Exploring the HR management of crowdworkers: who does what?

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Specialization Human Resource management

Stefan Becking
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

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1st Supervisor: Dr. J.G. Meijerink MSc
2nd Supervisor: Prof. Dr. Tanya Bondarouk

Abstract

The rise of the internet allows organizations to make use of new ways of working, such as crowdsourcing. When using crowdsourcing, a task is outsourced by a requestor to an undefined group of people, called the crowd via an online platform. The fact that crowdworkers are not formally seen as employees of these platform, but are likely to still be managed led to the following research question: 'What HR practices are used for managing crowdworkers and who is responsible for executing these practices?'

In order to be able to answer this question, data was gathered by conducting an exploratory case study at a crowdsourcing platform active in the food delivery industry, called Food@home. Data was gathered by conducting interviews with platform representatives, such as the country manager, supply associates, rider support associates and crowdworkers. Next to these interviews, data was collected by conducting participant observations. These participant observations were done by becoming active as crowdworker for the platform and start delivering meals.

It became clear that a wide variety of HR practices is present within the Food@home ecosystem and the ecosystem all actors bear responsibility for the execution of these practices. Some interesting findings include; the selection process was found to be really short, to get to get crowdworkers on the road as soon as possible; training was delivered to restaurants but due to institutional pressures, crowdworkers did not receive real training; both restaurants and requestors have and influence on the job design of the task performed by the crowdworker; incentives were in used to get the crowdworkers on the road, and to keep them on the road. When coming back to the answer of the research question, it can be said that the actors together are responsible for the execution of those HR practices that are being used to manage the entire ecosystem.

Some important implications were found based on this research. It became clear that at this moment, laws with regard to crowdsourcing are missing in the Netherlands, in order to be able to get the most out of the crowdsourcing way of working it is needed to get clear laws on the matter. It became clear that HRM is no longer used to manage employees only, it was found that HRM is used to keep the entire crowdsourcing ecosystem functioning, making that it might be time to come up with completely new models to study the field of HRM, allowing for future research opportunities to what these models should look like exactly.

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Introduction

In a world where the use of internet keeps on growing (McCarthy, 2014), new possibilities arise almost every single day. Not only consumers want to be able to gain advantages of the internet, but also organizations want to make use of the possibilities that come along with this rise in internet usage. A good example of this enhanced use of the internet as seen from the point of view of organizations is the use of online labor platforms to enable crowdsourcing. Here, crowdsourcing refers to the outsourcing of activities to an undefined group of crowdworkers (Boons, Stam, & Barkema, 2015; Nakatsu, Grossman, & Lacovou, 2014). One of the most important differences compared to a traditional company lies in the fact that crowdworkers are not seen as employees of the platform, but the platform enables them to do a task or offer a service to those that request their service. As such, online labor platforms form an intermediate between demand and supply of labor, or put more practically, between a client that wants a job to be done by a so-called crowd-worker that offers his/her services via the online platform. Some examples of online labor platforms used for crowdsourcing purposes are Uber, Lyft, Snappcar Innocentive, and LEGO®Ideas.

Within traditional organizations, HRM is often seen as a vital part to organizational success (Astrachan & Kolenko, 1994). Previous research found that the use of HR practices depends on the employment relationship that employees have with their employer (Lepak & Snell, 1999). Although crowdworkers are formally not seen as employees of the crowdsourcing organization, the HR practices that are being used in traditional companies should also be used to manage crowdworkers. Similar to the HR practices that are used to keep 'normal' employees committed, it is important for crowdsourcing platforms to offer HRM to crowdworkers, as their commitment to the platform is vital for the success of the platform. Namely, if all the crowdworkers would leave, the platform would seize to exist

(Boons et al., 2015). Due to this fact, it is likely that HR practices also are applicable to crowdsourcing platforms.

Since the crowdworkers are not officially seen as employees of the crowdsourcing platforms, it is rather hard to put them under the scope of an HR manager or department. This leads us to the question, if the crowdworkers are not formally seen as employees, who should then be responsible for making sure the right practices are being used. During this research, the aim is to find an answer to the following research question: 'What HR practices are used for managing crowdworkers and who is responsible for executing these practices?' At this moment, a limited amount of research has been done on the HR practices used to manage crowdworkers as well as which actors are involved in implementing these HR practices. The outcome of this study is a model that describes the actors involved in the HR management of crowdworkers and in particular, which HRM activity is performed by which actor. For practitioners this research can help to get a better understanding of what should be done in terms of HR practices within a crowdsourcing ecosystem and who is responsible for executing the relevant HR practices. In other words, what can they expect other actors of the crowdsourcing ecosystem to do in terms of HR practices and what can other actors of the ecosystem expect from them in terms of HR practices.

Theoretical framework

Crowdsourcing

Crowdsourcing has been the topic of many different studies and has gained attention from researchers from various disciplines. This makes that multiple definitions for crowdsourcing exist. The crowdsourcing phenomenon has been described by various researchers. Howe

(2006) – who first coined the concept – states that crowdsourcing is a new way to find the labor that is needed for a certain task can be acquainted from a broader pool, and most likely it is cheaper than traditional employees. One sources the task out to an undefined crowd, where in 'regular' outsourcing, the party that is responsible for conducting a task is known. Kuhn and Maleki (2017) describe crowdsourcing as being a microtask that is sourced to the crowd with the help of crowdsourcing platforms, which are also named online labor platforms, whereas Doan, Ramakrishnan and Halevy (2011) talk about crowdsourcing platforms which are online platforms that make use of the crowd in order to tackle a wide variety of problems, or to offer a service to their clients.

In order to be able to study this phenomenon, it is important to understand the crowdsourcing concept. Therefore, I look into the commonalities across the definitions of crowdsourcing that are provided so far. A first commonality across definitions is that crowdsourcing is a process where a requestor is in need of a certain service or solution to a problem and broadcasts it on a platform. In order to be able to broadcast a request, he or she made an online account and the crowd (registered members) can either provide a solution or offer the service that was requested. By doing this, the crowdsourcing platform becomes some sort of intermediary between the demand for a service or solution to a problem and the supply of this same service or solution. In short, a request is put on an online platform by a requestor, this request is seen by 'the crowd', crowdworkers, and they can decide to either accept or reject the task that was given by the requestor, once the task is completed, or the service provided, the money that is paid by the requestor is send to the crowdworker that did the job, but this transfer of money goes via the platform.

A second communality across definitions is that crowdsourcing involves the outsourcing of selected tasks. As noted by Nakatsu et al (2014), different types of tasks can be outsourced to the 'crowd' (see Table 1). In their work, Nakatsu et al. (2014) made a

distinction between well-structured and unstructured tasks, independent or inter-dependent tasks and lastly, there is a distinction made regarding task commitment. In the case of a well-structured task, the task is fully described, hence the crowdworker knows what is expected by the requestor. On the other hand, a task can be unstructured and in that case the requestor is most often looking for creative, innovative solutions. In the case of an independent task, one person is responsible for completing it. In the case of an interdependent task, crowdworkers have to work together in order to be able to complete the task, of which they all tackle a smaller piece and in order to successfully complete the task. The commitment refers to the amount of resources (like time and money) and effort one needs to put into the completion of a task, in order to complete it successfully. In this research, the focus will be on independent, well-structured tasks that ask for high commitment. The choice to conduct research on this type of crowdsourcing task was made because the employment relationship has been criticized a lot in the press, making it important to conduct research on the HR practices involved in the management of the crowdworkers. Based on these different dimensions, crowdsourcing is defined in this research as: "the outsourcing of a specific, independent, high commitment task in the form of an open call to an undefined crowd of people with the use of an online platform.''

	Independent Tasks (Individuals)	Interdependent Tasks (Virtual Communities)
Well-structured Tasks (The solution to the problem is well-defined.)	**I. Contractual Hiring** *Low Commitment:* • Human intelligence tasks • Crowdsharing marketplaces *High Commitment:* • Online employment platforms	**II. Distributed Problem-solving (Additive/Pooled Coordination)** *Low Commitment:* • Geo-located data collection • Distributed knowledge gathering • Crowdfunding
Unstructured Tasks (There is no known or well-defined solution to the problem.)	**III. New Idea Generation – Solo** *Low Commitment:* • Consumer-driven innovation *High Commitment:* • Online problem-solving platforms • Contests	**IV. Collaboration (Reciprocal Coordination)** *Low Commitment:* • Real-time idea jams *High Commitment:* • Open source software development • Open source design of hardware • Open content projects

Table 1: crowdsourcing taxonomy (Nakatsu et al 2014, pp829)

The crowdsourcing ecosystem

One should understand that a crowdsourcing ecosystem needs (at least three) different actors to function, this is important since the focus of this research is on the HR practices present within the crowdsourcing ecosystem and the actors responsible for the execution of these HR practices. A crowdsourcing platform needs the ecosystem in order to be able to function. Together the different parts can make it work, but on their own the different actors cannot make it happen. Crowdsourcing involves interaction between different actors. Breidbach and Brodie (2017) came with a solid theoretical framework that shows the different actors that are needed in the crowdsourcing. An adaption of this model can be is shown in figure 1.

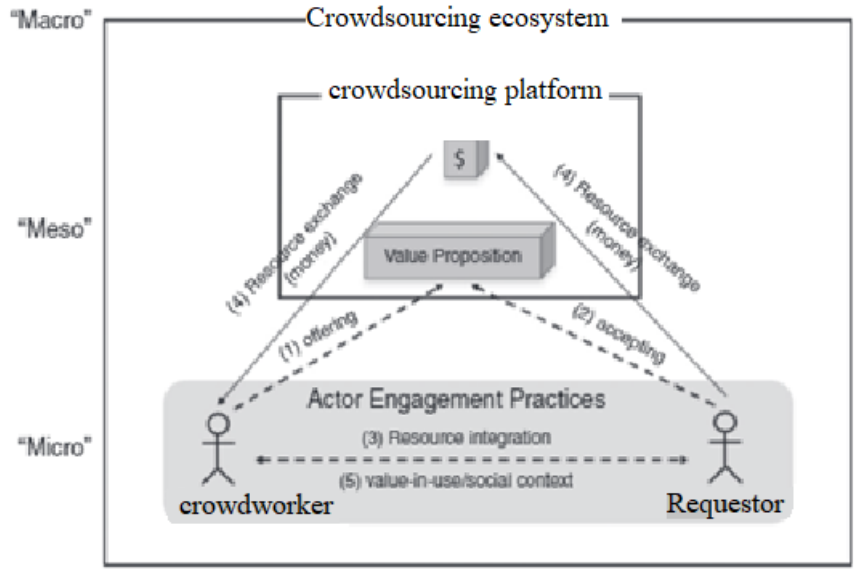

Figure 1: the theoretical framework of the crowdsourcing ecosystem, adapted from Breidbach & Brodie (2017).

On the left, one can find the crowdworker, which is in fact the one that delivers the service or completes the task given, this can be one person or a group of persons. The crowdworker is an individual who is active on crowdsourcing platforms in order to complete tasks. On the other side, there is the requestor. The requestor is the person, or group of persons that want a task to be completed. The requestor put the request to complete a given task on the platform. Lastly there is the crowdsourcing platform, which forms an intermediary between the crowdworker and the requestor. It is the matchmaker between the demand by the requestors for the fulfillment of tasks and the supply by the crowdworkers to supply the requestor with the service they requested.

When these actors come together, they form an ecosystem that forms the basis of a crowdsourcing process. There is an interaction between the different actors and they exchange services, time and effort for things like money. One can accept or reject requests and if the request is accepted and completed, money is transferred from the requestor via the platform to the crowdworker. It is important to realize that although it might look like the crowdworkers

are employees of the platform, they are not formally seen as employees of the platform. According to the International Labour Organization, one can talk about a legal link between the employer and the employee if one performs a task and is compensated for doing this task (International Labour Organization, 2011). The ILO states that due to the changing working environment, it can become vague whether an employment relationship is still present in the case of crowdsourcing or not. This makes it clear that it is becoming vague when one can speak of an employment relationship and when one cannot speak of an employment relationship anymore. Others, however, suggest that crowdworkers are described as independent contractors and they are considered to be freelancers, although some of these firms (crowdsourcing firms) exercise significant control over their work conditions and compensation (Kuhn, 2016).

