

Intrinsic Motivation and Organizational Identification Among On-Demand Workers

Kevin W. Rockmann

George Mason University

Gary A. Ballinger

University of Virginia

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Abstract

On-demand firms provide services for clients through a network of on-demand workers ready to complete specific tasks for a set contractual price. Given such on-demand work is defined by payment on short-term contracts with no obligation for continued employment, there is little reason to believe on-demand workers experience more than extrinsic motivation and a transactional relationship with the on-demand firm. However, using self-determination theory, we argue that to the degree that on-demand work fulfills innate psychological needs individual on-demand workers will develop intrinsic motivation, which further leads to organizational identification with the on-demand firm. Across two survey-based studies we find support for this path to organizational identification. This adds to the literature on motivation and identification by strengthening the link between individual needs and the individual-organizational relationship. Implications for theory and for the management of on-demand workers are discussed.

Keywords: on-demand work, self-determination theory, intrinsic motivation, organizational identification

Intrinsic Motivation and Organizational Identification Among On-Demand Workers

A specific type of freelance or contract work is on-demand work, which occurs when an individual – the on-demand worker – performs a task for a client on a short-term contract, facilitated by a third-party or on-demand firm (Brown, 2009; Kessler, 2014). While various estimates exist for the number of on-demand, or “online platform” workers, recent reports suggest a range of between .4% and .6% of the adult workforce (Harris & Krueger, 2015; Katz & Krueger, 2016), which represents an approximate range of between 650,000 and 1 million workers in the United States alone. While still a relatively small part of the overall workforce, participation in on-demand work has increased more than 300% in just the last two years (Farrell & Grieg, 2016), and venture capital funding for these types of business has increased five-fold (“The Economist,” 2014). While on-demand firms benefit from having a wide network of workers that they can advertise to customers as being able to perform a diverse set of services, these firms are vulnerable as on-demand workers can easily leave the on-demand firm at any time (Weber & Silverman, 2015). Despite this growing ubiquity of on-demand work, we do not yet understand whether and how on-demand firms can build strong relationships with workers when the business model is based primarily on short-term contracts and extrinsic rewards.

Organizational identification is defined as the "perception of oneness with, or belongingness to, an organization where the individual defines him or herself in terms of the organization in which he or she is a member" (Mael & Ashforth, 1992: 105). In this case our interest is in whether and under what conditions on-demand workers develop identification with the on-demand firm. As retention is one of the many positive outcomes to which organizational identification is linked (Ashforth, Harrison, & Corley, 2008; Riketta, 2005), fostering identification is critical for on-demand firms given the relative ease for on-demand workers to

exit the firm. Yet, whether identification is possible or how identification develops in such a context as on-demand work is an open question. On-demand workers have little if any physical proximity to the organization or contact with its employees, they have no investments in the firm (e.g., pension, sick days), and largely work in isolation. Further, much of the discussion on the so-called “gig” economy firms assumes that on-demand workers are primarily extrinsically motivated as they look to supplement or replace their earnings, which would suggest no more than an informal, contractual based relationship between worker and firm (Kessler, 2014).

While researchers have shown that organizational identification is possible for contract workers (George & Chattopadhyay, 2005), on-demand work is notably different from contract work as typically studied. On-demand workers are not located on site, as is common for contract workers, thus the ability that contract workers have to “feel and act as insiders” (George & Chattopadhyay, 2005: 94) and develop identification via high-quality relationships (Bartel & Dutton, 2001), is severely hindered for the on-demand work population. Further, traditional routes to identification such as strong role attachments (Sluss & Ashforth, 2007), similarity with others (Turner, 1981), organizational distinctiveness (Oakes & Turner, 1986), or organizational prestige (Chatman, Bell, & Staw, 1986), while possible, would appear to be much less likely in on-demand contexts. In the on-demand context individuals are employed only on contract and do not have co-workers, both of which present barriers to organizational identification based on role-relationships or perceptions of similarity. Further, given the lack of knowledge on-demand workers receive about the on-demand firm as compared to traditional workers, they may lack a base of information for which to make prestige, similarity, or distinctiveness judgments. Much of what these on-demand workers have with which to form identification judgments is the work itself – the tasks that connect them to the on-demand firm.

We use self-determination theory as a framework for exploring organizational identification between the on-demand worker and the on-demand firm. Self-determination theory states that individuals will develop intrinsic forms of motivation based in part on the degree to which work fulfills innate psychological needs (Deci & Ryan, 1980; 1985; 2000). We argue, extending theory on self-determination and identification, that on-demand workers are not purely extrinsically motivated, but rather can be intrinsically motivated by particular features of the work, a source of motivation which provides an as yet underexplored pathway to organizational identification. This approach extends arguments that meaningfulness in work is critical for both motivation and for developing one's sense of identity (Brief & Nord, 1990; Hackman & Oldham, 1976; Pratt & Ashforth, 2003). Our goal is to understand whether a deeper relationship between the on-demand worker and the on-demand firm is possible, and if so, to shed light on the motivational factors that play a role in this particular context. In doing this we extend past theory by examining the degree to which psychological need fulfillment via work predicts intrinsic motivation and consequent organizational identification.

