Platforms'[31]. This research shows that the star

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[30] https://www.zipconomy.nl/2020/10/platformondernemers-willen-aan-de-slag-met-dataportabiliteit/

[31] Hesse, Maik; Teubner, Timm; and Adam, Marc, "Bring your own stars – The economics of reputation portability" (2020). ECIS 2020 Research-in-Progress Papers. 72.
https://aisel.aisnet.org/ecis2020_rip/72

ratings that a seller transfers from one platform to another do indeed generate more trust among potential customers. In other words, according to Teubner, data portability can definitely be of use to users. The relatively unknown e-commerce platform Bonanza[32], for instance, has made such a link. Users can import their existing eBay reviews, thus generating a kickstart on the new platform. It would appear that an imported score particularly adds value for the first couple of transactions. After that, a score on the own platform generates the greatest amount of confidence.

Though this research clearly provides us with valuable insight, additional research into the impact of an imported score in the gig economy is necessary. Together with Judith Kas (Wissenschaftszentrum Berlin für Sozialforschung), Rense Corten (University of Utrecht) and Teubner, I initiated this type of follow-up research in the summer of 2021. In total, 188 platform customers participated in this research. This included both private consumers and businesses. During the experiment, they were presented with a variety of platform worker profiles; some with no reputation, some within one rating on the platform, a profile with an imported rating from another platform, and a profile with one rating from the platform and one imported rating. Subsequently, the participants were asked to decide whether they would hire this platform worker.

The first results showed that:

- Respondents are more willing to hire a platform worker who has earned ratings on the platform.
- If a platform working does not have a rating on the platform, imported ratings increase their chances of being hired.
- If a platform working has earned ratings on the platform, imported ratings have no impact on their chances of being hired.

The most important conclusion of this quick analysis is that an imported rating will have a positive impact on the confidence a potential customer has in a worker when it comes to their first couple of gigs. These preliminary test results are confirmed in a statistical test that tested for a number of worker and respondent traits. A further analysis of the research is expected to be published in a scientific paper in 2022.

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[32] https://www.bonanza.com/

4.2. Why? – Platform workers' opinions on data portability

In aforementioned reports, researchers of SER and ILO presumed that platform workers prefer to import their own data. In order to test this assumption, I carried out a survey in the spring of 2021, together with Meijerink, among 1,114 platform workers. The complete analysis will be published in an emerging academic paper in the near future.

Our earlier results, visualized in figure 2, show that platform workers generally are positive about the possibility of importing their data, if the platform offers this option.
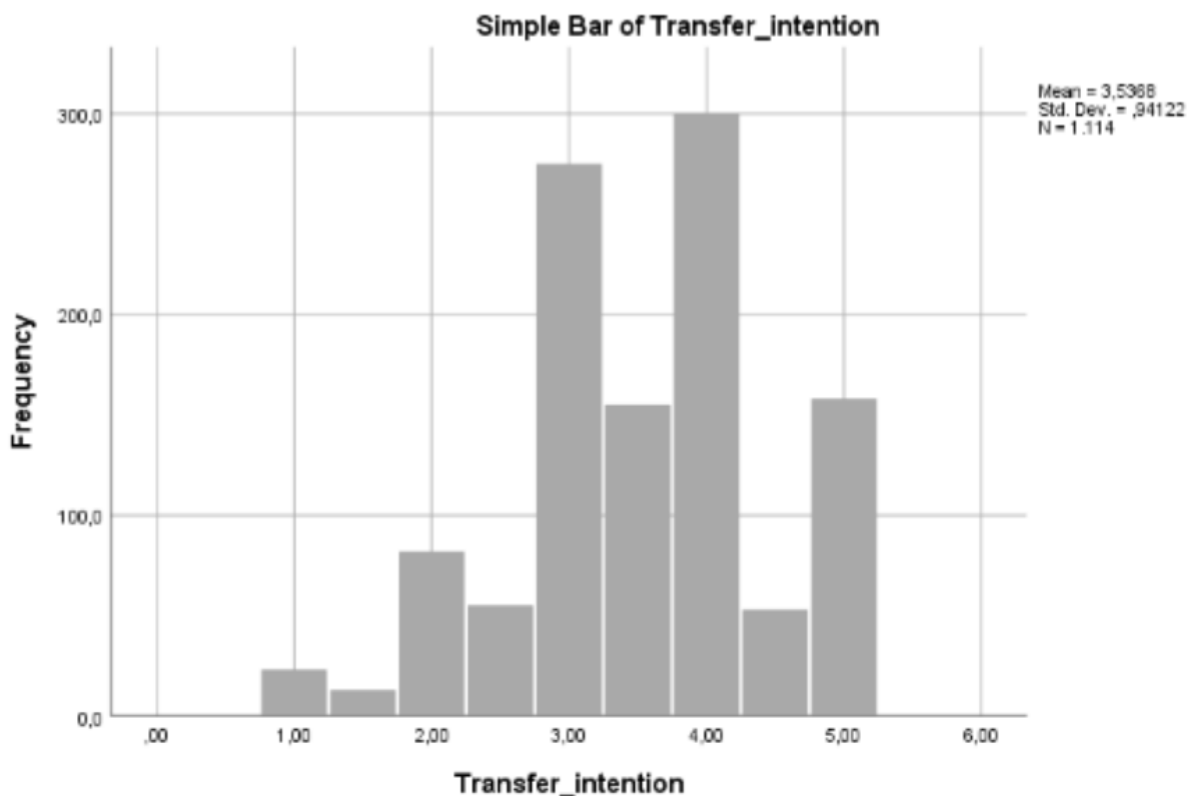

Figure 2: The intention of platform workers to transfer their data to another platform.