HR practices

Although, crowdworkers are not formally seen as being employees of the crowdsourcing platform, as was noted by Kuhn, (2016), they are of vital importance for the existence of the crowdsourcing platform. If the crowdworkers would all leave the platform, the platform will cease to exist as there is no one that can fulfill the requests set by the requestors. Because of the usage of HRM within traditional organizations for managing employees, it is assumed that HR practices are also used to manage crowdworkers. Where in 'traditional' organizations the HR department is responsible for executing the HR practices, given the fact that crowdworkers are not formal employees, it is assumed that within a crowdsourcing ecosystem, the different actors within the ecosystem are all partly responsible for HR. In this part the HR practices will be described and what they might look like for crowdsourcing platforms.

Within ‘traditional’ organizations, HR practices are used to manage employees. HR practices are likely to be focused on the abilities, motivation and opportunities of employees (Jiang, et al., 2012). In their study Jiang et al. (2012) identified eight practices: Recruitment, Selection, Training, Performance management, Compensation, Incentives, Involvement and Job design. In the study of Delaney and Huselid (1996) it was found that there was a positive relationship between the use of the right practices and organizational performance. In their study, Jiang et al. (2012) came with three HR domains that categorize the eight HR practices into three sets of HR activities, namely those that enhance the opportunities, abilities or motivation of employees to perform. Together the domains form an HRM system that helps to keep the employees committed to the firm. In order to make things visible, Table 2 gives an overview of the domains and their respective HR practices.

Opportunities	**Abilities**	**Motivation**
Job Involvement	Recruitment & Selection	Performance Management
Job Design	Training & Development	Compensation, Incentives

Table 2: overview of the HR domains and the HR practices belonging to those domains (adapted from Jiang et al, 2012).

In the work of Jiang et al (2012) the domains were described the following way. Opportunity enhancing HR is about the possibility for employees to use the skills they possess and the knowledge they gained in doing the job. The opportunity enhancing HR domain consists of the HR practices Job Involvement and Job Design. Jiang et al. (2012) described job involvement in the following way: ‘Job involvement is about being able to share information, and the amount of influence one has, this can include employee empowerment and whether or not employees have a voice.’ The job design was described by Jiang et al (2012) as: ‘Job design reflects the amount of freedom that is involved in a job and the possibility to influence the way a job is shaped.’

According to Jiang et al. (2012), ability managing HR is about the development of knowledge and learning new skills or get them present within an organization by selecting the right person for the job. The ability enhancing HR domain consists of the HR practices Recruitment & Selection and Training & Development. Recruitment and selection is about recruiting and selecting the right applicants for a job. Where recruitment is about communicating information about the job and organization to potential job-seekers that might have the skills needed within the organization (Jiang et al, 2012). In the work of Barber, 1998, recruitment was described as: "Recruitment includes those practices and activities carried on by the organization with the primary purpose of identifying and attracting potential employees (Barber, 1998, p. 5)." Selection is described by Jiang et al (2012) as picking those people that can be of the best value for the organization, given their 'potential' new task and/or skills and abilities. a second definition of selection was found in the work of Lepak and Gowan (2008), who described selection as: "The systematic process of deciding which applicants to hire (Lepak & Gowan, 2008, p. 184)." When looking at the HR practice of Training & Development, which is described by Jiang et al (2012) as: 'the skills of the people that are already present within the organization, they get to train their existing skills or the opportunity to develop new skills in order to get them to foster their job-performance.' In the work of Lepak and Gowan (2008) training is defined as: "The systematic process of providing employees with the competencies-knowledge, skills, and abilities-required to do their current jobs." (Lepak and Gowan (2008, p. 224).

Motivation enhancing HR is about ways by which an organization wants to stimulate and motivate their employees. The motivation enhancing HR domain is about ensuring the effort employees are willing to put into a task. This domain consists of the HR practices Performance management and Compensation & rewards as described by Jiang et al (2012). Performance management was described in the following way: 'Performance management

relates to the evaluation and appraisal of employee performance in such a way that in enhances their contribution to the overall organizational performance' (Jiang et al., 2012). In the work of Lepak and Gowan (2008), performance management was described as: "The process of: evaluating employee performance against the standards set for them and helping them develop action plans to improve their performance." (Lepak & Gowan, 2008, p 260) it became clear that giving feedback is part of performance management. Thus, making performance management not only about the performance evaluation, but also to share these insights with the involved employees. Compensation is a way to influence the motivation of employees, this can be done in the way of monetary as well as non-monetary rewards. As described by Lepak and Gowan (2008) who state: "Compensation, the monetary and nonmonetary rewards employees receive in exchange for the work they do for an organization (Lepak and Gowan, 2008, p.295)." According to Jiang et al. (2012), incentives are rewards on top of the ordinary compensation in order to give additional stimulation to the motivation of employees, they (incentives) can be based on short-term or long-term employee performance or based on certain achievements, they can be individual or team-based.

HR management of crowdworkers

In earlier research there has been some attention for HRM practices in a crowdsourcing environment. Some examples of previous studies and their findings will be outlined in the following section.

When talking about opportunities, one has the Job Involvement and Job Design. In the work of Breidbach and Brodie (2017), a nice example of Job Involvement was given in relation to Uber, where both crowdworkers and requestors receive information needed/relevant for their ride. The drivers receive information concerning new passengers and at the same time, those passengers receive information about the costs of their trip as well as the amount of time it will take the driver to arrive. In the work of Fieseler, Bucher and

Hoffmann (2017) it was said that the way in which a crowdsourcing platform is designed, can potentially limit the extent to which crowdworkers have a voice. When looking at the job design, or the autonomy for crowdworkers on how to design the task they are executing. Part of this autonomy comes from the possibilities for crowdworkers to be able to choose to accept or reject certain jobs. As described by Kuhn and Maleki (2017), if you as crowdworker would have the possibility to choose whether you want to accept or reject a certain job, you do have relatively high level of autonomy.

When talking about abilities, one can be referring to Recruitment & Selection as well as Training & Development. The abilities domain mainly focuses on individuals having the right skills needed to do the job. In the work of Dissanayake, Zhang and Gu (2015) it was nicely stated that making crowdworkers (partly) responsible for recruitment might be a good idea, as they might know people who are suited to become a crowdworker and have acquainted the right skills. With regard to abilities, it became clear that in order to be able to work for certain crowd-sourcing platforms, a person willing to become a crowdworker needs to have a certain level of skills in order to be allowed to apply to a platform (Kuhn & Maleki, 2017). In the case of Uber, for example, Dutch people that want to transport people for money need to have a 'chauffeurskaart' (Uber, 2018). Once a crowdworker is accepted to the platform, the platform will link him or her to certain requestors, based on their capabilities. According to Kuhn and Maleki (2017), however, there are platforms where the requestor can decide if he or she wants a certain crowdworker to do the job. Kuhn (2016) talks about the selection of crowdworkers by requestors as well as the allocation of crowdworkers to requestors by means of algorithms based on historical performance. When looking at the training and development of crowdworkers there is not much to be found about this subject in existing literature. However, in the work of Kuhn and Maleki (2017) some examples are shown as to what ways platforms share 'tips and tricks' to their crowdworkers. For example, Lyft used to encourage

their drivers to greet their passengers in a certain way and to ask them to sit in the front seat next to them. Furthermore, Uber gives their drivers tips on how to give the requestors the best experience by means of sending them messages. These, however, are all tips rather than fixed recommendations or requirements.

When one talks about the motivation, one is talking about compensation, incentives and performance evaluation. Crowdworkers mainly receive money for the tasks they have completed as a way of compensation. In the work of Breidbach and Brodie (2017) (see figure 1) the flow of money was visualized in a nice way, if a task is completed, the requestor transfers money to the crowdsourcing platform and the platform transfers the money to the crowdworker. If a crowdworker does not like the compensation he or she will receive for a job, he or she can reject a task, but for some platforms bonuses offered, if a certain percentage of requests is accepted. This might result in crowdworkers accepting offers they would normally not accept (Kuhn & Maleki, 2017). A nice example of a platform firm to offer an incentive to their crowdworkers, was given in the work of Nagesh (2016), who described a new service of Lyft, where drivers of the platform could rent a car. In the case that the driver would do more than 40 rides per week, he would not have to pay the usual 20 cent mileage charge that would normally come on top of the normal weekly rental fees of 99 dollars per week. In the case that a driver would do more than 65 rides per week, the rider wouldn't have to pay any money for renting the car, in that case, both the 20cent per mile charge as well as the weekly rent of 99 dollars would be waived by the platform.

With regard to performance evaluation, crowdworkers and requestors are often given a performance score via the platform and the possibility for platforms to constantly monitor the performance of the crowdworker. According to Boons et al. (2015), different ways of feedback mechanisms are present, with a focus on the individual performance, examples of ways in which performance is tracked are, rankings, activity overviews, and feedback by

other actors, also Kuhn and Maleki (2017) describe some nice examples of performance evaluation methods. For example, Deliveroo, where crowdworkers receive monthly performance reports. In the case of Uber, a driver is assessed by the acceptance rate as well as their cancelation rates, but also the requestor is able rate a driver once a ride is completed. Crowdworkers might be expelled from Uber's platform if their performance is below a certain threshold. In the case of Wonolo, well performing crowdworkers receive new tasks earlier than the average performing people, which gives them the opportunity to accept those tasks that they like and have a better chance in getting those nice tasks. In the case of Mturk, performance is based upon the percentage of tasks for which the client did pay them. Low performance can result in a lack of future job possibilities because of the way the platform is designed. It can be seen that it is no longer the firm(/employer) who is fully responsible for the HR management of crowdworkers, but others, like the crowdworkers are partly responsible for the execution of HR management.

Overview

As was explained in the previous section, the different actors involved in the crowdsourcing ecosystem are together responsible for the execution of the HR practices. In order to give an overview, in the next section the different actors will be explained in combination with their responsibility for the execution of HR practices as theorized.

When looking at the platform, it is responsible for the recruitment and selection of new crowdworkers as they set the minimum requirements in terms of skills needed to be able to work on a platform as was stated by Kuhn and Maleki (2017). Secondly, the platform is responsible for the selection of crowdworkers, in the work of Kuhn (2016) the example of an algorithm used to select crowdworkers was given. Thirdly, Kuhn and Maleki (2017) found that the platform provides crowdworkers with tips on how they could do their task or in which

way they can best please their requestors. Fourth, the platform is responsible for giving the crowdworkers the proper compensation, which is often done by getting the money paid by the requestors to the crowdworkers. The compensation process has been described by Breidbach and Brodie (2017). Fifth, the platform can hand out incentives to the crowdworkers if they match certain (performance) criteria which was nicely described by Nagesh (2016). Sixth, the platform can assess the performance, in general or crowdworker specific by different means which was described in the work of Boons et al (2015). Lastly, the platform can make or break the involvement. It depends on how much they want to involve their crowdworker and how they design the platform and the crowdworkers' tasks, as was found by Fieseler et al. (2017).

When looking at the crowdworker, there are some similarities in terms of HR responsibilities. Firstly, crowdworkers can be responsible for recruitment of new crowdworkers, as was stated in the work of Dissanayake et al (2015). Secondly, a crowdworker can either accept or reject a task given by a requestor, as was found by Kuhn and Maleki (2017). Thirdly, the crowdworkers can evaluate the 'performance' of their requestors. Also, with certain platforms, the crowdworkers themselves can influence their performance by accepting a lot of requests which was found by Boons et al (2015). Fourth, crowdworkers are likely to give (via the platform) and receive the information needed for the execution of a task, which was nicely described in the work of Breidbach and Brodie (2017). Fifth, crowdworkers are sometimes able to accept or reject a request as part of their job design; they have the autonomy to make these decisions, as was discussed by Boons et al (2015).

In a crowdsourcing ecosystem, the requestor also bears responsibility for the execution of certain HR practices. Firstly, a requestor is in some cases able to select a specific crowdworker for the completion of a task, as described by Kuhn (2016). Also, in the case of

multiple similar platforms, a requestor can select the specific platform (Uber vs Lyft) to his/her own pleasing, which is similar to the selection of a specific crowdworker, as described by Kuhn (2016). Secondly, a requestor can evaluate the performance of both the platform and the crowdworker, as was found by Boons et al. (2015). Thirdly, a requestor can give information which is relevant for the task to the crowdworker, in this way, they can influence the job design of the crowdworker, which was found in the work of Breidbach and Brodie (2017).