On-demand Work at NEO

On-demand work, as stated, is contract work performed by an individual for a client on a short-term, or on-demand basis. The role of the on-demand firm is to facilitate the pairing, or matching, of the client with the on-demand worker. The most familiar example of this is the car sharing service Uber. In the typical Uber transaction, the client (passenger) contacts the on-demand firm (Uber) via their app to find an on-demand worker (driver) who is willing to drive from point A to point B. The driver and client both accept the terms of the contract, and interact with one another to complete the contract. Uber, as the on-demand firm, collects the money from the passenger and pays the driver his or her rate.

Unlike Uber, which is an on-demand firm focused on providing non-professional services, our research is conducted in a professional service firm we refer to as NEO. NEO is a Networked Expert Organization specializing in matching industry on-demand workers (experts) with clients in need of general industry information. The work at NEO consists of brokering the client-expert relationship; clients seek out NEO for on-demand workers that have specific industry information. As NEO has built a network of many thousands of on-demand workers in more than a dozen broad industries (e.g., financial, healthcare, legal, etc.), NEO is able to match an appropriate, knowledgeable, on-demand expert to serve client needs. As with Uber, NEO facilitates the interaction between the client and the on-demand worker, but is not physically present for the delivery of the service.

As an example of this process, a client could be the manager of an investment fund in need of information on a new kidney drug about to be released to the market by a pharmaceutical firm. The investment fund manager would like to talk with someone in the field who can help interpret some of the findings from the Phase III drug trials. The client sends this request to NEO. NEO, using knowledge of the on-demand worker pool, sends invitations to a number of doctors or researchers with expertise in kidney disease. These experts are notified via e-mail that they have been invited to a consultation on kidney disease. Some number of those on-demand workers will say yes, at which time the client can see which on-demand workers are available to provide information. The client then chooses one of the experts (or decides the information is no longer needed), and a phone call between the client and the expert is arranged. Once the consultation is complete, which typically lasts 30 or 60 minutes, the client is billed by NEO, and NEO pays the on-demand worker his or her rate. While this matching process can take several days, typically this entire process is completed within a matter of a few hours.

One challenge of motivating on-demand workers at NEO follows from the fact that the distribution of earnings roughly fit the Pareto principle, in that the majority of earnings come from a minority of individuals. In data obtained from NEO we found that 80% of earnings are attributable to approximately 1% of on-demand workers. This is because certain on-demand workers are going to be more in demand than others, based on their expertise in relation to external events and market conditions. However, the success of NEO and other on-demand firms is predicated on the ability to provide any expert at any given time, not just experts with topic areas that have recently been more in demand. Uber faces a similar problem – if every Uber driver goes to the same location with the most individuals, those requesting an Uber in less-traveled areas will not be able to get one when they demand one, and will cease to use the service.

We began our inquiry at NEO by collecting qualitative data via interviews from a sample of 33 on-demand workers within NEO, selected in order to achieve variety on earnings and industry backgrounds. This type of preliminary inquiry via interviews was necessary because of the newness of this type of work and the absence of prior research on this population about workers beliefs, values, and needs. With the exception of one individual who had earned more than \$550,000 from NEO, these individuals had earned \$9,900 on average (range \$350 to \$75,000) from an average of 27 consultations (range 1 to 202). They had been doing consultations for NEO for an average of four and a half years. Our goal was to ask the workers about their general experiences at NEO, so that we could identify the factor(s) that may be potential lines of inquiry for studying their relationship with NEO. The interview contained questions about (a) on-demand work experiences, (b) what it meant to be a part of NEO, and (c)

interest in continuing at NEO. At this stage of inquiry we had made no decisions as to which factors, if any, would be predictive of organizational identification with NEO.

All interviews were recorded, transcribed, and analyzed for common themes. When asked about their experiences at NEO, those who had positive experiences focused on the enjoyment they derived from the on-demand work itself. Different on-demand workers commented on how they enjoyed hearing from clients with “different perspectives,” and that they often “learned as much as the client did” by participating in the on-demand work consultations. As noted by this on-demand worker:

You get to chat with somebody and they basically pick your brain and they make you think about things that maybe you haven't thought about because they're looking at every different angle that they can think of and sometimes it causes you to think about your [own] industry, what you're doing and where it's going and stuff like that. So it's kind of a learning experience on both ends, on my end as well as their end.

What was surprising was that, when asked specifically about what it meant to be an NEO member, individuals did not speak of the qualities of the on-demand firm but rather spoke about the value of the work. For instance, this on-demand worker stated:

I find it sort of intellectually interesting. The value that I get out of the consultations is more a sort of academic interest in hearing about a different perspective on the issues that I deal with day in and day out.

This suggests perhaps a tighter link between the work and what it means to them to be an NEO member than we originally thought. Another on-demand worker went further when answering the same question, and reiterated not just the interestingness of the work, but did so while emphasizing that the prestige of being in NEO itself meant very little to him or her.

Most people wouldn't necessarily recognize that I do work for [NEO], [it's] not something that necessarily sets me apart...Again, I think I get to talk to a lot of pretty interesting people and talk about topics that I might not normally get a chance to talk about and learn something.