We also asked platform workers whether they were positive about including their experience in a digital CV, in order to help find work outside the gig economy. The respondents also responded positively to this option.
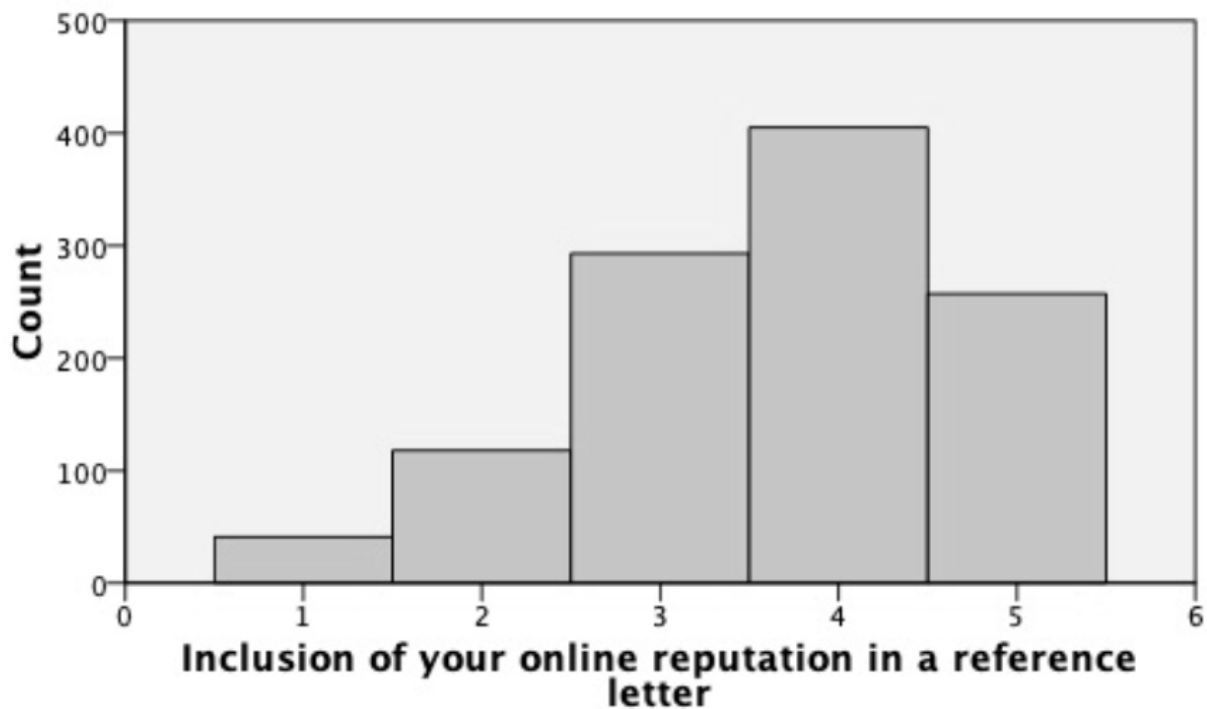
Figure 3: The intention of platform workers to transfer their data in a reference letter.

4.3. Points of attention

A reason to be careful when considering data portability is the fact that little is known about possible negative effects. It might, for instance, make platform work less accessible to workers without a reputation. Furthermore, portability might normalize imperfect, biased systems and amplify negative effects. This is why the report lays an emphasis on sharing reputation and (factual) transaction data. Whereby it is good to be aware of the fact that there is even a degree of bias in factual transaction data, for instance in the way this data is presented.

I advise researchers and platform developers to pay more attention to the impact of rating systems on the job satisfaction and well-being of workers. A literature study carried out by researcher Laura Lamers (of the University of Twente), for instance, shows that ratings can have a negative impact on the workers, when the context of a negative rating is absent[33]. Rating systems can generate fear of bad reviews and diminished well-being of the workers. On a more fundamental level, the reduction of work experience to numbers, rankings, and stars can lead to a dehumanization of the employment experience.

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[33] Gandini, A. (2019). Labour process theory and the gig economy. *Human Relations*, *72*(6), 1039-1056. https://doi-org.ezproxy2.utwente.nl/10.1177/0018726718790002

There are also studies that indicate a discrimination of certain groups of workers by the algorithmic software that is used in the platform economy.[34] Greenwood et al. (2017) therefore advocate for general awareness of the bias in online rating systems.

4.4. What? – Relevance of the type of data

In order to determine what you want to transfer, you need to know what purpose it serves. In this report, until now, we have focused primarily on the creating of confidence on platforms. There are other possible advantages. By exporting data, the worker can use this proof of their experience to find work outside the platform economy. In that case, the data is shared in a digital CV. Take, for instance, the case of Uber on page 27, in which the taxi platform offered to create such a CV for taxi drivers who found themselves without customers at the start of the COVID-19 crisis. Another possible application would be for the platform workers to use their reputation and transaction data for taking out a mortgage or insurance.

It has become apparent, from interviews from those who are in charge of this matter on gig platforms, that users are already submitting requests for an overview of their reputation data. They are requesting proof of their acquired experience, for instance if they want to study something such as child psychology. A platform entrepreneur in the house cleaning sector regularly receives requests for proof of hours worked, so that the cleaners can obtain a mortgage. An equivalent in the employment bureau sector is the so-called perspective statement[35], as it is known in the Netherlands. Temp workers can use this to request a mortgage from a mortgage provider.

Looking at these many options makes it tempting to think that the possibilities are endless. This report, however, will primarily focus on the sharing of reputation and transaction data for the purpose of obtaining more work within and outside the platform economy.

What is worth sharing? A workshop, in which six gig platforms participated, yielded the following data points:

1. The date of the first completed gig;
2. The total number of completed gigs;
3. Average rating (or percentage of the positively rated, completed gigs);
4. The number of times the worker showed up;
5. The number of customers;
6. Written reviews;

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[34] Greenwood et al., 2017; Kellogg et al., 2020; Rosenblat et al., 2017.
[35] https://www.abu.nl/kennisbank/perspectiefverklaring/

7. Skills used for the gig;
8. In the case of gig platforms that mediate between companies and individuals; the customers and the sectors.

Subsequently, we used the survey among platform workers to test these variables with the question: which data would you like to transfer? This yielded the following outcome (N=1.114).

1. Written reviews (741)
2. Ratings (stars) (724)
3. Number of gigs completed (681)
4. Number of customers (486)
5. Number of times the worker showed up (466)
6. Number of hours worked (394)
7. Nothing (68)

Different platforms use different rating systems; it goes without saying that a taxi driver is rated on other points than a designer. For this reason, we look for similarities - in other words evaluation criteria that are the same for different types of gigs. On the platform Upwork, for instance, workers are rated on reliability, quality, and communication. These criteria are important for a variety of gigs.

4.5. What? – Relevance of skills

Bas van der Haterd, advisor on the influence of technology on work, remarked the following during a workshop[36] arranged in support of this research: "There is no doubt that you can use such platform skills to show that you are also suitable for other gigs. It doesn't matter whether you have been given good ratings when it comes to communications as an IT worker, a child sitter, or a taxi driver. In other words, it would serve the IT worker who is applying for a child sitting gig well to be able to show their reviews. That is, of course, provided they have a good score."

In other words, reputation and transaction data do not have to have a direct link to the gig. Also general competencies such as customer friendliness and punctuality generate confidence in a worker. These types of competencies potentially represent added value if a platform worker wants to start working in a different sector. In part 4, 'The future of reputation and transaction data in the labor market', I will go into this further.

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[36] https://www.zipconomy.nl/2021/02/van-klussen-naar-skills-zo-kunnen-platformen-cvs-verrijken-en-andersom/

4.6. Who and how? – Implementation and management

Who should initiate and manage a system for data portability? In the past, various entrepreneurs made an effort to manage the data of workers on platforms.