In order to get a better understanding of what the crowdsourcing ecosystem looks like, a theoretical model that was based on the one developed by Breidbach and Brodie (2017) is developed in order to be able to explain the different actions that take place. This model can be found in figure 2. Based on the existing literature it looks like the different actors involved in the crowdsourcing ecosystem are all together responsible for the implementation and usage of the different HR practices. The differentiation of this study with regard to already existing studies lays in the fact that with this study the entire ecosystems and all HR practices will be researched in order to get the bigger overarching picture

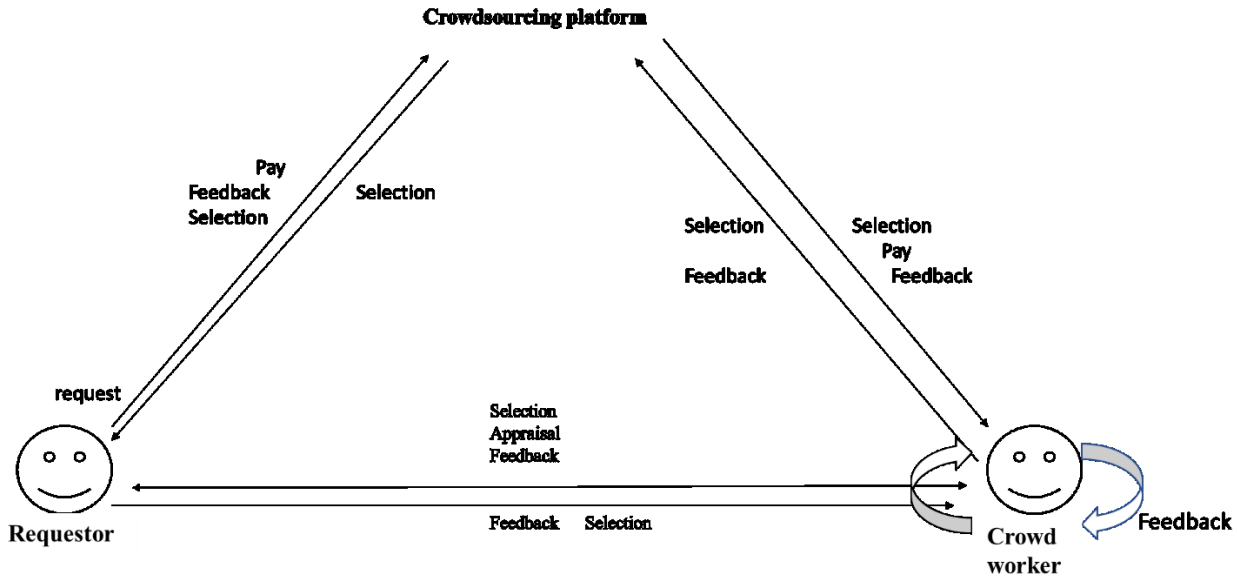

Figure 2: conceptual model of exchange processes involved in a crowdsourcing activity, adapted from Breidbach & Brodie (2017, p. 766)

Methodology

Research design

Based on the fact that limited information is known about the HR practices present within a crowdsourcing platform, the choice was made to conduct an exploratory study. Exploratory research is the best fit according to Kothari (2014) when searching for new insights. The limited amount of data with regard to HR practices in a crowdsourcing environment made clear that collecting new data was needed to find the practices that are present within a crowdsourcing ecosystem, but also to be able to find those actors of the ecosystem that are responsible for the execution of these HR practices. A good way to conduct exploratory research is a case study, because of the possibilities to conduct research on the case in its natural setting. One is able to compare findings from practice and existing literature and it also allows for collecting data from different sources (Yin, 1994). In this research the case that has been studied is crowdsourcing via the platform Food@home. By looking at the natural setting of the phenomena of HR practices in a crowdsourcing environment, in this case the HR practices used at Food@home, it is possible to see how the HR practices come to action in real live and what they look like in a real-life situation.

Data collection

The collection of data has been done by means of semi-structured interviews as well as participant observations. The interviews took place with platform representatives, such as the country manager, employees responsible for crowdworker support, and those who are responsible for the little tweaks the algorithm is not (yet) capable of to do on its own. Also, crowdworkers have been interviewed. The interviews took place at the office of Food@home in order to make sure to have the setting as close as possible to the natural setting in which the

platform is operating. The participant observations have been done by becoming a crowdworker for Food@home and get the real experience.

The reason for conducting semi-structured interviews came from the fact that the different interviewees have been interviewed only once, and thus conducting semi-structured interviews have been found to be the best way by Bernard (1988). This comes from the fact that with semi-structured interviews there is room to deviate from the guidelines. This possibility for deviation can be beneficial in the case that the interviewee comes up with issues/themes which can be valuable for the research, but the researcher did not think about in advance. The focus of the interview questions was on finding the HR practices that were present within the ecosystem as well as finding those actors that were responsible for the execution of these HR practices.

In order to select the right interviewees, some broad requirements needed to be passed. The requirements have been kept this broad in order to be able to select the broadest possible range of people with varying lengths of their (self-)employment at the platform Interviewees needed to have some experience in their work as crowdworker for the platform. The platform representatives needed to have knowledge about the use of HR practices within their organization in relation to the crowdsourcing part. The interviews mainly took place on an individual basis, for multiple reasons: Interviewees couldn't influence the answers given by others, and it would make the most sense logistically to conduct individual interviews as the task that is executed, is executed on an individual basis. All interviews were conducted in Dutch.

The choice to conduct interviews with both crowdworkers and platform representatives of only one platform was made because of the possibility to dive deep into the HR practices present within the crowdsourcing ecosystem and to see two sides of the story, which is also called data triangulation. Taking interviews with people from both sides also

allowed for getting the biggest possible picture of the way how HR is organized at Food@home. With data triangulation the goal is to see if two independent parties have a shared perception; In this case if the parties experience the same HR practices and responsible actors.

It is important to select the number of interviews that result in data saturation. According to Bernard (1988), Reaching the point of data saturation happens when adding more interviews will not gain additional insights next to the ones that are already gained. Because of the limited amount of time, it is important to find a balance between time spent and the amount of data saturation reached. During this research, a total number of twelve interviews have been conducted with thirteen persons. These included platform representatives, people who are currently active as crowdworker, and people who are still working as employee of the platform, as stated earlier. Out of the twelve interviews, seven interviews have been conducted with a variety of platform representatives with different functions. These were the country manager, an operation associate, an employee reponsible for the supply of new crowdworkers, engagement employees, and performance employees. Five interviews have been held with (former) delivery employees, of which some are currently active at the platform as crowdworkers. To get an impression of the interviewees, an interview overview can be found in table 3.

#	Name for reference	Actor within the ecosystem	Function	Interview duration
1	Emp1	Platform employee	operation associate	82 minutes
2	Emp2	Platform employee	supply	82 minutes
3	Emp3	Platform employee	Rider support	59 minutes
4	Emp4	Platform employee	Engagement associate	58 minutes
5	Emp5	Platform employee	Engagement associate	37 minutes
6	Crow1	Crowdworker	Rider	66 minutes
7	Crow2	Crowdworker	Rider	69 minutes
8	Emp6	Platform employee	Country manager	62 minutes
9	Emp7	Platform employee	Performance	54 minutes
	Emp8	Platform employee	performance	
10	Crow3	Crowdworker	Rider	29 minutes
11	Crow4	Crowdworker	Rider	30 minutes
12	Crow5	Crowdworker	Rider	42 minutes

Table 3: overview of interviewees and their respective function within the organization

The reason to do participant observations next to the interviews was made to be able to also see the HR practices come to work in real-life and thus not only hear about them, but also to be able to experience them in person. In order to be able to conduct participant observations, the decision was made to become active as crowdworker and by this being able to see how the process did work. During the observation, becoming a crowdworker enabled the real experience of the HR practices and how they are present in the entire process of becoming and being a crowdworker for Food@home. Notes were made during the process of becoming a crowdworker and after being active as a crowdworker.

Research context

During this research the HR practices present in at Food@home have been studied. The choice for Food@home was made because they are an interesting crowdsourcing platform active in the Netherlands. Food@home is a UK-based multinational company active in the food and beverage delivery sector in twelve countries and over 200 cities (Food@home, 2018), but for this research information was gathered via Food@home Netherlands, located in Amsterdam. In the Netherlands, Food@home is active in fourteen cities where they offer a broad range of food from a wide variety of restaurants to be delivered at your place and they

even deliver meals from a selection of restaurants at Schiphol Airport at this moment they offer meals from 1411 restaurants in those 14 cities (Food@home, 2018). The choice for Food@home was made because they are nowadays mainly working with crowd-workers, but in the past they used to have delivery employees, which can also make clear what they do different nowadays compared to the employee era. Understanding the way how the platform operates has changed can potentially lead to a better understanding of the responsibility of the different actors present in the Food@home ecosystem with regard to HRM.

Note: Food@home is a fictional name that replaces an existing organization, as the original organization wished to stay anonymous.

Operationalization

In this research the main variables are the HR practices and the role of the different actors of the crowdsourcing ecosystem in the execution of these HR practices. Therefore, it was important to make the HR practices measurable. In the first sections, the HR practices are operationalized and in the second part, the actors involved in the crowdsourcing ecosystem are operationalized.

As discussed in the theory section, three HR domains, consisting of eight HR practices in total are distinguished, including: ability-enhancing HRM (recruitment, selection, training and development), motivation-enhancing HRM (performance evaluation, compensation, incentives) and Opportunity-enhancing HRM (job design and job involvement).

Recruitment is about getting those people who are (potentially) willing to work for a platform as crowdworker to now about the possibilities of working with them. In order to obtain data on the recruitment of crowdworkers, questions were asked such as ‘How can people join the platform as crowdworker?’ and ‘Is the platform actively approaching people to join?’

Selection is about getting those people who are willing and able to work for the platform and make sure that they meet the requirements. People can talk about selection criteria and requirement. In order to obtain data on the selection of crowdworkers, questions were asked such as: 'Do crowdworkers need to fulfill certain conditions before they can enroll on the platform?', 'Do crowdworkers need to share specific information in order to be able to use the platform?' and 'Are there certain processes which are being used for the selection of people?'

With training and development, people can talk about workshops, courses or onboarding, to reach a higher level of skills or to keep knowledge up-to-date. When talking about onboarding, it is mainly getting familiar with procedures and rules that are company-specific. In order to obtain data on the training, development, and onboarding of crowdworkers, questions were asked such as: 'Do crowdworkers receive training, information and instructions when they start working for the platform?' and 'Who is responsible for the development of the crowdworkers?'

Performance evaluation can be based on real performance scores or the way how certain things work, for example an app, if it keeps bugging. Therefore, performance evaluation can involve the evaluation of the way how a job is done, or how good or bad, and potential areas where performance can be increased. In order to obtain data on the performance evaluation of crowdworkers, questions were asked such as 'Is the performance of crowdworkers being evaluated based on certain criteria?' with the follow-up questions being related to what the criteria look like and how this is done.

Feedback can be direct (from a to b) or indirect from a to b via c), one can give a comment on all sorts of fields, like performance, clothing, hygiene, waiting times, etc. In order to obtain data on feedback with regard to the different actors, questions were asked such as 'Do crowdworkers receive feedback regarding their performance after the completion of a

task?', Do requestors and the platform receive any feedback?' and 'By which means are crowdworkers being stimulated to give feedback?'

Compensation is about the reward one receives for the completion of a task, this can involve money. Compensation can be measured by the amount, per unit (piece, hour, week, month, year) or one can talk about salaries, in relation to compensation. In order to obtain data on the compensation of crowdworkers, questions were asked such as 'which ways of compensation is given to the crowdworkers for the task they take care of for the platform and its customers?' and 'Via which ways does the money go from the customer to the crowdworker?'

Incentives are bonuses one receives on top of the ordinary compensation. It can be bonuses, it can be tips, extras for working at the company. In order to obtain data on incentives the crowdworkers receive, questions were asked such as 'Do well-performing crowdworkers receive additional rewards?', Does the platform offer rewards in any kind to its crowdworkers?' and 'Are there other benefits the crowdworkers receive for working for the platform?'