This led us to focus more on how the work that these on-demand workers were performing impacted how they felt about the on-demand firm, rather than simple membership in the organization or prestige of membership in the organization, which seemed to be less important to these individuals.

With regard to the work, on-demand workers were quite specific regarding their experiences, with several commenting on the benefits of the client interactions. As this expert noted: “NEO gives me an opportunity to deal with other people, in effect, financial institutions, investors, investment banks, hedge funds. I’m happy to do that. It rounds me out.” As such NEO as the on-demand firm is providing unique access to this intrinsic form of work for these on-demand workers. Another commented that he/she enjoyed the “interactions with the clients” because he/she was a sole proprietor and didn’t get to do a lot of “networking in person.” Other experts focused on the work being a validation for their own expertise, how grateful they were to be seen as an “expert in their area,” and being “recognized for their industry knowledge and experience.” This expert summarizes this theme well: “[The on-demand work] makes me feel like I have information and experience that [the client will] value and that makes me feel good and needed.” Others commented on the flexibility in doing the on-demand work: “The ability to receive an inquiry and be able to respond with my availability is quite convenient,” as well as the flexibility in responding only to projects that are seemingly a good fit: “I’ll respond to that [invitation] based on whether I think I would feel I would be able to give somebody useful

information.” Again, NEO as the on-demand firm is supplying the work that these individuals are valuing.

What these themes suggested was that the intrinsic value in the on-demand work was not only possible but seemed to play a critical role in predicting positive attitudes of these individuals not just towards the work, but also towards the on-demand firm. Further, that the work, which is being provided by NEO, seemingly met individual needs for feeling competent, connecting with others, and having a good deal of autonomy. Given these met needs and the importance of intrinsic motivation for these individuals, it led us to apply self-determination theory (Deci and Ryan, 1980, 1985, 2000), as opposed to social identity theory, to further study identification with the on-demand firm. Social identity theory and self-categorization theory center on the idea that for reasons of self-enhancement individuals depersonalize as they see themselves as comparable with prototypical members of the social group (Tajfel & Turner, 1986; Turner, 1987). Identification then results as these social groups are internalized into one’s sense of self. While possible in the on-demand firm, this preliminary inquiry revealed no evidence of depersonalization nor of on-demand workers as prototypical members. Self-determination theory, in contrast, focuses on how met needs via work impact personal motivation and consequent outcomes. As such we use this approach to help explain why on-demand workers might experience intrinsic motivation, then extending the theory to explore why they might in turn identify with the on-demand firm.

Self-Determination Theory and On-Demand Work

It has long been known that individuals have different motivations for performing work (e.g., Herzberg, 1966; Porter & Lawler, 1986; Staw, 1977). Self-determination theory, developed by Deci and Ryan (1980, 1985, 2000), states that motivation can be more controlled, where

individuals are driven solely by extrinsic rewards (Brief & Aldag, 1977), or more autonomous, where individuals are acting out of their own volition. One type of autonomous motivation is intrinsic, which is indicated by individuals finding themselves naturally drawn to tasks (Grant, 2008), looking at the completion of the work as the goal in and of itself (Amabile, 1993; Bono & Judge, 2003). While self-determination theory plots intrinsic and extrinsic motivation on opposite ends of a continuum, there is increasing evidence that intrinsic and extrinsic motivations are independent, each with unique antecedents and outcomes (Amabile, 1993; Amabile, Hill, Hennessey, & Tighe, 1994; Grant, Nurmohamed, Ashford, and Dekas, 2011). We agree with this notion and with Staw (1977), who noted that in organizations, because financial incentives exist alongside interesting tasks, individuals can simultaneously experience extrinsic and intrinsic motivation for doing their work.

Need Fulfillment in On-demand Work

Self-determination theory takes the perspective that individuals have innate, rather than acquired, psychological needs (Hull, 1943). Deci and Ryan (2000) focus on the three needs of competence, autonomy, and relatedness, and argue that the fulfillment of such needs are essential to individuals feeling growth, integrity, and well-being. Competence is based on the innate need to feel effective (White, 1959); when individuals feel competent they are able to learn and grow in their environment (Deci & Ryan, 2000; Elkind, 1971). Relatedness refers to the innate desire to be connected to others (Baumeister & Leary, 1995), and is central not only to the literature on identification but also psychological attachment (Bowlby, 1958). Autonomy refers to control or volition – the desire for individuals to have freedom to determine how to integrate their work with their sense of self (deCharms, 1968; Deci, 1980; Ryan & Connell, 1989).

As described by Deci and Ryan (Deci & Ryan, 2000; Ryan & Deci, 2000), there is a strong relationship between fulfillment of each of these needs and intrinsic motivation. Several experiments have found that positive feedback, linked to the need for competence (Deci & Ryan, 1980; Vallerand & Reid, 1984), leads to intrinsic motivation (Deci, 1971), as individuals will enjoy work when it supports feelings of self-esteem. The link between autonomy and intrinsic motivation is based on individuals feeling responsible for their work (Fisher, 1978; Zuckerman, Porac, Lathin, Smith, & Deci, 1978), as well as being free to explore important aspects of their self via their work. Relatedness, while argued to be “less central to intrinsic motivation than competence or autonomy” (Deci & Ryan, 2000, p. 235), is still critical as relatedness provides individuals a degree of security in the social context in order to explore all of the benefits of the work. This is supported by research that has found individuals reporting work to be more intrinsically motivating when they are in supportive and caring environments (Ryan & Grolnick, 1986; Ryan, Stiller, & Lynch, 1994).