An important question, in this context, is how desirable it would be for the data to be managed by a party whose aim it is to make a profit. The organizing and maintenance of this infrastructure could also be carried out by the government. It could be seen as a type of public service. For instance, the DUO (Dutch Executive Education Agency) maintains an online database on who has obtained which diploma.

A third option would be a cooperative[37], or block chain, solution in which the ownership and management are in hands of the interested parties. The question arises as to how such a bottom-up initiative could be set up by the users. Platform workers are heterogeneous group, which would make organizing complicated. It would be worthwhile exploring the scenario in which the platforms would contribute in the setting up of such a system. A concept such as this has already been developed in a so-called 'workers cooperative'[38]. Also stakeholder organizations such as unions could play a role in this. A few examples of successful platform cooperatives are the platform for housecleaners Up&Go, and the taxi platform Green Taxi, which were created with the help of unions and other outside support.

A third option would be a set of agreements that would be developed with the platforms, which could be managed by a third (public or private) party[39]. A set of agreements is a set of specifications, rules and agreements regarding the sharing of data. A well-known example is iDeal[40]; it is a set of agreements between banks who have thereby jointly created a payment solution.

The essay 'Sets of Agreements in Practice'[41] summarizes the advantages of such sets of agreements as follows: "What typifies a set of agreements is that it often does not create anything itself, but supplies the rules to which the parties, who want to set up the system themselves or join it later, have to adhere. It allows a number of parties to create or use a system, thus giving rise to an open and decentralized ecosystem in which no one can become the monopoly. This, is in contrast to large, monopolistic platforms, in which one party creates the rules of the ecosystem - with

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[37] https://www.tpedigitaal.nl/artikel/zijn-platformcooperaties-levensvatbaar
[38] J.M. van Slooten & J. Holscher, 'De werkerscoöperatie',
https://www.my.stibbe.com/mystibbe/attachment_dw.action?attkey=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQJsWJiCH2WAUUibaqU1
TT1M%2BXOzihcydI&fromContentView=1&nav=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQuf6KjHLHOBw%3D&attdocparam=pB7HEsg%2
FZ312Bk8OIuOIH1c%2BY4beLEAeKg0G%2Fe%2BSlz8%3D
[39] https://www.sidn.nl/nieuws-en-blogs/uhm-afsprakenstelsel-leg-even-uit-alsjeblieft
[40] https://nl.wikipedia.org/wiki/IDEAL
[41] https://nl.wikipedia.org/wiki/IDEAL

which workers and customers have to comply when interacting and/or entering into transactions with each other."

Creating a set of agreements regarding the sharing of reputation and transaction data will help prevent that all the data and power comes to lie with the large platforms. The market will remain competitive, while platform workers can use the data to find other work, within or outside the gig economy. In order to do this, a large group must come together to set up the legal framework, protocols and standards on all the important issues. It is of the essence that many platforms join in. The import and export of data must be automated. Human intervention would be too expensive, as it would regard huge amounts of data and transactions.

4.7. Examples from practice

The idea that a rating on a platform could constitute added value elsewhere, has inspired several startups to create a business model for this. During earlier research, I interviewed a number of these entrepreneurs[42]. I spoke with the founders of Traity (Madrid), Deemly (Copenhagen), eRated (London and Tel Aviv) and MyTQ (Tel Aviv). Another well-known example is Trustcloud, which was founded in 2012. Sometimes, millions are invested in these companies. The fact that none of these startups still exist[43] shows that setting up a system of exportation of reputation data is easier said than done. For purposes of this research, I once again contacted some of the entrepreneurs behind these initiatives.
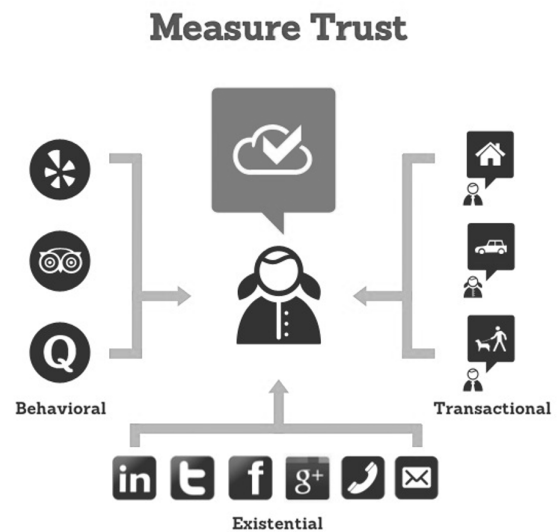
All the startups had come with the idea of creating a 'trust passport' (or 'reputation passport') for online marketplaces. A sort of personal profile containing data from a variety of sources (marketplaces, social media).

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[42] https://youtube.com/playlist?list=PLDxXQy74yPNgYhAVHlyC9L8PsvUbA7pUp
[43] eRated still exists under the name Silverlake.ai data-drive advice for market places
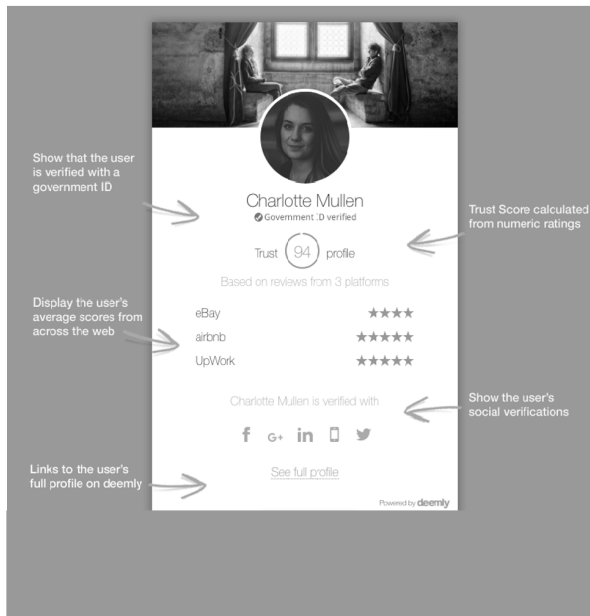
A reputation profile on the Deemly platform   The scheme of a reputation profile at Trustcloud

Figure 4: Two examples of 'trust passports'

What you see with all these initiatives is that they are something of a one-way street. Though the platforms and the potential users *do* communicate, the users are seldom involved in the initiatives. While, in fact, the success of such a system strongly depends on the cooperation between platform and users. Furthermore, the models are often very complicated. This is one of the greatest pitfalls; by biting off more than they can chew, these initiatives preclude short-term success. They focus on too large a variety of platforms and want to serve multiple countries.

At the moment, there are a number of international projects that are exploring these possibilities, such as the blockchain project Capena[44]. As is the case in the aforementioned startups, these initiatives fail to gain a foothold among platforms and platform workers. Also here, the focus is on technology. As was the case with the earlier initiatives, Capena is finding it hard to develop a business model.