Job design is about the way how a job is organized, whether employees have a lot of freedom when executing their job, whether there are certain guidelines that need to be followed in order to successfully complete a job. Is there room for deviation, and can they decide when they want time off. These are job design related issues. In order to obtain data on the job design of the crowdsourcing tasks, questions were asked such as 'What tasks are involved in the job of a crowdworker?' and 'To what extent do crowdworkers have the possibility to decide how and when they want to do their job?'

Lastly there is job involvement. This is about the amount to which employees have the possibility to have an influence when important decisions are being made. In order to obtain

data on the job involvement of crowdworkers, questions were asked such as ‘Do you have the idea that crowdworkers feel involved with their task?’ and ‘Does the platform organize activities to increase the involvement of the crowdworkers with their task?’ A complete overview of the questions can be found in appendix A1 and A2. All interviews were conducted by two or sometimes three interviewers.

For the observations, the focus was put on the selection/onboarding process, as this was a step that was necessary to complete in order to be able to start working as crowdworker for the Food@home platform. During the actual observation, the focus was mainly on Selection, performance evaluation, feedback, compensation, incentives, and job design.

Data analysis

Interviews have been recorded if permission for recording was granted by the interviewees. When possible, notes were taken. The recordings were put in writing by transcribing the interviews. The analysis of the transcripts was done by designing a coding-scheme. The initial coding scheme was a result of the theoretical framework; this is called deductive coding. the eight HR practices were coded along with the ecosystem actors. The deductive coding scheme can be found in Appendix B. Later other important items related to the research topic have been added based on the input given in the interviews, which is called inductive coding. To make sure that the coding was done in a proper way, one interview was coded separately by two coders, after which the intercoder reliability was calculated by means of Cohen’s Kappa for the longest interview and some revisions were made to the coding’s foundation. Analysis of this interview lead to a Cohen’s Kappa of 0.852, which indicates that the two coders where consistent in coding the interview transcripts. Based on these outcomes enough evidence was present to continue coding in this way.

After the observations, notes have been made, and they have been ordered in a similar way as by which the interviews have been coded. This means that the things that struck attention with regard to, for example, job design were all put together, but the same applies for the other focus points. With the observations it was possible to really see and feel what it was like to be active as a crowdworker for Food@home, and what HR practices were used on a day-to-day basis to manage the crowdworkers.

Results

The result section is divided into four sections. The first part will be a case description, the second first part will be about ability enhancing HR practices, the third part will be about the motivation enhancing HR practices, the fourth part will be about the opportunities enhancing HR practices. It became clear that a lot of practices were present within the crowdsourcing ecosystem that has been researched; these will be discussed in the oncoming sections together with the actor responsible for the execution of the HR practices.

Case description

Food@home is a company which is active in the food delivery industry. Food@home offers a platform where requestors can search for and find the meal they like. Food@home does not make any meals, but they act as the mediator between the requestors who select a meal from one of the listed restaurants and the meal that is then delivered to the requestor, mainly by means of crowdworkers. In order to make things clear, Food@home used to have delivery employees, but the company decided to shift towards a model in which they work with independent delivery contractors. Most of the employees made the change, but Food@home still has some (the number is unknown) Delivery employees. Because of the change from

being an employer with delivery employees towards a platform using independent contractors for the deliveries, Food@home has been in the news a lot lately. This was mainly because the question was raised whether the construction with these contractors is legal or not. The issue did even stroke the attention of Dutch politicians who are also unsure of the legality of this way of working. The transition lead to a couple of lawsuits by (former) delivery employees, which formed a large part of the recent news.

In the Food@home ecosystem, four actors are involved in the process, rather than the theorized three actors. These are the requestors, crowdworkers, the platform, and restaurants. The requestors, or the customers, want to order food, and they look for the type of food and/or the restaurant they want to have food from. There are the crowdworkers, who are mainly students, as was noted by one of the engagement associates, who collect the food ordered by the requestors at the restaurants and bring it to the customer. The crowdworkers can use either a scooter or a bike for their deliveries, depending on their own preferences and the ability to legally drive a scooter. The crowdworkers have the ability to 'buy' the basic gear which is needed to do the job in a specially designed Webshop at currently a 100% discount. At this moment this gear consists of a Food@home Jacket and a thermal bag to transport the food in such a way that hot food remains hot and cold food remains cold. There is the platform itself, which is basically a facilitator of the crowdworkers and the restaurants to be able to offer a service to the requestors; namely, enable the requestor to order food from a restaurant on the platform and get it delivered to the requestors' location within the boundaries of the zones in which Food@home operates. The restaurants can join the platform to generate more income next to those people who are really eating at the restaurant, as they can now serve their food to a crowd that is potentially bigger than the restaurants seating capacity; people using the platform to order food (the requestors) do not need a seat within the restaurant itself.

In short, a requestor puts an order out for food from a specific restaurant via the Food@home platform, the restaurants get to see the order, allowing them to prepare the meal for when the crowdworker comes to collect the food and delivers the food to the requestor. Food@home is the facilitator of this entire process; they connect the demand for food delivery at home by requestors from a specific restaurant and the supply of independent delivery contractors who collect and deliver the food from the restaurant to this very same requestor. In order to maintain both the supply and the demand in balance, HR practices such as compensation and incentives tend to change by the week, as was said by an operations associate of Food@home. Because of the way how the job is designed, crowdworkers are free to decide when or if they want to work with the platform, therefore one of the main goals of Food@home is to get new crowdworkers on the road as soon as possible after they subscribed to the platform to become a crowdworker. In the following sections the HR practices present at Food@home and the responsible actors will be outlined.

Ability enhancing HR practices

Recruitment

When talking about recruitment at Food@home, it became clear that multiple types of recruitment instruments are used. Food@home, the platform, is responsible for most of the recruitment activities. They make use of posts on different social media like Facebook and Instagram, which makes sense when taking into account the main group of crowdworkers that work with Food@home, which are students:

> *'The main target group, at which we mostly aim, are students.' (Supply employee Food@home)*

Next to the job ads, there are also ads meant to attract new requestors, but they also serve as a mean by which potential job seekers might think that working for Food@home could be an

interesting option for them to earn money. This is because Food@home is a well-known brand in the cities where they are active.

Another way of recruiting is that Food@home teams up with marketing agencies to come up with special campaigns like flyer actions in particular cities or the placement of seat covers on bike seats at a university. At the same time, the crowdworkers themselves are seen as ‘’living ads’’. As noted by one of the crowdworkers, if people see them cycling through the city wearing a Food@home jacket and bag, they might be encouraged to start as a crowdworker themselves, which was also how he got in touch with Food@home. Also, Food@home makes use of a referral incentive, which means if a crowdworker refers a new crowdworkers for Food@home both the existing crowdworker as well as the new crowdworker will receive an incentive if the new crowdworker has done a certain amount of deliveries.

> *‘I am going to refer my girlfriend, so she can also start working for Food@home […] I will then receive a bonus and she will receive a bonus too.’ (crowdworker Food@home)*

In short, the platform is the main responsible actor for recruitment, but they also make the riders responsible for recruitment by actively offering them the referral incentive and by having potential new crowdworkers see them cycling along the city wearing the company themed clothes and bags and they are teaming up with partners for special recruitment activities.

Selection

When looking at selection, one should be aware of the fact that not only crowdworkers are selected, but in fact also the restaurants available on the platform have to undergo some kind

of selection by the platform. In the case of crowdworker selection, the selection process is designed in such a way that the crowdworkers can start working as soon as possible.

Food@home is responsible for the selection, but due to institutional pressures Food@home is not allowed to select everyone they please. For example, people from outside of the European Union need to be in the possession of the right documents in order to be allowed to work here, as was nicely described by one of the interviewees.

> '*We need to check whether or not someone is allowed to work.' (Supply employee Food@home)*

Next to these document requirements, crowdworkers need to be able to speak either Dutch or English. Basically, these are the only two requirements that decide whether or not a person can be selected. When looking at the selection of restaurants that operate on the platform, it is rather important to select the right ones. Therefore, also selection of restaurants is taking place, as noted by one of the performance employees. Food@home wants to prevent that there is too much of the same sort of restaurants available on the platform.

> '*One needs to zoom into the details […] One can have 100 restaurants, but if out of these 100, 99 are pizzeria's and one Vietnamese restaurant, you have a lot of quantity, but almost no diversity,*' *(Performance employee Food@home)*

During the selection process, which a potential new crowdworker is guided through automatically after completing each step, the main focus is on onboarding rather than selection, as the criteria are very limited, as said before. The only purpose is to get those that do fulfill the requirements on the road as quickly as possible. When a new person wants to register as a crowdworker, they get to see some videos, with regard to safety and some explanation about the app that is needed to be able to work. Also during the process, which takes place either at home or at the Food@home office (this depends on the location where a

crowdworker would like to work), one is guided towards a web-shop where it is possible to purchase the needed gear. Some essentials like the thermal bag and a jacket can be bought at a 100% discount, but other gear can also be bought. In order to make the process as smooth as possible, Food@home uses an online onboarding tool which is called 'Fountain'. Fountain offers the possibility for support staff to find the exact spot where crowd workers are stuck and be able to help in the process of individual crowdworkers in order to guide them through the process and help when help is needed.

It can be said that selection is the main responsibility of the platform with regards to the go/no-go decision of crowdworkers and it is important to be aware of the fact that Food@home also selects the restaurants they allow on their platform. However, in most of the Dutch cities the crowdworkers might not be aware of this, as they go through the entire process by themselves.

Training and development

When talking about training and development at Food@home, one should understand that the possibilities to offer training and development to the crowdworkers who work with Food@home are limited because of limitations in the law. In the case that Food@home would offer too much of training and development possibilities to their crowdworkers, the government might see the fact that Food@home is offering training to their crowdworkers as an act that would imply an employer-employee relationship rather than a crowdsourcing platform-crowdworker relationship. Which is a pity as the goal of Food@home is to offer crowdworkers as much flexibility as possible, but for a lot of things this is rather restricted

> *'We would love to give explanation about the way how people need to do their taxes, but it is hard to give real training […] the government could come to us*

and say, what you are doing is wrong, what you do is implying an employer-employee relationship.' (Employee supply Food@home)

All the 'training' currently being offered by Food@home is actually part of the selection process. It is limited to the basics, all to make sure that others (labor union and government) are unable to imply an employer-employee relationship. The training that is currently offered to crowdworkers is a range of videos with regard to safety, cycling, minimal bicycle requirements and of course how the app that is needed to become a crowdworker for Food@home works.

All other things with regard to training have to be done with the help of an external party in order not to get this situation where the employment relationship is being questioned.

'*All we offer is embedded in the subscription process, where we give safety videos, that is on the edge, but we cannot give real instructions. Other things regarding learning and development need to be offered via external parties, we cannot give trainings ourselves.' (Employee supply Food@home)*

In the past, when Food@home still had employees as riders, new employees had to take a test ride in as on-the-job-training to see if they were suited to do the job, but due to the fact that Food@home changed the employment relationship due to the fact where they were shifting to working with crowdworkers, this was no longer possible.

'You had a test-ride, where you went with an experienced employee to see how the process works and after seeing one order, you could do the next order.' (Delivery employee Food@home)

Another important finding is related to the fact that, apart from the initial video's that are part of the onboarding process, and some extra videos on their online portal, there is no training

and development taking place, mainly because it would change the way how the employment relationship is seen by others, like the government and labor unions.

Motivation enhancing HR practices

Performance evaluation

Performance evaluation at Food@home is done in a lot of ways. The crowdworker has the possibility to evaluate the performance of Food@home, the requestor and the restaurant. Food@home can evaluate the performance of the crowdworkers and the restaurants. The requestor has the ability to evaluate the performance of Food@home (as platform), the crowdworker and the restaurant. Lastly the restaurants can evaluate the performance of Food@home and crowdworkers.

The crowdworker can evaluate the performance of the process of Food@home, as well as the app which the crowdworkers are using. The requestors are (indirectly) evaluated by the crowdworkers together with the restaurant, since the crowdworkers have the possibility to evaluate every delivery they do.

> *'Rate this Delivery, but it is not so clear, a ride consists of multiple elements, you have both the ride to the restaurant and the customer.' (crowdworker Food@home)*

Food@home evaluates the performance of the crowdworkers by checking figures like acceptance rate, attendance when a session has been booked by the crowdworker, late cancelations of booked sessions, and the number of times a crowdworker has worked during peak hours. Of these the last three are used to see if a crowdworker deserves to book new sessions at an earlier moment and thus by giving this incentive, they want to stimulate crowdworkers to cancel in time if they are unavailable, and to show up when a session has been booked by the crowdworker.