In the on-demand context, while many workers likely enjoy the economic benefits that such work provides, we argue that on-demand work can concurrently support intrinsic motivation. This is because this type of work thus provides an opportunity for individuals to satisfy personal needs that may be otherwise unsatisfied (McHugh, 2016). In this way individuals can use on-demand work to craft their careers (Wrzesniewski & Dutton, 2001), so as to better fulfill personal needs that are unfilled by one’s current job or perhaps unfilled given that one has retired or is unemployed. As need fulfillment is a key antecedent to intrinsic motivation (Deci & Ryan, 2000), it is likely that this population of on-demand workers who experience met needs will be motivated by the intrinsic value in the work.

On-demand workers are hired for their competence or expertise and they may view the work as providing an opportunity to validate said expertise. To the degree that the work accomplishes this, the individual is likely to continue because such work makes them feel good about their own skills. As individuals feel better about who they are, they internalize the work, which to them feels more autonomous rather than controlled. This positive feedback, either in the form of additional opportunities for consultations or clients who express gratitude, should strengthen feelings of intrinsic motivation (Deci & Ryan, 1980; Vallerand & Reid, 1984).

The on-demand worker likely values autonomy and freedom to complete contracts on an as-needed basis, as they are likely working on-demand because they value the ability to control when and whether they work (Weber & Silverman, 2015). As noted by Harris and Krueger (2015, p. 5), these individuals can choose “when to work, and whether to work at all.” The on-demand firm seemingly wants the same autonomy – to have a wide network of diverse individuals who are willing to work on contract at different times. Further, in the context at NEO workers have a great deal of autonomy in the task work itself, in that they can say whatever they’d like – NEO employees do not listen to conversation. Thus it is likely then that performing such on-demand work fulfills individual needs for autonomy in ways that even traditional work may not.

Regarding the need for relatedness, it is unlikely that the on-demand firm is seen as supporting or caring given the arms-length nature of the relationship. In NEO there is no assigned “mentor,” and work is arranged almost exclusively via e-mail, as the work at Uber is arranged almost exclusively through the Uber App. As noted, however, in this type of work, the majority of the interactions are with the client, not with the on-demand firm. Thus this need for relatedness, as suggested by some of the on-demand workers, is met via interactions with the

clients. If on-demand workers find meaning in that social connection to the client, it is likely that such connections are part of what is providing intrinsically motivating work for the on-demand worker.

Hypothesis 1: Performing on-demand work that fulfills needs of competence, autonomy, and relatedness will be positively associated with intrinsic motivation.

Intrinsic Motivation and Organizational Identification

If needs are met via the on-demand work and individuals feel intrinsically motivated to continue to engage in such work, the question is whether that motivation is enough to strengthen the relationship between the individual and the on-demand firm. While past research has found a positive relationship between intrinsic motivation and organizational commitment (Gagné, Chemolli, Forest, & Koestner, 2008; Tremblay, Blanchard, Taylor, Pelletier, & Villeneuve 2009), satisfaction (Gillet, Gagné, Sauvagère, & Fouquereau, 2013; Patrick, Knee, Canevello, & Lonsbary, 2007; Tremblay et al., 2009), and retention (Gillet et al., 2013), whether intrinsic motivation is related to organizational identification is unknown, especially in the on-demand context where such a deep relationship seems unlikely to occur.

When an individual enters a new, unknown, organization they are likely to ask questions “about the relevance of this organization for the purposes of self-categorization” (George & Chattopadhyay, p. 72). This is due in part to the inherent need to seek attachments to aid in the search for meaning and connectedness in one’s social context (Katz & Kahn, 1978).

Organizational identification is one outcome of this process – the degree to which an individual includes the organization as part of his or her self-concept (Ashforth & Mael, 1989; Pratt, 1998; Sluss & Ashforth, 2008). As such, organizational identification, unlike other attitudes such as job satisfaction and commitment, is associated with “feelings of solidarity with the organization”

(Patchen, 1970, p. 155; see also van Knippenberg & Sleebos, 2006).