Platforms are also experimenting with ways to share data with platform workers. For example, Glovo, a delivery platform that is active in 24 countries and claims to serve 65,000 couriers[45], started the 'Glovo Pro' project at the end of 2021. Maria Mingrone, product owner at Glovo Pro, said: "Glovo Pro is a digital certificate that Glovo deliverers can request. The certificate contains some statistics related to the activity of the courier during the delivery of orders. In an extended variant, couriers can include information about their studies and previous jobs. The main idea of this

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[44] https://www.blockstart.eu/portfolio/euroledger/
[45] https://about.glovoapp.com/en/

project is for couriers to have a document that acts as a resume so that they can share it with whoever they want when looking for other jobs."
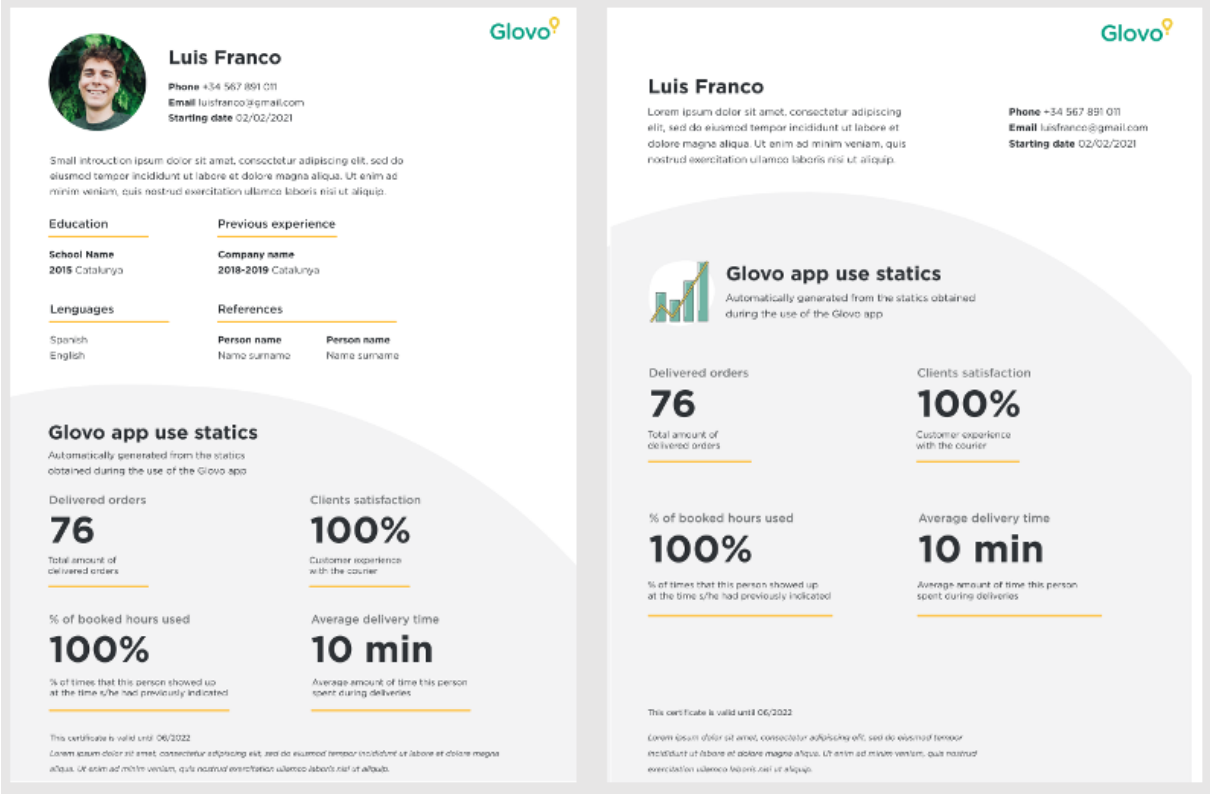
An example of the Glovo certificate

Another initiative that approaches this issue from a completely different angle is that of taxi app Uber in the Netherlands in 2020. During the COVID-19 crisis, it became clear to Uber that there was a great reduction in the number of requests for taxi rides. In order to help their drivers find work in other sectors, Uber developed a system that allowed their platform workers to download a performance overview. It listed the number of rides ridden by the driver, the average customer rating, compliments, and a description of the competencies required for being a driver. Adecco developed a dedicated job portal[46] where Uber drivers can search, select and apply for jobs that match their profile. The performance overview serves as a starting point for exploring their opportunities on the labor market and can be used in the reference check phase when they are in an application process.

In the end, 400 Uber drivers in the Netherlands downloaded this performance overview. An interview with the Adecco staff member who was responsible for this cooperation indicated that the performance overview did indeed yield employment

[46] https://www.adecco.nl/info/uber/

interviews with the drivers. However, it is unclear what the impact of the overview was on the employability of the driver.

4.8. Vision and point of view of the platforms

How do the platforms feel about the sharing of reputation data? During the workshop that I organized on October 5, 2020, it became clear that all 13 representatives of platform companies were positive about the plan to make reputation data portable. The questions that arose primarily regarded the practical implementation, the relevance of the data for the worker, and the matter of which data should be shared.

The platforms are aware of the benefits that the sharing of data represents for their own business. The more data a platform can collect about its users, the better it can match supply and demand. The subject of reciprocity also arose. As a participant remarked: "The benefits must outweigh the costs. I am willing to share recommendations, but not to proactively send candidates to other platforms. It's fine with me if the candidates want to register with another platform, whereby they have the option of importing data from our database, but the initiative must remain with the candidate."

Of note is the primarily constructive attitude of the platforms. In the appendices to this research, the reader can find a complete report of this workshop.

5. Preliminary conclusions

Much of what has been said regarding the sharing of data and the impact this has on the platform worker is based on assumptions. Nonetheless, by now we know more about this topic.

The main question of this research is how the portability of reputation data can contribute to the employability of platform workers on the labor market, both within and outside the gig economy. In order to answer this question, the following insights from the previous chapter are relevant.

From the perspective of the platform worker
The first part of this report shows that platform workers are positive about the concept of transferring their data to other employers or customers, both within and outside the gig economy. It is important to note that it is not yet clear for the platform workers how this will affect their chances on the labor market. This will have to be studied in practice.

Perspective of the customer
Imported data can contribute to the confidence a customer has in a platform worker. It is important to note that this is particularly the case for platforms in which the customers handpick their own platform workers. Furthermore, an imported score will particularly be of added value for the first couple of transactions. As soon as a platform worker has accumulated reputation and transaction data on the platform, the added value of the imported data will lose its importance.