'Usually the new sessions are available at 5PM on Mondays, if you (crowdworker) have good statistics, you can book sessions at 3PM or even 11AM […] this means, if you are present when you booked a session, if you work during peak times and if you do not make cancelations less than 24 hours before your session.' (Supply employee Food@home)

Food@home also evaluates the performance of the restaurants. This mainly is about having the meals ready when the meals are supposed to be ready and Food@home also evaluates online ratings of the restaurants. At the same time, both restaurants and requestors have the possibility to evaluate the performance of Food@home (the app and process) and the crowdworker. The requestor can also evaluate the meal/restaurant. The requestor can do this by giving stars and after that it is possible to specify the evaluation. In the case of the restaurant, on a day to day basis they get the possibility to evaluate the riders of every meal they send out via Food@home and for process related issues (e.g. the app) they can contact their account managers.

So overall all actors can evaluate the other actors in the Food@home ecosystem, but they all do it in slightly a different way, but all with the same goal: to make the process, customer experience and service levels as good as possible.

Feedback

An important part of performance evaluation is to give back this evaluation in the shape of feedback. In the case of Food@home, there quite some possibilities to give feedback. Crowdworkers can rate their delivery, which they can specify by adding specific feedback, and they can provide feedback about the Food@home process and the app by means of the so-called Rootalks. Food@home makes use of historic data, big data and customer ratings in order to provide feedback to the restaurants. Also, it is important to know that at this point,

the performance of crowdworkers does not influence the allocation of tasks, but as said in the previous section, having a better performance score can help the crowdworkers to be able to book those sessions that they would like to have, because they can make reservations for sessions at an earlier point. Clients can give feedback on their delivery, this can be crowdworker related or meal related.

> *'As customer, one can give an order rating, also about the restaurant, and if we receive a lot of complaints about a restaurant, we often send the restaurant an email.' (Rider support employee Food@home)*

As said in the previous section, all of the actors can give feedback, but a lot of people tend to forget to do this unless something really bad or strange happens.

> *'In the app one can give thumbs up or thumbs down depending on how the delivery was, but to be honest, I don't use it that often.' (Delivery employee Food@home)*

The restaurants also have the possibility to give feedback about the riders. Therefore, all actors have the possibility to give feedback about the others, although this does not always happen.

Compensation

Compensation in a traditional organization is the remuneration an employee receives if they completed a task; the money is paid by the organization to the employee. In the case of a crowdsourcing ecosystem, the stream of money is organized in a different way. In the case of Food@home, there are even two ways in which the compensation goes from the requestor to the crowdworker. The money does not go directly from the requestor to the restaurant and crowdworker, but the requestor pays the platform for both the food and the delivery, then the restaurant is paid the amount of money they would receive for the money minus the

commission to be on the platform. The money for the delivery goes then depending on the way how a crowdworker is registered. In the case that one has become an independent contractor, one will receive the money of the delivery including taxes and the independent crowdworker needs to pay the taxes to the tax office. In other case one can make use of a payroll company, which makes them a sort of employees of the respecting company. In that case the money which would normally be paid to the crowdworker is turned into a salary, where the payroll company takes responsibility for the tax payments, and they keep a certain percentage of the earnings as compensation for their services.

> *'The rider tells us that he/she makes use of an external party, and to transfer the money to the account of that company, which is Verloning.nl. They transfer the earnings of the rider into a salary, they deduct taxes and of the earnings they keep a certain percentage and the rider receives the compensation in the form of a salary.' (employee rider support Food@home*)

One of the crowdworkers said the percentage that Verloning asks for their services is 4% for crowdworkers of Food@home that want to make use of their services. So in short, the requestor does pay the platform, which in turn pays the restaurant and the crowdworker in which the crowdworker can either receive a direct compensation or the compensation of the crowdworker is turned into a salary by a payroll company, after which he/she receives the compensation.

Incentives

When talking about incentives, there are a lot of different ways how these can be organized, one can receive bonuses if organizational targets are being made on the short-term or on the long-term. When looking at the incentives present at Food@home, it is nice to see that they also have performance-based incentives, which they call 'Do X, get Y'. If a crowdworker

delivers a certain amount of meals, within the two-week timeframe, he or she will receive a bonus on top of their normal compensation. By doing this, Food@home hopes to stimulate the crowdworkers in keep on doing the deliveries.

> *'We make use of a bonus structure […] The bonuses are not on a day-to-day basis, but on a biweekly basis. This is the 'Do X, get Y'. these are mainly there to compensate the less busy times. By doing this they (the riders) can earn a proper hourly income.' (Performance employee Food@home)*

Next to this 'Do X, get Y' bonus, employees receive an activation bonus, which means that they get a certain amount of money after they have delivered their first meal. Also, as said in the recruitment part, crowdworkers can receive a bonus if they refer a new crowdworker, and this crowdworker does a certain amount of deliveries, which is a nice way to stimulate crowdworkers to get others interested in doing the job.

> *'Referring a friend, so if I give someone my referral code, I will receive 200 euro and he will receive 100 euro after he completed thirty orders. These are nice things, some kind of motivation, apart from the orders, it is a good way to get people to talk to others to get them to work for the platform too, and I think it is a rather successful way.' (Delivery employee Food@home)*

Food@home sometimes decides to give crowdworkers additional compensation on top of the normal compensation in order to stimulate them or to be able to offer them a fair reward, or if the weather is bad they want to convince crowdworkers to start working. This additional compensation is really appreciated by the crowdworkers.

> *'I think you get 2 euro on top of the normal fee when it is bad weather. This is how it should be, as the weather can be really bad.' (Crowdworker Food@home)*

Also, requestors can give the crowdworker a tip, if they appreciate the speed of the delivery, or if they just like the crowdworker. Tips can be given upfront, included in the order, which allows riders to be grateful to the requestor and to thank them for the tip, or tips can be given in cash to the crowdworker. Giving a tip upfront can be done when the requestor makes his order; one is able to choose to give a tip in the costs in the order specification.

> '*Giving a cash tip is also possible, but it is also possible to give a tip via the app' (Operations associate Food@home)*

Food@home also offers partnerships, which give the crowdworkers access to nice perks, like discount at partner-restaurants, on bike-repairs, e-bike-rental. At this moment Food@home offers four types of partnerships, which are all nice perks for the crowdworkers, on a variety of themes and activities or products.

> *'We offer four types of partnerships, the first is to make the job as easy as possible, the second is related to self-development […] the third category is fun based, like sport memberships and the fourth category is still under development but will be safety related.' (Engagement associate Food@home)*

So in terms of incentives, there are a lot of different incentives used to keep the crowdworkers motivated, most of the incentives are given by the platform, but the partners are responsible for the partnerships incentive and the tips are given by the requestors.

Opportunity enhancing HR practices

Job design

The way how the job design is organized at Food@home is somewhat special, crowdworkers need to book sessions in order to be certain that one is actually allowed to work. The algorithm is responsible for the allocation of tasks to those crowdworkers who have booked

the current session and are online, and the location of a crowdworker in relation to the restaurant to minimize the total time a crowdworker needs for the completion of an order. Another important issue relating job design, comes from the fact that the restaurant can give specific instructions with regard to the order picking, transportation and the requestor can give specific instructions regarding the delivery.

When talking about the job design, one is referring to the way how a job is being shaped, the amount of freedom one has in doing the job, in traditional organizations, jobs are often designed by management and to a certain extent the employees can have some influence in the job design, sometimes they can decide to work from home for example. In a crowdsourcing platform and specific in the case of Food@home, a crowdworker receives a notification that a job is available, and the crowdworker can decide to accept or reject this job-offer. In the case that a crowdworker accepts the job, he/she only gets to know where to go, but how they do that, is up to them. In the specific case of Food@home, a crowdworker needs to reserve a session in which he/she would like to work. This is done in order to give the crowdworkers a proper compensation. Food@home wants to make sure that all riders that are working at any given moment have a fair chance in earning a reasonable amount of money. They want to prevent that all available people go online and ending up in a situation where the crowdworkers barely get any orders, just because there are way too many riders online. They use their algorithm to decide for the number of sessions they want to make available at a point in time in order to control for this. The algorithm takes into account different factors, such as the weather, the day of week, and the time of the day and based on the historical data, the algorithm then gives a number of sessions that should be available for riders. This can result in crowdworkers being unable to go online and start doing orders.

'We sometimes hear, hey, why can't I book a session, but this is all to prevent them from going online and make no money, or there should be an increase in number of orders.' (Rider support Food@home)

The algorithm plays a big role in the job design of crowdworkers that work for Food@home, as the goal of the algorithm is to minimize the total time a crowdworker needs to complete a task. This is done by taking into account a wide variety of factors, like the time needed by the restaurant to prepare the meal, the time needed to get from point A to point B in a city. The algorithm needs to take into account the location of the crowdworkers that are logged into the system, whether or not they are busy delivering an order, and of course the time when the order needs to be collected at the restaurant. Based on these inputs, the algorithm decides who will receive the delivery order. This selection is based on the kitchen-to-the-customer time, the total time it would take a crowdworker from acceptance till the point of delivery and the possibility of a crowdworker to arrive at the restaurant exactly at the right moment.

'You want the meal to be from the kitchen to the customer in the shortest possible time, that is clear. We need to find those riders who can be there exactly at the moment when the meal is finished.' (Rider support Food@home)

Given the fact that the algorithm allocates orders also based on the location of the crowdworker, it can be helpful for crowdworkers to know what area covers the zone, to make sure that they are within the boundaries of the zone, and preferably in or just around the center of the zone. The fact that this is important became clear from an interview with a supply employee of Food@home.

'If you have completed an order, it is the best to cycle back to the center of the zone, since the algorithm looks at who is where, and who is able to do an order now, it is divided equally, but if you stick to the edges of a zone, you will most

likely be the one the furthest away, making it necessary to keep cycling long distances.' (Supply employee Food@home)

After accepting a job, the influence of the restaurant comes into action. They can give instructions to the crowdworker about a variety of topics, such as that the crowdworker should wait outside of the restaurant, or that the meal needs to be handled and transported in a certain way. It is pretty special that a restaurant can give instructions to the crowdworkers, especially given the fact that Food@home cannot give real instructions as a result of the crowdworker-platform relationship between Food@home and the crowdworkers.

'sometimes it is an instruction about how to handle the food […] but it can also be that the restaurant prefers you (the crowdworker) to stay and wait outside of the restaurant […] it can be anything.' (Supply employee Food@home)

Also clients have influence on the job design of the crowdworker, they can have the same style of requests, about what to do when arriving at the spot where they want the food, they are able to give instructions to the crowdworker and by that have an influence on how the crowdworker has to do his job.

'When cycling to het customer, instructions given by the client can be like, you need to call me, or go to the sixth floor, that is stated pretty clear.' (Crowdworker Food@home)

The platform also has an influence on the job design of restaurants, as they need to adapt to the requirements of Food@home. For example, restaurants get a ticket when a customer orders food, on this ticket a starting time is printed at which point they should start to make the food in order to be (almost) done when the crowdworker arrives at the restaurant. If this is not done in the correct way, it will result in big problems because of the way the algorithm works. If a crowdworker has to wait, and this waiting happens regularly, the algorithm will

think the restaurant will need more time for the preparation of the meal; if they keep not being ready when the crowdworkers are there, the ticket time will explode as the algorithm will keep on adding these waiting times to the preparation times, thus resulting in a situation which is the preparation time will increase enormously, while the actual preparation time will more or less stay the same.

> *'The system is looking at the time needed to complete an order depending on the time of the day. It doesn't matter if they start right away or if the restaurant waits. Based on historical data the system will estimate a time needed to make the meal. If the restaurant decides to wait, for ten minutes, and the crowdworker has to wait for ten minutes at the restaurant, the system will add ten minutes to this preparation time. […] there it goes wrong completely, because the system learns it as being the truth, but it is ridiculous. If people don't stick to the way the algorithm works, it goes wrong.' (Country manager Food@home)*

In terms of flexibility, a crowdworker can cancel booked sessions, and when he is online, he can decide to refuse offers without any problem. Also, a crowdworker can easily change the zone in which he/she would like to work without problems, which gives them the freedom to move the job with them. In the case that they would move or for example study in Amsterdam and go to the parents in Eindhoven during the weekend, the crowdworker has the possibility to work in both places.