As summarized by Ashforth et al., (2008), development of organizational identification is based on both a cognitive and evaluative component. The cognitive component includes an awareness of category membership, while the evaluative component is a “sense that this awareness [of category membership] is related to some value connotation” (Tajfel, 1982, p. 2). One potential source for value connotation is goal congruence between the individual and the organization (Lee, 1971). To the degree that on-demand work is intrinsically motivating, individuals will evaluate the on-demand firm favorably as the firm wants the same goal as the individual – to perform the on-demand work. In this way the firm is providing them work that they value, which should meet the evaluative component of identification development (Tajfel, 1982). Feeling competent functions as a social validation (Ashforth, 2001) and self-enhancement motive (Hogg & Turner, 1985; Smidts, Pruyn, & Van Riel, 2001), helping individuals appreciate the firm that validates their expertise. Autonomy is a generally valued job characteristic (Spector, 1986), and can support feelings of organizational identification because the organization is giving freedom and control to the individual – helping them do what they want to do (Russo, 1998). Relatedness is defined by feelings of connectedness – to the degree that individuals perceive that sense of attachment (Baumeister & Leary, 1995), even if the source of the social connection is the client, it contributes to sense that the work is meaningful, which has been linked to identification (Pratt & Ashforth, 2003). Together this suggests the following hypotheses:

Hypothesis 2: Intrinsic motivation in performing on-demand work will be positively associated with organizational identification with the on-demand firm.

Hypothesis 3: Intrinsic motivation with on-demand work will mediate the relationship between personal need fulfillment and organizational identification with the on-demand firm.

To test these hypotheses we conducted two survey-based studies at NEO with different samples and at different points in time. The first study establishes that intrinsic motivation and organizational identification can occur among the population of on-demand workers. The second study explores how these constructs develop, specifically via the fulfillment of personal needs via the on-demand work.

Study 1

Method

Participants and Procedure

The data gathering strategy for this first study at NEO was a two-stage survey over six months. NEO provided the earnings history for each on-demand worker in the sample, which included information on the date and earnings for each consultation. Intrinsic and extrinsic motivations are assessed at time 1 while organizational identification was assessed at time 2. All scale items appear in Appendix 1. This study was approved by the George Mason University Institutional Review Board under the title Network Member Study – Part II (#7433).

2664 randomly sampled on-demand workers in NEO were invited to participate in this study. To solicit participation, these on-demand workers were sent an invitation to a two-part survey studying the experiences of on-demand workers within NEO. There was no compensation to participate in the survey. 571 responded to the first survey and of those, 324 responded to the second survey, for an overall response rate of 12%. There were no significant differences between respondents and non-respondents on earnings ($\Delta M = \$9697$, $t = 1.95$, ns), or tenure (ΔM

= .07, $t = .52$, *ns*), suggesting the sample is slightly biased towards those who have earned more as part of NEO.

Measures

Intrinsic Motivation. Intrinsic motivation was assessed with two items from the intrinsic motivation subscale of the WEIMS motivation instrument (Tremblay et al., 2009), based on the work of Vallerand (1997). A third item: “For the pleasure it gives me to know more about my profession” was added given that these are professional on-demand workers who may find value in this aspect of the work. Following the prompt: “Why do you continue to work for NEO?” intrinsic motivation was assessed with these three items. Alpha for this scale was .89.

Organizational Identification. Organizational identification is measured with the five items developed by Mael and Ashforth (1992). Alpha for this scale was .90.

Control Variables. We control for extrinsic motivation using the subscale on external regulation from the WEIMS motivation instrument (Tremblay et al., 2009). One item from the WEIMS subscale, “Because this type of work provides me with security,” was not shown to be internally consistent with the other two items, and was therefore dropped. The resulting alpha for this two-item scale was .91. The three additional WEIMS subscales of integrated regulation, identified regulation, and introjected regulation were not included as these represent various forms of externally-regulated motivation and we had no theory to suggest that such sources of motivation would be critical for the on-demand population.

We used earnings data provided by NEO to calculate total and recent earnings for each on-demand worker with the on-demand firm. For total earnings, we used the log of earnings from the beginning of membership in NEO until the time 1 survey. We used the log of this measure as the skewness of the distribution of earnings made the variance of the errors non-

normal (Cohen, Cohen, West, & Aiken, 2003). For total earnings the skewness of the untransformed variable is 7.76, while the skewness for the transformed distribution is .41. Because this study took place over six months, we also control for recent earnings, which represent earnings from on-demand work performed between the time 1 and the time 2 surveys. For recent earnings the skewness of the untransformed variable is 15.63, while the skewness for the transformed distribution is -.62.

Test of the Measurement Model

We conducted a series of Confirmatory Factor Analyses (CFAs) on the motivation and identification items used in this study. We began by examining the fit of a model with a combination of the motivation items loading on one factor (the two-factor model) versus a model with the motivation items loading on their respective factors (the three-factor model). As shown in Table 1, the model fit for the three-factor model with separate factors for intrinsic and extrinsic motivation had superior fit to the two-factor model with the motivation items loading on one factor ($\Delta X^2 (df = 2) = 481.70, p < .001$). Using multiple fit indices, the three-factor model had acceptable fit (Hu & Bentler, 1999) (RMSEA = .071 (90% CI = .053, .090); CFI = .97, TLI = .96, SRMR = .034).

Results

Means, standard deviations, and correlations between the variables are shown in Table 2. Overall earnings for on-demand workers were significantly correlated with recent earnings ($r = .446, p < .001$), suggesting that on-demand workers have skills that allow them to consistently be selected for contracts over an extended period of time. The means for extrinsic ($M = 5.41$) and intrinsic ($M = 5.48$) motivation were quite similar, suggesting that both are widely present among the on-demand workers. Further, the distribution of organizational identification around the

midpoint of the scale ($M = 4.22$, $sd = 1.31$) suggests also that identification with the on-demand firm is quite possible.