The value that transferring data might constitute for employers or customers outside the gig economy is still unknown. There are other variables of importance in this situation; for instance, certain matters - such as scarce or excess supply in the labor market, or the risk of termination should the customer not be satisfied - will always play a role in the choice that the customer makes and the risk they are willing to take.

General points of attention
The system of portability of reputation and transaction data must be secure. Practice has shown that collaboration with the platforms is essential. This type of collaboration should preferably be (semi) voluntary. The value of the data, after all, also depends on presentation and standardization. There are still too many questions to be answered before this can be put into legislation.

It is important to involve all stakeholders from the beginning of the process. With this, I mean both platforms and perform workers. When developing a digital CV, also parties such as the UWV (the Dutch Employee Insurance Agency) and employment bureaus should be involved. After all, they must recognize this document.

When sharing reputation and transaction data, quality and privacy must also be ensured. Furthermore, it would be best to start by focusing on simplicity and choosing a clear niche, such as, for instance, transactional platforms in the gig economy. In order to comprehend the dynamics, it would be wise to accompany the development of the solution or standard with scientific research.

The first part of this research focused on the transfer of reputation data, whereby it was pointed out several times that it is important to combine this data with more objective data. Many experts are also in favor of adding skills. Therefore, this report has been extended upon with an exploration of the added value of skills in the context of the portability of reputation and transaction data, now and in the future.

PART 3:

the future of reputation and transaction data in the labor market

During this research, I not only focused on the practical applicability of data portability in the present, but also on the possibilities for the future. In this chapter, I look into the role of a digital CV and reputation and transaction data in the labor market. I studied under which circumstances reputation and transaction data are of value for the worker. The input for this part is provided by a variety of interviews with experts and the workshop 'Skills in the Gig Economy' that I organized in February 2020.

6. Skills in the gig economy

The central question during the workshop was how a platform worker use gigs they carried out via platforms to provide proof of experience. The workshop also looked into how skills can generate a next gig or job. The term 'skills' covers all types of professional proficiencies. From technical competencies (hard skills) such as driving, selling and cooking, to so-called 'soft skills', such as social skills, creativity and problem-solving skills.

At the moment, the reputation data of platform workers is often limited. In order to enrich this data, it would be valuable to be able to automatically register the skills a worker has used. This would also help platforms offer workers gigs in a variety of sectors. For instance, if a platform worker has good sales skills, this could be of use both in a store as well as in a call center.

The Flemish software Company Actonomy is currently working on this[47]. Actonomy's software analyzes profiles and converts these into terms that are used in recruitment texts. Furthermore, their software adds information that the candidates themselves do not write down, but that the system can deduce from the text. CEO Filip De Geijter remarks: "We know, for instance, that maintenance technicians have skills that are also useful in other jobs. Based on the analysis that you can do A, the system deduces that you can also do B. By constantly analyzing recruitment texts and candidate profiles, the system learns the deeper meaning of words. Furthermore, the software creates connections between the various types of jobs."

This way, Actonomy hopes to come up with a solution for the mismatch between supply and demand. Recruiters such as Adecco, Accent and Job Leads use this software. De Geijter adds: "You can also use this technology to analyze the gig that is being offered on the gig platform."

[47] https://www.actonomy.com/

In the Netherlands, the UVW is working together with the Central Bureau for Statistics (CBS) and the TNO on a so-called 'skills ontology'; a self-teaching system aimed at creating a better match between supply and demand on the labor market. Belgium already has a system that matches skills with professions; CompetentBE. A Dutch version, based on this system, is being developed in the Netherlands[48]; CompetentNL. It would be interesting to explore how this type of system can be used in gig economy platforms to enhance profiles.

7. Skills passport and career wallets
Aside from CompetentNL, TNO is also working on a project called 'skills passport'[49]. This is an alternative type of CV that is not based on training, diplomas and work experience, but on what a person really can do. The idea is for the worker to develop a personal safe containing their skills, work experience and diplomas. This will allow them to target the data they share towards potential employers.

TNO is working together with, among others, the Rabobank, as the bank already for some time now has been focusing on a similar project; the so-called Career Wallet[50]. This blockchain app has the same aim as the skills passport; to contribute to the labor mobility of employees in the Netherlands. KPMG writes[51]: "The Career Wallet is a system that puts the employee (worker) central, and not the employer. The Career Wallet is a personal environment in which the employee manages their own data and where necessary and possible, shares this with external parties such as (potential) employers. The employee is in control. Diplomas, certificates and a lot more can be downloaded into the Career Wallet and added to the solution. The solution verifies that the data originates from the source. You yourself decide where the data is retrieved and how long this data is stored."
In this sense, it is a sort of 'work passport' that facilitates the switching between jobs, projects or gigs.

8. The role of companies in the gig economy
Platforms appear to be the ideal environment for working with a skills passport. To start with, because they are 'digital first'; they already focus on data and automation. Also, compared to traditional intermediaries, they pay more attention to facilitating rather than to the ownership of data and a candidate; a notion that is still quite active in the traditional employment intermediary sector. Furthermore, platforms can keep the problem small. They don't have to map out the entire labor market, but can start

[48] https://www.samenvoordeklant.nl/praktijk/een-verbindende-taal-voor-arbeidsbemiddeling-competentnl
[49] https://www.tno.nl/nl/tno-insights/artikelen/waarom-een-skills-paspoort-nu-echt-hard-nodig-is/
[50] https://www.hrpraktijk.nl/topics/verandermanagement/nieuws/de-hr-podcast-afl-21-rabobank-hr-innoveren-een-hub
[51] https://home.kpmg/nl/nl/home/insights/2021/06/career-wallets-een-win-win-en-een-no-regret-move-voor-de-arbeidsmarkt.html

with their own niches and expand from there to other sectors. Additionally, these platforms need this innovation. If rating and review systems allow platforms to deduce skills from reviews and project descriptions, this will give them more added value when matching supply with demand. Also, a digital CV is cost-efficient, particularly for platforms who match workers to small gigs. In the case of longer projects, it would be logical to conduct selection interviews with the candidates - for shorter gigs such an interview would be too costly, both in terms of money and time. Automation can solve this.

It would not be logical to try to come up with individual solutions for the gig economy, because career wallets are already being developed. It really is not in the interest of platforms to invest in the development of such a costly and complicated construction. It would be more practical and logical to adopt existing solutions when it comes to the set of agreements and standards.

9. Preliminary conclusions

In the previous chapter, I discussed the role a digital CV, as well as reputation and transaction data, could play in the labor market in the future. Addressing this will help develop a more sustainable answer to the main question: "How can the portability of reputation data contribute to the employability of platform workers in the labor market, both within and outside the gig economy?"

The advantage of skills
This exploratory research has shown that experts expect that the adding of skills to reputation profiles will create a lot of benefits. In the first place, for the platform workers. This will give them access to a variety of jobs, both via platforms as well as in the traditional labor market. It will also benefit platforms. In the future, companies that are active in the gig economy will start to focus more on sectors, while the diversity of gigs within sectors will also increase. By adding skills to profiles and requests, matches can be made in many more sectors.