> *'In the case that someone is a rider in Amsterdam, but he studies in Eindhoven for two days a week, he can always decide himself to work wherever he wants to work, he can easily change the zone in the app.' (Supply employee Food@home)*

Thus, the platform has an influence on the Job design of the crowdworker and the restaurant, the restaurant has an influence on the job design of the crowdworker and the requestor has influence on the job design of the crowdworker and the crowdworker has influence on his own job design.

Job involvement

When looking at the job involvement, one talks about the amount of influence one has on the job and the ability to have a voice. In a traditional organization, job involvement is often done by having a representative advisory board within the organization. They can advise the management about certain issues relevant for the organization. When looking at Food@home, it is important that the platform is aware of the fact that they work with self-employed people, who can just leave when they don't agree with certain decisions.

> '*Exactly, now they are independent self-employed contractors, we need to keep in mind to keep one additional party satisfied.' (performance employee Food@home)*

The crowdworkers (former employees) feel that some important decisions are made without their involvement, especially with the transition from the traditional employment to the crowdsource way of working.

> *'Big decisions are taken without the Riders knowing it. Were we involved in the decision to change to crowdworkers? Not exactly. Was it possible to have influence, not exactly, major decisions are made without consent.' (Delivery employee Food@home)*

But riders are being involved into certain decision-making by means of a riderforum, which allows the united riders to have some influence in the way how things are being organized. The crowdworkers can come up with suggestions on how Food@home can improve their

'job'. In the case of Food@home, a lot of activities are organized to give the crowdworkers the feeling that their input is being valued, these so-called Rootalks are informal events in which crowdworkers can address issues they experience.

> *'They (Food@home) organize for example the Roo talks, these are meetings in a very informal setting, people can take a beer and some snacks. People can talk to support staff and give feedback.' (Operations associate Food@home)*

It became quite clear that Food@home is trying to give their crowdworkers a voice, but in the end when big decisions are made, the influence of the crowdworkers is limited and the power still lays with the platform.

Overview

Overall, a lot of HR practices are taking place within a crowdsourcing ecosystem and these practices are executed by all of the actors in a lot of instances. They are all exchanging the practices and it is a really intertwined network of HR practices and actors. A short overview of the HR practices that are present at Food@home and the involved actors is shown in Table 4.

Actor	The platform (Food@home)	Crowd worker	Requestor	restaurant
HR practice				
Recruitment	1. Makes use of (job) adds on social media 2. Special recruitment events	1. Can refer new crowd workers 2. 'Living ads' as they cycle through the city		
Selection	1. Selection of new crowd workers 2. Selection of restaurants	1. Selection of specific orders from restaurants 2. Selection of platform (before start)	1. Selection of platform 2. Selection of restaurant while ordering	
Training & Development	1. Onboarding as training 2. Training of restaurant	1. Responsible for own development as crowdworker		

Performance evaluation	1. Evaluation of crowd worker performance 2. Evaluation of restaurant performance	1. Evaluation of platform performance 2. Evaluation of restaurant performance (timing, way of packing) 3. Evaluation of requestor performance	1. Evaluation of platform performance 2. Evaluation of crowd worker performance 3. Evaluation of restaurant performance	1. Evaluation of platform performance 2. Evaluation of crowd worker performance
Feedback	1. Feedback on crowd worker 2. Feedback on restaurant based on	1. Feedback on platform (via Rootalks) 2. Feedback on restaurant and requestor (via rating screen in the app)	1. Feedback on the restaurant and rider (star rating with explanation in app)	1. Feedback on platform (app or process) 2. Feedback on crowd worker (via app or mail)
Compensation	1. The platform pays the restaurant 2. The pays the crowd worker (direct or via payroll construction) 3. Additional to compensate low income/bad weather		1. The requestor pays the meal including delivery fee (and optional tips)	
Incentives	1. Do X, get Y 2. Referral bonus 3. Partnerships f		1. Tips	1. free drink or ice-cream as part of partnership
Job design	1. The algorithm decides who get an order based on different variables	1. Ability to reject an order 2. ability when to work or cancel a session 3. Can change zone in which the work is done	1. Can give specific instructions with regard to delivery	1. Can give specific instructions when crowd worker arrives or regarding the transportation of the food
Job involvement	1. most of the power is with Food@home, important decisions made without consent of others.	1. Limited involvement via Rootalks		

Table 4: overview of HR practices and responsible ecosystem actors

Discussion

During this research a lot of insights were gained and, in this section, it will be discussed what these findings might potentially mean for the way in which researchers look at HR research. Next to this, some future implications for both researchers and practitioners will be given.

Theoretical implications

While conducting this research, a lot of things have become clear. Some findings were in line with what was found by earlier research and in other cases new or different things have been found. In the next sections some similarities as well as differences will be discussed with regard to crowdsourcing, the crowdsourcing ecosystem, HR practices, and HR management of crowdworkers.

Crowdsourcing

In the work of Howe (2006) it was stated that crowdworkers are part of an unknown crowd. In this research, that is found to be partially true, the requestor does not necessarily know which crowdworker will show up at his door, but the platform knows which crowdworkers are working at a certain moment, and which crowdworker is responsible for completing a certain task. It is not said that Howe (2006) was wrong by ignoring this, but with the help of this study it became clear that it is not fully unknown which crowdworker is responsible for the task. In the work of Nakatsu et al (2014) eight different types of crowdsourcing have been defined. Tasks could be structured or unstructured, independent or interdependent, and low or high commitment. In this research it became clear that in the case of Food@home in general tasks are structured, independent and ask for high commitment, since people need to invest time and money to buy an appropriate bike and other items needed, and the time to do the job. However, there are cases in which crowdworkers are depending on other crowdworkers for the completion of a task, that is, if they have to deliver an order that is really big, the platform

will send two or more crowdworkers to complete the task together. Also the commitment can vary. If one already possesses the needed resources, the step that need to be taken to start doing work with help of a crowdsourcing platform is lower than when these resources are not yet present. Based on this finding, it became clear that one particular crowdsourced task does not necessarily needs to fit to one type of crowdsourcing as defined by Nakatsu et al (2014) and that within one type of job, there can be difference with regard to in(ter)dependence, and task commitment.

The crowdsourcing ecosystem

In the work of Breidbach and Brodie (2017) a model was developed in order to explain the crowdsourcing ecosystem. Their model consisted of three actors, the provider (crowdworker), the customer (requestor) and the engagement platform (crowdsourcing platform). It became clear during this research that in the classical example of a crowdsourcing platform this model is correct, but there can be modifications with additional actors, such as in this case, the restaurants. These four actors are always needed to make the ecosystem function. However there are other parties, such as Verloning and Fountain in the case of Food@home, that might be vital for the correct functioning of the ecosystem as these parties are used for important things such as making sure the crowdworkers receive their money (Verloning) or offer a platform that allows the platform to make the onboarding process as smooth as possible (Fountain). Therefore it is important to keep in mind that there might be more parties involved in the crowdsourcing ecosystem, apart from the actors, who are most likely to be identified easily, but those external parties are not always present that obvious, and finding them needs real deep digging into an crowdsourcing ecosystem or any type of organization when interested in those external parties which can play a vital role in the day-to-day business operations.

Thus, in order to function, a crowdsourcing ecosystem needs at least the three actors which were described in the model created by Breidbach and Brodie, but more actors can be involved in the ecosystem, such as the restaurants in the case of Food@home, and also there can be external parties that are responsible for ecosystem related tasks vital for the correction functioning of the ecosystem. Having attention for those parties aside from the main actors is important when the goal is to have a complete overview of those parties involved in a crowdsourcing ecosystem, it is not only the main actors that make the platform, but also the external parties that are important for the correct functioning of a crowdsourcing ecosystem.

In the work of Kuhn (2016) it was stated that some of the platforms exercise significant control over the work conditions and compensation. In this research it became clear that this is correct to a certain extent, but it does not fully cover the real situation. Indeed, the platform decides what amount of money a crowdworker receives for completing one task, but it does not restrict the number of tasks a crowdworker completes within a certain period, the crowdworkers can decide this on their own. Next to this normal compensation, that is determined by the platform, crowdworkers can receive tips from requestors and the requestors can give as much as they would like to give without the platform having an influence. With regard to the work conditions, it became clear that the influence of the platform is limited, as the crowdworkers are free to do what they want to do. As stated by Kuhn (2016), the platform can have an influence on the compensation and the work conditions, based on the information gathered in this research, it became clear that for compensation this is largely true in the case of Food@home. However, with regard work conditions, this influence was found to be present to a certain extent. for example the opening hours of the platform, between which customers can order food, were decided by the platform. Also, crowdworkers needed to make reservations if they wanted to be sure to be able to work, limiting their freedom to decide to work at any given moment if they would like

to work. the platform in a particular city was decided by the platform, but within those hours, crowdworkers were was not found at all. Based on the outcomes in this research, it can be seen that the platform has some influence on things like compensation and work conditions, but especially in the case of work conditions, the crowdworkers also have a fair amount of influence, therefore it might be good that in the ideas of Kuhn and Maleki (2017) it is stressed that although the platform can have a big influence, the real amount of influence might be different for different crowdsourcing platforms.

HR practices and HR management of crowdworkers

In the study of Jiang et al (2012) eight HR practices have been identified within three HR domains. These were ability enhancing HRM (recruitment, selection, training and development), motivation enhancing HRM (performance management, compensation, incentives) and opportunity enhancing HRM (job design and job involvement). In this research it was found that some of these HR practices do also apply to crowdworkers, the crowdworkers still need to be recruited, they want to receive money and incentives and also they want to have an influence on the job design (since it was found that crowdworkers mainly do these kind of tasks as a crowdworker in order to be able to earn money and at the same time be flexible). At the same time, it was found that other HR practices were found to be not that important for the crowdworkers, like training and development, this comes from the fact that they only receive basic training when they start, but this is not real training, but mainly videos as part of the onboarding process, also for the crowdworkers themselves, the performance evaluation and providing feedback, this comes from the fact that one of the platform representative stated that crowdworkers will only be expelled from the platform in the case that a crowdworker steals food from a requestor or likewise bad behavior, but they were not punished for bad performance, they could be asked to explain their performance or behavior, but purely based on performance, no real actions were said to be taken. It needs to

be said that in general, the AMO framework created by Jiang et al. (2012) is can be a good starting point to see what HR practices are present within an crowdsourcing ecosystem, but in order to fully explain the HR management needed for the good functioning of a crowdsourcing ecosystem, it might be lacking, because of the increased complexity of the ecosystem, as well as the changed view on HRM, that will be described in the next paragraph.

In the work of Lepak and Gowan (2008) and Jiang et al. (2012) it was stated that HR practices are used in order to manage employees, but in this research it was found that HR practices are not only used to manage employees. It is important to know that HRM is used to keep the entire ecosystem functioning. When looking at training, training is offered to employees in order to develop their skills (Lepak and Gowan, 2008; Jiang et al., 2012) in a traditional organization. Giving training is likely to imply a employer-employee relationship as was mentioned by Kuhn and Maleki (2017), Lepak and Gowan (2008), Lepak and Snell (1999). This finding makes that it is currently impossible to provide real training to crowdworkers directly by the platform and they can only provide the crowdworkers with the real basics as part of the onboarding process. At the same time, it was found that restaurants, which were seen as customers, did receive training, making clear that training is no longer a mean to develop the skills of employees, but training is becoming a thing that organizations offer to other stakeholders too. The fact that training is being offered to customers is not new, but one should realize that at the same time, crowdworkers, who could be seen as employees in a traditional organization, do not receive any training apart from the basics during their onboarding process, which makes that the way how training looks within a crowdsourcing ecosystem is completely different compared to training within a traditional organization. It might be interesting to see for future researchers what the exact effects are of this strange situation in which one actor of the ecosystem can receive training, while at the same time

another cannot receive training by the platform organization as a result of institutional pressures.