Insert Tables 1, 2, and 3 Here

The findings for Study 1 are summarized in Table 3. We tested Hypothesis 2 using ordinary least squares regression. Controlling for recent earnings, total earnings and extrinsic motivation, intrinsic motivation at time 1 significantly predicted organizational identification measured at time 2 ($b = .427$, $SE = .060$, $t = 7.11$, $p < .001$). This result provides support for Hypothesis 2.

Discussion

The results from this first study provide support that intrinsic motivation and organizational identification are possible for on-demand workers. Further, results provide support that those intrinsically rather than extrinsically motivated are more likely to have strong identification with the organization six months later. As organizational identification is more indicative of a deeper relationship between individual and collective, we argue that these individuals are internalizing the meaningful work they are doing and attributing that, in some way, to their membership in the organization. The second study was designed to again test the relationship between intrinsic motivation and organizational identification, while also testing whether met needs from self-determination theory are related to intrinsic motivation, and hence, organizational identification.

Study 2

Method

Participants and Procedure

The data gathering strategy for this second study at NEO was three surveys over nine weeks, with surveys being sent week 1, week 5, and week 9, complemented again by earnings data provided by NEO on each of the on-demand workers. Needs were assessed at time 1, intrinsic and extrinsic motivation were assessed at time 2, and organizational identification was assessed at time 3. This study was approved by the George Mason University Institutional Review Board under the title Network Member Study (#820862-3).

The sample for the study is 2118 randomly sampled on-demand workers in NEO. To solicit participation, these on-demand workers were sent an invitation to participate in a three-part survey studying the experiences of on-demand workers within NEO. There was no compensation to participate in the survey. 630 responded to the first survey, of those 475 responded to the second survey, of those 318 responded to the third survey, resulting in a 15% overall response rate. Four respondents were removed from the dataset because they had participated in the first study.

We found a statistically significant difference between respondents and non-respondents on earnings ($\Delta M = \$18,248$, $t = 5.10$, $p < .001$), but not on tenure ($\Delta M = .3$, $t = .002$, ns), suggesting the sample is biased towards those who have earned more at NEO.

Measures

Intrinsic Motivation. Intrinsic motivation was again assessed with the three items from Study 1, along with the addition of the previously omitted item from the WEIMS intrinsic motivation subscale (see Appendix 1). The alpha for this four-item scale was .87.

Psychological Needs. The items to assess the three psychological needs of competence, autonomy, and relatedness were adapted from the work-related basic need scales (W-BNS: Van

Den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010). The W-BNS scale has six items for each scale, and is structured so that individuals are responding to the degree to which one's permanent job fulfills one's underlying needs. The concern in adapting this to the on-demand context is that there is no office for the on-demand worker, nor is there a full-time job, so questions about "mixing with other people at my job" or being with "colleagues" or feeling "forced" to do things did not resonate with the NEO managers who were consulted on survey design. We chose three items in each of the three subscales that were felt to be most applicable to the on-demand work context, and changed the wording from "my job" to reference the work they do for NEO. After one item in the autonomy scale was dropped due to poor internal consistency (see Appendix 1), the resulting scales had three items for competence, two for autonomy, and three for relatedness. The corresponding alpha values for these three scales were, respectively, .76, .79, and .74.

Organizational Identification. Organizational identification was assessed using the same five items as in Study 1. Alpha for this scale was .90.

Control Variables. Total earnings were assessed using the same methodology as in Study 1. Given the shorter time frame of Study 2, recent earnings was not used as a control given many respondents had not performed consultations between the surveys. Extrinsic motivation was controlled for using the same two items as in Study 1. As in Study 1, the third item was dropped due to low internal consistency. Alpha for the two-item scale was .87.

Test of the Measurement Model

We conducted a series of Confirmatory Factor Analyses (CFAs) on the motivation, needs, and organizational identification items used in this study. We began by comparing the fit of the full six-factor model with items loading on separate factors for each of the three needs as

well as on intrinsic and extrinsic motivation to a model which had the motivation items loading on one factor (the five-factor model), and to a model that had the three needs loading on one factor (the four-factor model). As shown in Table 4, the model fit for the six-factor model with separate factors for intrinsic and extrinsic motivation had superior fit to the five-factor model with the motivation items loading on one factor (ΔX^2 (df = 5) = 668.09, $p < .001$), and to the four-factor model with the needs items combined on one factor (ΔX^2 (df = 9) = 316.16, $p < .001$). The full six-factor model had good fit (Hu & Bentler, 1999) (RMSEA = .055 (90% CI = .045, .065; CFI = .96, TLI = .95, SRMR = .040).

Results

Means, standard deviations, and correlations between the variables are shown in Table 5. In this study intrinsic and extrinsic motivation were positively correlated with each other ($r = .17$, $p < .01$), with intrinsic ($M = 4.17$) motivation more prevalent than extrinsic ($M = 3.23$) motivation ($t = 17.48$, $p < .001$). The distribution of organizational identification ($M = 4.10$, $sd = 1.40$) is similar to Study 1.