As skills are added to the reputation and transaction data of platform workers, this will contribute to the employability of a worker in the labor market.

Advantages
An important condition for this conclusion is that employers and customers search for people based on skills. Furthermore, the platforms must find ways to distill skills from the project / gig description, include skills when creating a project / gig description, and add skills to project / gig categories.

PART 4:

from research to pilot

In this report, I looked into the variables and problem definitions when it comes to the portability of reputation data. I mapped out how a system of portability could look. Exploratory research has shown that platform workers are positive about the concept of transferring data and that a transferred rating contributes to the confidence potential customers have in the worker.

Many questions remain, however. For instance, how can a platform worker decide how they feel about the transfer of data if they don't know the impact it will have on their position in the labor market? How do you determine the impact of a digital certificate if you don't know how employers value it? And how can an imported score be presented in such a way that it delivers an optimal contribution to the confidence a customer has in the platform worker? Furthermore, it is not quite clear yet how a portability system works in practice.

The good news is that these questions will not remain unanswered, but will be explored during the second phase; the pilot phase.

10. The development of a pilot

The original plan was to decide whether a pilot should be developed *after* this exploratory research had been carried out. However, as it became clear during the workshop of October 5, 2020 that the willingness of platforms to focus on this was great, I decided not to wait. Since then, six Dutch gig economy platforms (Charly Cares, Helpling, Level.works, Roamler, Wiertz and YoungOnes) have become involved in the development of KlusCV / GigCV[52]; a new standard with which gig economy platforms can share reputation and transaction data with platform workers. The emphasis is on objective, factual transaction data, to which minimal information from reputation systems has been added. This in order to avoid that undesired and uncontrollable effects are exacerbated.

GigCV allows workers to transfer their experience in the platform economy to other employers and customers. The project is supported by various knowledge partners when it comes to technology, design and legislation. In order to guarantee quality, to find answers to remaining questions and to present this knowledge in scientific literature, I am working together with researchers from four different universities; the University of Twente, the University of Utrecht, Einstein Center Digital Future and the Wissenschaftszentrum Berlin für Sozialforschung (WZB).

[52] http://www.gigcv.org

The focus is on validating assumptions and ensuring simplicity. Based on this, GigCV will become a set of agreements with standards in combination with joint branding. After all, it does not make sense to come up with rules and to invest in technology without knowing that this will lead to the desired results. We are therefore developing only essential technology.

The first phase will kick off in December 2021. From then on, the participating platforms will offer their users the option of exporting a digital CV in PDF form. With the press of a button, platform workers can download their data. This digital CV will contain the number of transactions, ratings, sectors, customers, and sometimes written reviews and applied skills. Besides that, a paragraph with skills needed to do platform work will be added to the PDF:

Working via a platform requires specific skills. While carrying out their gig, [name gigworker], who acquired this gig via [naam platform] has demonstrated the following skills:

A flexible work mentality, as platform work often requires the mental capacity to quickly adapt to work circumstances on a very short notice.

This type of work also demands independence when taking on projects, setting conditions, and planning the work - as well as ensuring good and healthy working conditions.

Finally, in order to carry out platform work, the worker must have demonstrable digital and marketing skills. Platform workers know how to present themselves online (i.e. build an online profile), read and write, as well as communicate effectively with potential clients.

In the next phase, it should be made possible for the various gig platforms to import data. The exchange of data will follow later, as the platforms will have to decide for themselves if and how they wish to integrate this in their systems. Furthermore, for this next phase, I am looking to work together with, and arrange financing from, institutions. The development in the first phase has been made possible by the platforms, knowledge partners, and myself - however, more support is needed for the next development stage. In the next phase it would be also interesting to find a way to add skills to the GigCV.

11. Research

Parallel to the development and validation of GigCV, various scientific research projects are being carried out. The first research was a survey that provides insight into the vision platform workers have regarding digital certificates and the portability of data. This survey was carried out in the spring of 2021 and the preliminary results have been included in this report. This research tests assumptions regarding data portability that were presented in aforementioned reports.

The second research regards an online experiment focusing on the impact of an imported reputation on the confidence of a customer. Do imported data increase the confidence of a customer? Does an imported score increase the chances that an employer or customer will hire a platform worker? This research was carried out in the summer of 2021. The preliminary results have been included in this report.

In 2022, research will focus on the impact of a GigCV on the employability of a worker in the regular labor market. The focus is on workers who do not have easy access to the labor market. This research will be made possible by a financial contribution made by NSVP (Nederlandse Stichting voor Psychotechniek) and SBCM (Kenniscentrum en Arbeidsmarkt- & Opleidingsfonds voor de sociale werkgelegenheid). Platform workers who download the GigCV are invited to fill out a survey. In order to determine to what degree they actually made use of this CV, the platform workers will receive a second survey a year later.

12. Expansion

Once the GigCV pilot has been launched, it will become available for all gig economy platforms. The ambition is to connect 10 to 15 Dutch job platforms to the GigCV standard by 2022. Ultimately, the intention is to roll out 'GigCV' internationally. To gain new insights about sharing data with the user and to present an example case that will inspire others to build on.

Conclusion

This exploratory research focused on the following central question:

"Can the portability of reputation and transaction data contribute to the employability of a worker in the labor market, both within and outside the gig economy?"

In an aim to answer to this question, I consulted literature on this topic, conducted interviews with 38 specialists on this topic, organized two workshops and actively participated in the international debate regarding the sharing of reputation and transaction data.

Willingness and potential benefits
The exploratory research showed that platform workers are open to the idea of transferring their reputation and transaction data. The preliminary results of an experiment with customers on platforms shows that imported data contributes to the confidence a customer has in a platform worker. At least for the first couple of transactions in which the customers handpick the platform worker. In the case of an automatic match, as is customary for meal delivery services and taxis, it is less likely that an imported profile will contribute to this confidence. After all, it is not the customer, but the algorithm that makes the choice.

Practical implementation
It would be best to set up a system for sharing reputation and transaction data in collaboration with platforms. This is evident from the analysis of failed initiatives created for the purpose of sharing reputation and transaction data. The question then arises as to how to secure this system. Should it be part of the public infrastructure, or should it be left up to the market?

Putting the development into perspective
The transfer of reputation and transaction data fits in with the trend of career wallets. Multiple parties develop a type of digital safe in which the worker can manage their own relevant data. Another trend that the gig economy platforms can join, is the making of matches based on skills instead of diplomas. The platforms are entering more and more sectors, which offers the opportunity to match supply and demand in multiple sectors.

With this research, I explored the issue of portability of reputation and transaction data for platform workers. I did this together with various public and private partners.