The fact that the use of HRM is not limited to employees of an organization is something future researchers should keep in mind when looking into the HR practices that are present within an organization, because if people are unaware of the fact that also other actors next to the employees are managed with the help of HR practices, it is possible that important insights are ignored. Based on these insights, it might be a good idea to have a critical look at the way in which HRM is seen in the current days, with all the new ways of working, because in the basis it is still possible to see HRM how it has always been seen and done. It is important, however, to keep in mind that the new ways of working might not always fit with the existing ways of looking at HRM. It might be a good idea to start looking in a different way at HRM, it is no longer a thing where HR practices and policies are the central aspect in the performance of an organization, but HRM in a crowdsourcing ecosystem should be used in order to make sure that the ecosystem is in balance, that all the actors are happy and willing to comply. If the ecosystem is not balanced, the entire ecosystem will be negatively influenced or it might become impossible to operate. HRM is used to maintain the balance between the platform, the crowdworkers, the requestors, and in this case the restaurants and external parties, it is all about the minimizing the risk that one or more actors decides to take the ecosystem out of its balance.

In the work of Lepak and Gowan (2008) it was described that the HR department of an organization was bearing most of the responsibility with regard to HRM, where it used to be the responsibility of line-managers. However, during this research it became clear that this view might already be outdated, at least for crowdsourcing platforms where this view was found to be pretty far from reality. This does not mean that this view is outdated in general, but for the new ways of working such as crowdsourcing this is the case. Within a

crowdsourcing ecosystem, all the ecosystem actors are together responsible for the execution and implementation of the HR practices. In the work of Nishii and Wright (2007) it was stated that there can be differences between the intended HR practices as the top-management takes into account the organizational strategy, the actual HR practices, which are the practices that are actually being implemented within an organization by the line-managers, and way how these HR practices are perceived by the employees. In the case of a crowdsourcing ecosystem, it is not about the strategy of one company, but the strategies of three companies are involved and these strategies are not necessarily in line with those of other ecosystem actors. The aim for a crowdsourcing platform is to develop HR management and the HR practices in such a way that other parties are happy to, as they need each other for the proper functioning of the ecosystem. At the same time there can still be a difference in what the top management of a platform wants, what is implemented and how the other actors perceive these HR practices, making that the framework of Nishii and Wright (2007) is still applicable to a crowdsourcing ecosystem, but little changes are needed, to take into account the changed organizational context.

Based on the insights gained while conducting this research, it became clear that the current way of studying HRM might potentially be outdated, depending on the type of organization a researcher is looking at. In the case that a researcher is looking at traditional organizations, the existing models such as the Job characteristics model developed by Hackman and Oldham (1976) and the HR architecture model developed by Lepak and Snell (1999) are absolutely fine to use. However, it might be a good idea to develop new models for the new ways of working, such as crowdsourcing, as in these cases, the existing model might not be able to fully explain the HRM of such an organization, given the fact that within these organizations HRM is being done in a completely different way with different people sharing responsibilities for the execution of HRM. The new models can be specific for a type, making

that whenever a new way of working is being introduced, new models need to be made. It is also possible to create new models that are able to explain all ways of working in a variety of ways, it is possible that the new models work integrate existing models and extend those, or the new models can be completely new, based on a specific organizational structure. The models should include the most important things, how should HRM be organized for a specific type of organization and who should be involved in the design of these HRM system.

Implications for practice

Because of institutional pressures by the government and labor unions, at this moment the work of a crowdworker for a crowdsourcing platform is a balancing act between the edges of the law. It is important to have laws that state clearly what is allowed to do, whether the construction used by Food@home and similar platforms is legal, and in which ways the platform organizations can have an influence on the job design of the crowdworker. By providing clear laws it should at least be clear whether this way of working is allowed and if so, what a crowdsourcing platform is allowed to do for their crowdworkers. Therefore, it is important that policymakers implement clear laws with regard to crowdsourcing as soon as possible. Regardless of the fact that crowdsourcing will be legal or not, it will at least make things clear. In the case that crowdsourcing would become illegal, the platforms need to find different ways in which they would still be able to continue, for example by taking the crowdworkers in as being employees of the platform. In the case that crowdsourcing would be recognized by law, it will enable both platforms and crowdworkers to get the most out of their contractual relationship. To give an example of the strange way of how the law is operating currently, the example of training will be given. At this moment there is the strange situation that Food@home can give training to the restaurants that are working with the platform, but they cannot help their crowdworkers to learn how to file their taxes, because this could potentially imply an employer-employee relationship. By having clear rules and regulations

about what is allowed and what is not allowed, it will become clear for all the involved parties what they can and cannot do by law.

At the moment that these new laws are here, it will be possible both for Food@home and their crowdworkers (and other platforms) to change the way how they operate in accordance to the laws. Also, within the boundaries of the existing laws, there are things that could be changed in order to maximize the effectiveness of the Food@home ecosystem. Food@home should make sure that all ecosystem actors are well aware of the fact that they are part of a bigger ecosystem and should behave accordingly; all actors need each other in order for the ecosystem to work. Creating this awareness amongst the different actors can be done in different ways, the platform could make use of pop-ups to remind the different actors to give feedback with regard to the other actors, because as one of the crowdworkers said, feedback is often not given, mainly because of the fact that I tend to forget about giving it.

Also based on an issue stated by one of the Food@home representatives that at this moment the HR practices present within the ecosystem are rapidly changing, incentives change, compensation changes, and training changes. It might be a good idea to try to find a mix of HR practices that is less subject to change. Because if the HRM system is more stable, it is most likely that the entire ecosystem performance will go up, if the actors know what they can expect from other actors and what others expect from them, the entire crowdsourcing ecosystem is likely to perform better. It should not be impossible to make any changes at all, but the rate by which changes occur should go down drastically in order to be able to find the best possible HR system, allowing for an increase in overall ecosystem performance. The most important HRM practices needed for the correct functioning of the ecosystem are a stable way of compensation, stabilization of the incentives (e.g. ‘Do X, get Y’) rather then changing them biweekly, this makes that crowdworkers have a better insight what their compensation will be over a longer period of time (given the fact that they manage to have a

stable number of orders in this period), and making them most likely more willing to put in more effort. Given the fact that training and onboarding is that short, the advice would be to limit it to the minimal, how to work with the app, and for the rest crowdworkers will work out fine. It is important to keep on providing proper feedback, to both high- and low-volume restaurants, so they can improve and be of better value for the platform.

For crowdworkers it would be important to start to realize that working as a crowdworker for a platform is something different than working for an organization as employee. There are crowdworkers who like the idea of being free, but at the same time they want to have the feeling to be part of the team. They are part of the ecosystem, but they are not part of team Food@home, since they are independent delivery contractors. For Food@home, it is important that they make sure that crowdworkers understand the way how a crowdsourcing relationship is working. Crowdworkers are expected to do what they should do (deliver meals) but should not expect massive team bonds to be present, just because of the way how the work is organized. The crowdworkers need to be made aware that they are part of the Food@home crowdworker team, but this team is not an ordinary team, it consists of all independent crowdworkers. They have chosen for this model because they want their freedom, and as a result of this choice, they should not expect too much of a team behavior to be present, all crowdworkers have their own different interests.

In the same style, Food@home made the choice to limit the amount of crowdworkers that can be active at a certain time. It might be a good idea to ask what the crowdworkers would prefer in this case; keep the system as it is to ensure that those that are working have good chances of earning a fair amount of money, which means they keep the amount of crowdworkers and thus freedom to work whenever a crowdworker wants, somewhat limited, or to change the system, to allow all crowdworkers to go online at the same time, maximizing their freedom, but at the same time limiting their possibilities to earn a fair amount of money.

By giving the crowdworkers the vote for this issue, they will feel involved with the platform and feel like they have a voice.

For Food@home it is important to be open about the perks people can get (e.g. insurance), and what they look like. It is also important that the crowdworkers know exactly how the tasks are allocated to the different crowdworkers, in order to prevent the possibility that things get unclear and as a result people feel treated in an unfair manner.

Limitations and future research

As in every research there have been some limitations. Some of these limitations will allow for new research possibilities. When looking at the generalizability of this research, for which data was gathered at the Dutch subsidiary of Food@home, a crowdsourcing platform active in the food delivery industry. The results that have been found in this research, are likely to not only apply to the Dutch subsidiary of Food@home, but these results might also reflect in great lines the way how HRM is being organized throughout the entire Food@home organization, across all subsidiaries across the world, in fact, there is an possibility that the research outcomes on how HRM is being organized and HR responsibilities for the different ecosystem actors of Food@home are used within the entire food delivery crowdsourcing industry in a similar way. At the same time, it is likely that crowdsourcing ecosystem that look different (fewer or more actors) have a different way in which the HRM responsibilities are shaped, which might make that the research outcomes of this study do not reflect on how HRM is organized at crowdsourcing platforms that look different and operate in a different way.

In this research the choice was made to focus on the platform and the crowdworkers, where others might have included the crowdworkers and the restaurants also. Picking two out of the four involved actors could be seen as a limitation because the research now only

reflected the story of two out of the four main actors of the ecosystem, which might potentially reflect in somewhat biased outcomes. However, based on the current findings it is uncertain if adding more ecosystem actors would have led to other or better insights. Leaving these two actors out of the scope of this research allows other researchers to take into account the view of the restaurants and the requestors as well.

In the beginning of this research, requestors were included, but pretty soon it became clear that at this point in time it would have been really difficult to get in touch with requestors on a relatively short notice. One possible limitation of this outcome could be that customers only perceive themselves as customers who only have to pay for their meal and do not see the need to pick up the responsibility for their HRM tasks, such as performance evaluation and providing feedback. The main reason why the customers were not included in this research, was the change in European privacy law. The new laws just became active while conducting this research, making it rather hard to include them at this point in time. In future research, when the dust of the new regulations has settled, it might be possible to arrange these kinds of interviews by means of the platform actively asking customers if they are willing to share information for research purposes and arrange interviews in that way, allowing future researchers to include the requestors and their view in those studies as well.

During this research, twelve interviews have been conducted of which five have been conducted with a variety of crowdworkers and former delivery employees. This number could be seen as a limitation; however, it was found that in this research in combination with the twelve other interviews with platform representatives, this number of interviews led to achieving the point of data saturation, during the latter interviews, the things said by earlier interviewees were confirmed, making that it could be said with confidence that data saturation was achieved. However, it needs to be said that getting in touch with crowdworkers was found to be really hard. Initially contact was established via the platform, but this did not

generate any results at the end unfortunately. The choice was then made to start looking at crowdworkers of Food@home via social media, which resulted in some interviews. It might be a good idea for future research to actively approach crowdworkers via different means in order to get better chances of a higher respond rate. This could for example be done by means of attending platform meetings and actively approach them during such a meeting or ask the platform to put a video message in the app to ask crowdworkers to participate and to make it livelier by asking them in such a way.

With the help of this research, potentials for future research regarding the use of HRM for crowdsourcing platforms might arise. With the help of the data that was gathered, it will be possible to conduct data at other crowdsourcing platforms and to be able to compare how they implement HRM. It would also be possible to conduct quantitative research to find out which HR practices are the most important for the overall ecosystem performance, and which are perceived to be the most important by the separate ecosystem actors.

Given the fact that at this moment the way how the HR practices are organized at Food@home changes regularly, it might be needed to conduct more longitudinal research into this topic, conducting longitudinal research might help platforms to find a set of best practices and best ways how to organize these practices, which could help crowdsourcing platforms to perform better over time.

Conclusion

With the help of this research it was possible to find an answer to the research questions raised at the beginning of this research: ‘What HR practices are used for managing crowdworkers and who is responsible for executing these practices?’ The responsibilities will be summarized in the next sections per actor.

When looking at the platform itself, it was found that the platform (Food@home) is responsible for recruitment, selection, training and development, performance evaluation, giving feedback, compensation, incentives, job design, and job involvement. Food@home is responsible for the recruitment of crowdworkers, the selection and training and development of crowdworkers and restaurants. Also, Food@home is responsible for the performance evaluation, providing feedback, compensation of crowdworkers and restaurants and giving incentives to the crowdworkers. Lastly, Food@home is responsible for the job design of crowdworkers and restaurants via the algorithm, and the job involvement of crowdworkers.