Insert Tables 4, 5, and 6 Here

The findings for Study 2 are summarized in Table 6. In testing Hypothesis 1, we included all three needs in the regression model. The link between need for competence and intrinsic motivation (controlling for the other two needs) was not significant ($b = .123$, $SE = .082$, $t = 1.50$, ns). The link between need for autonomy and intrinsic motivation (controlling for the other two needs) was significant ($b = .240$, $SE = .079$, $t = 3.04$, $p < .01$), and the link between need for relatedness and intrinsic motivation (controlling for the other two needs) was significant ($b =$

.123, $SE = .045$, $t = 2.77$, $p < .01$). Thus we find partial support for Hypothesis 1. Controlling for extrinsic motivation and total earnings, we found a significant direct effect of intrinsic motivation on organizational identification ($b = .740$, $SE = .108$, $t = 6.83$, $p < .001$), providing support for Hypothesis 2 and replicating the finding from Study 1. This is shown in Model 1 in Table 6.

To test Hypothesis 3, we tested whether there were significant indirect effects of the underlying needs on organizational identification through intrinsic motivation (Hayes, 2013). First, as seen in Model 3 in Table 6, controlling for extrinsic motivation, total earnings, and all three needs (competence, autonomy, and relatedness), we found a significant direct effect of intrinsic motivation on organizational identification ($b = .508$, $SE = .102$, $t = 4.96$, $p < .001$). We did not find a significant indirect effect of need for competence on organizational identification through intrinsic motivation ($ab = .063$), with a bias-corrected and accelerated 95% confidence interval based on 10,000 bootstrap samples that included zero (-.030, .170). We found a significant indirect effect of need for autonomy on organizational identification through intrinsic motivation ($ab = .122$), with a bias-corrected and accelerated 95% confidence interval based on 10,000 bootstrap samples that was entirely above zero (.032, .248). The ratio of the indirect effect to total effect was 29.6% (.122/.412), and the ratio of the indirect effect to the direct effect was 41.9% (.122/.291). We found a significant indirect effect of need for relatedness on organizational identification through intrinsic motivation ($ab = .063$), with a bias-corrected and accelerated 95% confidence interval based on 10,000 bootstrap samples that was entirely above zero (.015, .129). The ratio of the indirect effect to total effect was 8.5% (.063/.742), and the ratio of the indirect effect to the direct effect was 9.3% (.063/.679). Taken together, these results

provide partial support for Hypothesis 3 in that significant indirect effects are found for need for autonomy and need for relatedness.

Discussion

The findings from Study 2 extend the findings from Study 1 by again showing the prevalence of organizational identification and intrinsic motivation among this on-demand workforce. Further, results demonstrate that organizational identification is linked to intrinsic motivation, which stems from the fulfillment of personal needs by those engaging in this type of work. Specifically, both the need for relatedness and the need for autonomy predicted variance in intrinsic motivation, with intrinsic motivation mediating the relationship between both autonomy and relatedness and organizational identification. As in Study 1, neither total earnings nor extrinsic motivation were related to organizational identification.

General Discussion

This research opened with the question of whether on-demand workers could form deeper relationships with on-demand firms, and if so, how. Across two studies we have found support for the notion that intrinsic motivation and organizational identification with on-demand firms are possible, despite the barriers to such feelings in a context where the only interaction between the firm and the worker is contracts and payments. We have argued that the internalization of the work, based in part on the fulfillment of needs, impacts the internalization of the organizational category into one's sense of self. The studies have further shown some evidence for why on-demand workers develop such feelings of intrinsic motivation and consequent organizational identification. Supporting self-determination theory, need fulfillment, especially needs for autonomy and relatedness, were the most strongly related to intrinsic motivation.

Imagine a lawyer, doctor, engineer, or other professional who has been in their field long enough to build expertise over a certain domain. That expertise is clearly valued beyond just one's organization, as seen by the growth of this on-demand industry. The professional on-demand firm has seized on this opportunity, and is serving as a matchmaker between domain experts and the firms in need of such expertise. The question for the on-demand firm is: how to incentivize experts to do this work? Given the business model it seems the most common answer to this question is to pay them. What we find here is a double-edged sword. While the firm might think paying them over and over leads to a deeper relationship marked by identification, the findings here suggest that may not be a viable path. That lawyer, doctor, or engineer may be looking for something more. They are looking for autonomy, perhaps because they are not getting it in their own job, and they are looking for connection, again perhaps because it is lacking in their own job. Thus the allure of the on-demand work is not simply because is it extra work, it is also, and perhaps more importantly, different work. These workers are able to have conversations or work on projects and connect with clients in ways that provide much needed meaningful conversations.

As such it is possible that the intrinsically motivated on-demand workers are seeing the task work as something more than perhaps designed. While "task" cues one to think of extrinsic rewards and behaviorist motivation theories, work conveys the notion that a collection of tasks has meaning, that it may be viewed as an occupation, or perhaps as a part of how one defines oneself at work. Similarly, for Uber, the task is driving from point A to point B, but the work is "being a driver for a customer." That met needs from such tasks could influence changes in identity and possible outcomes for the organization potentially changes how we think about the role of agents in the identity formation process.