This exploratory research has generated better insight into the subject, variables and success factors. Furthermore, this report shows how the sharing of reputation and transaction data fits into the development of the labor market.

The research and accompanying activities have generated an essential contribution to the understanding and awareness of this subject. Furthermore, this research inspired the realization of a first concept towards collaboration with six gig platforms and other partners. This pilot, in combination with the research, will once again generate valuable insight into the subject that until then will primarily have been discussed on the basis of theories and underbelly feelings. The aim is deliver a contribution to a sustainable and more inclusive (platform) labor market.

Acknowledgments and words of thanks

About the author

Martijn Arets is an entrepreneur and international platform expert. Intrigued by the possibilities offered by online platforms and driven by curiosity, he has been researching the rise of the platform economy since 2012. This has led him to interviews with more than 500 participants in 16 countries.

With his own company, Professional Outsider Consultancy, Martijn shares his knowledge through presentations and advice. Furthermore, he initiates his own research projects, whereby which he, as a 'professional outsider', brings together partners who share his interest in, and curiosity about, a variety of topics.

Joining the debate as an independent voice allows Martijn to contribute to a variety of studies and to illustrate the developments surrounding the rise of online platforms. He has set up the platforms www.deeleconomieinnederland.nl and www.platformwerk.nl in order to demonstrate the scope of the platform market to a larger public, while for six years he has shared context on the debate regarding platforms in his Dutch weekly newsletter. Martijn is a bridge builder who brings together stakeholders, in order to focus the debate and make it more constructive.

Martijn lives in Houten, together with Jannette and their three children Joep, Sophie and Anna.

APPENDICES

Platform entrepreneurs are willing to start working with data portability

Dutch entrepreneurs in the platform economy want to make it possible for users to transfer their reputation data to other platforms. But before this can be done, practical issues must be resolved. "Our flex workers are truly central and if it helps to share data, then we should facilitate this."

At least 13 Dutch representatives of platform companies in the gig economy want to start working with the so-called portability of reputation data. They announced this during a meeting on this topic in Seats2meet Utrecht.

"The idea is a good one, however there are some practical objections," says Wiggert de Haan, co-founder of Roamler. This is a good summary of how the entrepreneurs at this meeting feel about this topic.

The platform companies came together in Utrecht in order to discuss - together with a dozen scientists, policy makers and other experts - under what conditions data portability constitutes added value and how such a system should be set up. The context was made clear through presentations given by Jeroen Meijerink (University of Twente), Timm Teubner (Technical University of Berlin) and Matthijs Ros (Innopay). The meeting had been arranged on the initiative of platform expert Martijn Arets, who is carrying out a large-scale investigation into the portability of reputation data. Arets remarks: "This is a hot issue; everyone is talking about it and everyone has an opinion on it - however, nothing clear has been developed yet. This is something I want to tackle together with the stakeholders."

Reputation as CV
Generating confidence is an important issue for everyone who wants to do business online, which is why online reputation is essential. If a hundred people who have gone ahead of you write down that their experiences with a certain rental company or freelancer is positive, then your expectations of working with these parties will be positive.

Currently, workers have to build up their reputation from scratch on each different platform. Even though, for years now, you have been known as a reliable seller on

eBay, if you decide to sell your car on Snappcar, you will have to prove yourself once again. Wouldn't it be convenient to be able to transfer your reputation data from one platform to the other? Or to use your data as a CV in order to pursue better opportunities outside the platform market, on the labor market?

The first step

Yes, say the Dutch managers of gig platforms; platforms that mediate in supply and demand of short (one-day) gigs. They can definitely see the advantages. Uber has even taken the first steps, says Nick Hilhorst. He is Head of Northern Europe Policy for this well-known platform.

"During the COVID crisis, we could see that drivers were receiving far fewer requests for rides," he says. "In order to help our drivers, we tried to both stimulate demand as well as look at how we could help them find work in a different sector. We made it possible for them to obtain a performance overview. This contained the number of rides they had done, the average client rating over the last 500 rides, compliments, and a description of the skills that are necessary to be a taxi driver. This overview is recognized by employment bureau Adecco, who use it to help the drivers find work." You can read more of this in the white paper Honest Work (Eerlijk Werk)[53].

If the user wants it

"If it contributes to the labor market and income position of workers, then I definitely see the advantage of making our platform's reputation data transferable," says Pim Graafmans of freelance platform YoungOnes.

Stijn Verstijnen of the Deliveroo delivery app remarks: "It doesn't seem quite relevant for our platform at the moment, because we barely work with ratings. But if it were to turn out that it could benefit our users, for instance because it would help them find a job in another sector, then it would become interesting. If it is in the interest of our user, then it is also in our interest."

Also Roderik Kuster of the Sjauf driver app wants to facilitate it, he says. "Our flex workers are truly central and if it helps to share data, then we should facilitate this." Wiggert de Haan of Roamler is also positive about it, though he points out that one should give thought to what type of information categories you create. "We must first look into how this model works. There is little point in printing out a PDF, unless parties such as the UVW and Randstad are willing to recognize it."

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[53] https://blogadmin.uberinternal.com/wp-content/uploads/2020/09/Uber_White_Paper_Eerlijk_Werk.pdf

Freedom of choice and competition
During the workshop, the experts, scientists and entrepreneurs also discussed how a system for transferable reputation data should be set up. Which type of data lends itself for transfer? Is the user allowed to choose for themself which ratings they transfer? Should this be left to the government, the market - or should an independent entity (a 'reputation data cooperative') be created?

How about the situation of competing apps and the exchange of reviews? Reinier Vastenburg of the digital employment bureau NowJobs says: "We invest a lot of money and time in adding relevant data and references to CVs. This is the added value of our company. I am not hugely enthusiastic about simply linking something we have created - two years down the road from now. That is something that complicates this discussion."

Uber recognizes that this is a sticky topic, says Hilhorst: "We are happy to share data if it helps our users. But the question is: What do you share and why? If a driver requests a performance overview, then of course this is fine. However, from the point of view of privacy and competition, we are not willing to simply share a list of all Uber users. Furthermore, it is not yet clear from research whether the sharing of reputation data really benefits the drivers. Your rating, after all, does not influence whether you are offered a ride, the most important factor is your distance to the customer."

Other platforms do see the benefits for their own business. The more data a platform can collect about users, the better it can match supply and demand. Graafmans: "But this has to be reciprocal; the benefits must outweigh the costs. I am willing to share recommendations, but we do not want to proactively send candidates to other platforms. It is fine if they register with another platform and have the option of importing data from our database, however the initiative must always be with the candidates themselves."

Subsequent steps
Clearly, there is still enough food for thought. This workshop is the first in a series of three. In the second workshop that will start towards the end of November, the parties will come together again to discuss how reputation data can be linked to skills, in order to create a digital CV. The aim is for the parties to create the first version of this digital 'gig CV'.