When looking at the crowdworker, it was found that they are (partly) responsible for recruitment, selection, training and development, performance evaluation, feedback, job design, and job involvement. Crowdworkers are (partly) responsible for the recruitment of new crowdworkers, and they can select, and they bear responsibility for their own development. Crowdworkers can evaluate the performance and give feedback about the platform, the restaurants and the requestors. Crowdworkers have an influence on the job design and they are involved in the job via the Rootalks.

When looking at the requestor, it was found that they are responsible for selection, performance evaluation, feedback, compensation, incentives and job design. Requestors select the platform and the restaurant. Requestors evaluate the performance, give feedback and compensation to the platform, the crowdworker and the restaurant and they give tips to crowdworkers. Requestors influence the job design of crowdworkers.

Lastly there are the restaurants, it was found that these are responsible for performance evaluation, feedback, incentives and job design. Restaurants evaluate the performance and give feedback about the platform and the crowdworkers and they can offer incentives to crowdworkers. The restaurants have an influence on the job design of crowdworkers as they can give specific information that influences the way in which a crowdworker does his job.

In short: All crowdsourcing ecosystem actors – including crowdworkers, requestors, the platform and the restaurants - are responsible for the execution of the different HR practices.

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Appendix A: Interview protocols

Appendix A1: Interview protocol crowdworker

Subject	Crowd-worker
Introduction	Can you introduce yourself? How often do you work for this platform? • When are you performing this job/at which moments? • Is it a side job/only source of income? • What kind of work/study are you doing beside this? What are your reasons to do this job/to apply yourself for this platform? Do you feel involved with this platform? • Is this the only platform you work with? • if not, what are other platforms? How does this work in practice? How do you see yourself in relation to the platform? (how would you describe yourself/what is your function title)
Additional questions (not directly HR-related)	What are your expectations from the platform? What should the platform do according to you, in order to keep you motivated? What else do you expect of the platform, which is currently lacking, but which would be appreciated if they would start doing this? Are there any questions/theme's that have yet not been discussed, but you would like to discuss?

Ability-enhancing HRM questions	
Subject	**Crowd-worker**
Recruitment	How did you get to work for the platform? • Via which channels, via who you hear about the platform that made you willing to start working for the

	platform? • What exactly did you hear about the platform through which you started working there? Follow-up question: did someone (from the platform) ask / contact you to come and work for the platform? how have you registered yourself as crowd-worker? • What did that process look like? (E.g. What information did you have to share about yourself)
Selection	Were there certain conditions/criteria (test, Certificate of conduct) that you had to meet before you were allowed on the platform? And if so, which ones? What information did you have to share yourself before you could start working for the platform? Who / how did you have to give / share this information?
Training, development, onboarding	Did you receive certain training, information and instructions (about the work, app, platform) when you started working at the platform? What does the platform do to ensure that you have and develop your skills to do your job well? (e.g. training / activities / workshops offered) Who is responsible for your development as a crowdworker? Which activities do you undertake yourself to be able to continue to do your work well and to maintain / develop your skills? What do these activities look like, who or what are involved in these activities Do you get tips from certain people to improve your performance?

Motivation-enhancing HRM questions	
subject	**Crowd-worker**
Compensation	To what extent are you motivated to do this work? • What makes it that you are motivated or not? What do you receive in exchange for the work you do for the platform and its customers? • Do you receive payment, in the form of money, after you have completed a task? • How big is this payment? • Do you know how much the customer pays and how much of it you receive? How does the payment of the customer end up with you? (Per task / weekly / monthly / per hour) • Who is responsible for this? Do you receive a nonmonetary compensation after you have completed a task? Is it possible to receive tips when a task is completed? Is this going directly or via the platform? Are there still certain secondary conditions of employment that you must receive / arrange by law (for example insurance (incapacity for work), pension)? If so, who is responsible for this?
Feedback	Do you receive comments (feedback) about your performance, in any way after you have completed a task? • If so, what does this look like and from whom or what do you receive the comments / information / feedback? How are you encouraged to give / receive feedback about from your requestors?
Performance evaluation	Is your performance / work as crowd-worker

	assessed on the basis of certain criteria? If so, which / how (app / face-to-face) is this done? (e.g. the level of acceptance, the number of completed tasks, customer satisfaction) Who or what do you rate? Who is involved in this?
Incentives	Do you receive an additional reward / benefits / privileges if you perform 'well'? • If so, what do you receive? (Bonuses, tips, higher rating, other benefits) and when? (e.g. Many work hours / satisfied customer / working certain times) • Who gives these rewards / benefits / privileges? • In which way do extra rewards come to you? • Are there any extras you receive because you work for the platform?

Opportunity-enhancing HRM questions	
Subject	**Crowd-worker**
Involvement	Do you feel involved / committed to the task / job you are performing? • Why, why not? • Who/what makes you gives you this feeling? Do you receive information / insights about the way in which the platform works / that help you to carry out your work? • Who gives this information / these insights? Do you also have contact with other platform employees? • In what way? • About what topics?
Job-design	What tasks / responsibilities does your work consist of? • Who determines this? To what extent do you have the possibility to decide for yourself how and when you want to carry out your task? (e.g. guidelines, time limits etc.)

	Who is responsible for obtaining the supplies to carry out your task / job? (e.g., bicycle (bags), clothing) Who are involved in this process?

Appendix A2: Interview protocol platform employees (support staff)

Subject	Platform employees
Introduction	Could you please introduce yourself? Why do you work at /are you involved in this platform? What is your role within the platform? Do you use the platform (as customer/crowdworker)?

Ability-enhancing HRM questions	
Subject	**Platform employees**
Recruitment	Which steps do you take to get people to work for the platform as crowdworker? In which ways (via which channels) do you motivate people to work for you as crowdworker? How can people joint he platform as crowdworker or requestor? Can anybody just enroll? Is the platform actively approaching people to join? If yes, how does this work? Who is responsible for this?
Selection	Do crowdworker/requestors need to fulfill certain conditions/restrictions (certificates, diplomas) before they can enroll on the platform? If so, which? Do the crowd-workers/requestors need to share specific information in order tob e able to use the platform? To who/in which ways do they need to share this information? Are there certain processes that are used for the selection of people? What exactly is the first meeting after a rider enrolled about? What is the role of Fountain in the selection process?

	What are the reasons behind the choice for Fountain? In what way is fountain being compensated, commission or contract basis?
Training, development, onboarding	Do crowdworkers receive training, information and instructions? (about the job, app, platform) when they start working for het platform? What does the platform doe to make sure that crowdworkers possess and develop the skills needed to do the job in a good way? (e.g. trainings/activities/workshops) Who is responsible for the development of the crowdworker? What is the role of the platform? What is the role of the crowdworker? Do crowdworkers receive tips to improve their performance?

Motivation-enhancing HRM questions	
subject	**Platform employees**
Compensation	In what ways does the platform make sure that crowd worrkers are motivated and stay motivated and be active on the platform, doing a good job? Which ways of compensation is given to the crowdworkers for the task they take care of for the platform and its customers? Via which ways does money go from the customer to the crowdworker? Who is involved in this transaction? How big is the payment? What is the percentage of commision, the platform receives? How often do payments take place(per task, weekly, monthly hourly? Who is responsible? Are possibilities to receive tips present for crowdworkers within the platform? If so, how? If not, are requestors able to give tips to crowd-workers?

	Are certain secundary labor benefits that crowdworkers need to get by law/need to arrange for themselves (e.g. insurances and pension? If so, who is responsible for this?
incentives	Do well-performing crowdworkers receive additional rewards? (monetary/non-monetary) Does the platform offer rewards in any kind to the crowdworkers (bonuses, higher rankings, other benefits)? Who is giving these rewards/benefits/privileges? In what way do these end up at the crowdworkers? Are there other benefits the crowdworkers receive for working for the platform?
Performance evaluation	Is the performance of crowdworkers being evaluated based on certain criteria? If so, which/in what way (app/face to face) is this done? (e.g. the level of acceptance, the number of completed tasks, customer satisfaction) If so, what do the criteria look like, what does the process look like? Who are involved in the setup of these criteria?
Feedback	Do crowdworkers receive feedback (tips, tops)regarding their performance, after the completion of a task? Who is giving feedback? Based on which indicators, the feedback is given? Do requestors and the platform receive feedback (in any way)? What does the process look like (electronic, (in)direct) and who is involved? By which means are crowdworkers being stimulated to give feedback (about the platform or other crowdworkers)?

Opportunity-enhancing HRM questions	
Subject	**Platform employees**
Involvement	Do you have the idea that crowdworkers feel involved with/are committed to their task? Why (not)? What gives you this impression? Do crowdworkers receive information/insights about the way how the platform works/helps them to do their task in a better way? Who is giving them this information/these insights? Does the platform organize activities to increase the involvement of the crowdworkers with their task? If so, what are these activities like and who is responsible for the execution of these activities?
Job-design	What tasks are involved in the job of a crowdworker? Who determines this? To what extent do crowdworkers have the possibility to decide how and when they want to do their job (e.g. guidelines, timelimits etc.) ? In what wat does the algorithm/app decide which crowdworker receives what task? Who is responsible for the crowdworkers to have the necessities for them to be able to do their task? (bike, bags, clothing)? Who are involved in this process?
Additional questions (not directly HR related)	What can the platform do in order to keep the job attractive for the crowdworker? Are there other items, questions, that we have not yet talked about, but you reckon are important for us to know?

Appendix B: Coding scheme

HR-domain	HR practices	Description code/HR practice	Codes EN	Codes NL
Abilities	Recruitment	Communicating job and organization information to potential job-seekers and recruiting the right applicants for a job, getting the right competences in the organization.	Job application Job advertisement Approach	Vacature Benadering
	Selection	Selecting those applicants that do possess the skills that are needed in order to successfully perform the given task or lacking within the organization.	Application Restrictions Certificates Competences Skills Information sharing Job admission	Sollicitatie Restricties Certificaten Competenties Vaardigheden Informatie delen Toelating
	Training & Development	The process of further development of those skills/competences that need attention to get the right employee performance, better performance or learn new skills.	Training Courses Workshops Onboarding Instructions Activities Tips	Training Cursussen Workshops Inwerken Instructies Activiteiten Tips
Motivation	Performance evaluation	Performance evaluation is an integrated approach to evaluate and appraise employee performance to ensure employees are focusing their work efforts in the way that contribute to organizational outcomes Feedback is the part of performance evaluation that is communicated to	Evaluation Performance appraisal Selection criteria	Evaluatie Functioneringsgesprek Beoordeling Selectiecriteria

	Feedback	those involved in the task process by sharing information about the performance or specific behavior related to a certain task	Feedback Comments Criticism	Feedback, Terugkoppeling, Opmerkingen Commentaar
	Compensation	Compensation refers to an organization's decision regarding how to influence employees' motivation to perform through monetary and non-monetary remuneration.	Compensation Monetary rewards Non-monetary rewards	Compensatie Beloning Salaris Vergoeding
	Incentives	Incentives are rewards on top of the ordinary compensation, incentives can be based on long or short-term performance or on certain achievements and they can be individual-based or team-based.	Incentive Bonus Advantages Privileges tips	Stimulans Bonus Extraatjes Advantages Privileges
Opportunities	Job design	The job design includes the tasks and responsibilities in a job and it reflects the amount of freedom or control that is involved in a job.	Control Freedom Tasks Responsibilities Task design	Controle Vrijheid Taken Verantwoordelijkheden Taak ontwerp
	Job involvement	The involvement is about being able to share information about the job, and the amount of influence. In practice this might include empowerment, information sharing and to what extent employees have a voice.	Involvement Absorption	Betrokkenheid Toegewijd/Toewijding

Crowdsourcing ecosystem	Description code	Codes EN	Codes NL
Platform	The platform forms an intermediary between the crowdworker and the requestor, it is the match between the demand by the requestors for the fulfillment of tasks and the supply by the crowdworkers to supply the requestor with the service they requested.	Platform 'Name platform' Employer client	Platform 'Naam platform' Werkgever Opdrachtgever
Crowdworkers	The provider, which is in fact the one that delivers the service or completes the task given, this can be one person or a group of persons, but in this study the focus is on the independent tasks and therefore, the provider or crowdworker is an individual who is active on crowdsourcing platforms in order to complete tasks.	Worker Crowdworker Employee	Werker Crowdworker Werknemer
Requestors	The customer or requestor is the person, or group of persons that want a task to be completed and is outsourcing this task	Requestor Customer Client	Aanvrager Klant Klant/cliënt