Martijn Arets: "The greatest challenge will be to keep it simple, allowing us to get to work with it quickly and practically. Today, we have set the first steps towards

discovering for whom this can constitute added value, who should set it up and how a digital CV can generate more opportunities on the labor market."

This article was written by Claartje Vogel on the request of Martijn Arets. Earlier, it was placed on the project website and on ZiPconomy[54].

[54] https://www.zipconomy.nl/2020/10/platformondernemers-willen-aan-de-slag-met-dataportabiliteit/

From gigs to skills: this is how platforms can enhance CVs (and the other way around)

Creating matches based on skills instead of diplomas is the future, at least according to parties such as UWV and TNO. The platform economy can play an important role in this, as became clear during the workshop Skills in the Gig Economy.

In order to create a better match between supply and demand on the labor market, many of the larger organizations such as UWV, Rabobank and various international recruiters are looking for ways to enhance CVs with skills. They agree on the fact that technical competencies and social skills can tell you more about a person's suitability for a job than diplomas and titles.

During the online workshop Skills in the Gig Economy, UWV, TNO and the software companies SkillLab and Actonomy presented their solutions. The fact that it is a current and urgent theme was evident from the diverse list of participants. Platform entrepreneurs such as YoungOnes en Verloning.nl, employers, unions, researchers, and public organizations put on their thinking cap.

The workshop is part of a research product set up by platform expert Martijn Arets. He is looking into how the reputation and transaction data of gig platforms can contribute to the position of workers. Together with six platform entrepreneurs, he is also developing a 'digital CV': KlusCV[55]. During the workshop, Arets wanted to explore the role skills can play in this digital CV.

More matches thanks to a focus on skills
Labor market advisors Jeroen Schuil and Frank Verduijn of UWV explained that skills help match supply and demand. "That is why this topic is of great interest to us," Verduijn explained. "If we can make clear what a person truly can do, then we can link more jobs to this person. The fact that you are a good salesperson will come in handy both in stores and in a call center."

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[55] https://kluscv.nl/

According to researcher Joost van Genabeek of TNO, skills can tell you a lot more than diplomas or work experience. "The work experience of a salesperson in a multinational is very different from that of a salesperson in a small company," he explained. "A diploma is soon outdated, once you start developing as a professional."

Self-teaching systems and blockchain
The UWV is working together with the Central Bureau for Statistics (CBS) and TNO on the development of a self-teaching system that aims at better matching supply and demand on the labor market. This system will also form the basis of another TNO project: the 'skills passport'[56]. This is a type of alternative CV that is not based on training, diplomas and work experience, but on what a person really can do. "The idea is for the worker to be given their own safe in which they can store their skills, work experience and diplomas," says van Genabeek. "They can then target the data they share to their potential employers."

TNO is working together with, among others, Rabobank, as the bank already for some time now has been focusing on the similar project; the so-called Career Wallet[57]. This blockchain app has the same aim as the skills passport; to contribute to the labor mobility of employees in the Netherlands.

From skills to a career
Various software companies are also busy developing systems aimed at matching work seekers and employers based on skills. During the webinar, Christoph Bretgeld talked about SkillLab[58], which since 2018 has been developing software that 'translates skills into a career'. This includes not only jobs, but also short gigs, informal care for ill people and hobbies.

"People find it hard to identify their own skills," Bretgeld said. "We are inclined to think that our experience is not relevant - for instance, because we did not receive remuneration for it or because it was a long time ago. We are creating an app that distills a person's skills based on interviews. This helps you generate a complete CV, that you can match with a wide variety of tasks and professions with the help of artificial intelligence."

Another example is the Flemish software company Actonomy[59]. Recruitment companies such as Adecco, Accent and Job Leads make use of their software. CEO

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[56] https://kluscv.nl/
[57] https://www.hrpraktijk.nl/topics/verandermanagement/nieuws/de-hr-podcast-afl-21-rabobank-hr-innoveren-een-hub
[58] https://skilllab.io/en-us
[59] https://www.actonomy.com/

Filip De Geijter explained how his system analyzes profiles and converts these into terms used in recruitment texts. Furthermore, the software adds information that the candidates do not write down themselves, but that the system can deduce from the text. "We know, for instance, that maintenance technicians have skills that are also useful in other jobs," says De Geijter. "Based on analysis, the system discovers that if you can do A, you can also do B."

Being able to ride a bike versus winning the Tour de France
it is not enough to merely link skills to a project, remarked Bas van de Haterd. He is an advisor on the influence of technology on work. "In the technology that is now being developed, a skill becomes a 0 or a 1; you either can do it or you can't," he said. "That is not how the world works. Just because I can ride a bicycle, does not mean that I can win the Tour de France. And how long you have done something also does not tell you a lot. If that were the case, then - with my 25 years of experience behind the wheel - I would be a better racecar driver than Max Verstappen."

This is why he finds ratings and reviews on platforms so interesting. He mentions the platform Upwork, on which users are rated based on reliability, quality and communication. "You can definitely use such platform skills to show that you are also suitable for other projects," he says. "It makes little difference whether you received a positive rating on communication skills as an IT worker, a child sitter or a taxi driver."

Flexibility and equal opportunity
During the workshop, it became clear that the rating and review systems of platforms can constitute added value when creating matches based on skills, Martijn Arets concludes. "Precisely the combination of a diversity of gigs in combination with ratings truly tells you something about quality," he says. "It became clear, during the workshop, that these systems are only going to increase in importance. To big organizations, the future is about making matches based on skills. It can create a flexible labor market with equal opportunities." Gig platforms are the ideal place to start working with this type of digital CV, says Arets. "To start with, because they are 'digital first'; they already focus on data and automation. Furthermore, platforms can keep the problem small. They don't have to map out the entire labor market, but can start with their own niches and expand from there to other sectors. Also, compared to traditional intermediaries, they pay more attention to facilitating rather than to the ownership of data and a candidate; a notion that is still quite active in the traditional employment intermediary sector."

Furthermore, he emphasizes, these platforms need this type of innovation. A digital CV is cost-efficient, particularly for platforms that match workers to small gigs," he explains. "It is logical that a recruiter would want to conduct an interview with the manager that you want to put in charge of large change management project within your organization. But for a person who is to carry out one short gig via an app, this type of selection interview is much too costly, both in terms of money and time. Automation can solve this. A gig passport, based on skills demonstrated both in the labor market and on platforms will come in very handy in this type of situation."

This article was written by Claartje Vogel on the request of Martijn Arets. Earlier, it was placed on the project website and on ZiPconomy[60].

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[60] https://www.zipconomy.nl/2021/02/van-klussen-naar-skills-zo-kunnen-platformen-cvs-verrijken-en-andersom/