While there is very little research on on-demand firms, the premise of doing business in this context is to cultivate relationships with workers that are only based on extrinsic rewards. What we believe is compelling here is that even though the on-demand business model is set up purely based on extrinsic rewards, individuals have needs, and those needs can be met even if the organization isn't necessarily trying. Further, that the organization benefits in terms of organizational identification by fulfilling these needs, even though, again, they may be doing so without realizing the effect on the on-demand worker. In this case the unintended consequence for the organization may be positive – that they are developing a stronger attachment without necessarily realizing why.

Theoretical Contributions

Self-determination theory is a theory of motivation and personal well-being – how individuals develop more or less autonomous forms of motivation and how such motivations impact personal outcomes. Theory on identification centers on how individuals see themselves vis-à-vis social groups such as organizations, seeking to understand how individuals come to identify with those groups. On-demand work provides a relevant context to bridge this gap, how motivations that are developed towards work play a role in shaping the relationship with the organization. The findings here extend self-determination theory by suggesting that not only does intrinsic motivation play a role in determining individual well-being, such meaningful work plays a role in internalizing the organization as well.

The research also answers the call to contextualize intrinsic motivation and move beyond individuals working on isolated tasks in experimental settings (Ambrose & Kulik, 1999). As noted by Grant (2008), citing Shamir (1990): “A more social concept of intrinsic motivation is needed” (p. 321). In addition to demonstrating a link between intrinsic motivation and

organizational identification, we have shown the power of the most social of the needs (relatedness) in determining intrinsic motivation. That this need, rather than competence, was more central to intrinsic motivation was quite surprising given that the nature of on-demand work is based on leveraging one's competence, or expertise. This suggests that internalizing tasks (and the organization) may be as much about who one works with, rather than simply what they do. In this context it is likely that the on-demand worker is deriving that social connection from the client rather than from the firm. This is surprising because it is likely that the clients are people that they don't know and likely will never interact with again. That both intrinsic motivation and identification can come from such anonymous interactions also suggests we broaden our notion as to the sources of such meaning in organizations. This suggests a much more critical role of this need than has been acknowledged, especially in this context of on-demand work.

These findings complement the deep and growing interest among many identity and work scholars in how individuals develop meaning in their work (Pratt & Ashforth, 2003; Wrzesniewski, Dutton, & Debebe, 2003). However, while meaningful work has been suggested as a pathway to identification (Pratt & Ashforth, 2003), these studies empirically demonstrate this link. Extending these ideas is the potential role of non-organizational members (e.g., clients) in providing said meaningful work. If salespersons, for instance, can draw meaning from client connections, it may change how organizations build and maintain strongly identified employees.

We also contribute to theory on motivation by showing, as have others, that extrinsic and intrinsic motivations are distinct. While many of the findings within self-determination theory are centered on the idea that incentives undermine intrinsic motivation (Deci, Koestner, & Ryan, 1999), we found no such relationship. Earnings had no relationship with intrinsic motivation in

either Study 1 ($r = -.03, ns$) or Study 2 ($r = .07, ns$), yet were significantly related to extrinsic motivation in both. There were also relatively small correlations, in opposite directions, between intrinsic and extrinsic motivation in both Study 1 ($r = -.12$) and Study 2 ($r = .17$), suggesting the relative independence of the two sources of motivation.

Limitations and Future Directions

The first limitation concerns the generalizability of the sample to more stable, ongoing employment relationships. While on-demand work is a desirable and growing context, it is not reflective of most individual-organizational relationships that are characterized by the sort of deeper interpersonal relationships that emerge from repeated interpersonal contact. We encourage future research not only on on-demand and freelance work and how individuals are motivated and develop organizational identification in such contexts, but also the relationship between intrinsic and extrinsic motivation and organizational identification in more traditional contexts.

Our sample in Study 2, and to a lesser degree Study 1, is biased towards those who have earned more in these on-demand firms. It is possible that the hypotheses we have made are more relevant for those with more experience, and that identification for relative newcomers could have a different source. This could help explain why extrinsic motivation is lower in Study 2 – those motivated purely for extrinsic reasons do not last in the on-demand firm. Finally, while we have separated our surveys over time and have suggested both theoretically and empirically that there are causal relationships between needs and earnings, motivation, and organizational identification, we have not completely ruled out the possibilities for reverse causality or other explanations for these outcomes. For example, it is possible that for some individuals who have a strong need to belong organizational identification comes first, and it is only after feeling a sense

of meaningful membership in the organization that individuals develop intrinsic motivation towards the work (e.g., Peters, Tevichapong, Haslam, & Postmes, 2010). While we believe the most parsimonious explanation is the one presented given that the first encounter with the organization is via the work, we encourage future research to continue the efforts to separate out these constructs over time.

Conclusion

The explosion in on-demand work in the last decade has raised important questions about whether it is exploitative of on-demand workers (Kaminska, 2014; Kessler, 2014). The source of the economic benefits to firms that build business models based on these relationships has been clear for some time – witness the explosion in venture capital funding (“The Economist,” 2014). But the question of whether on-demand workers feel like they get anything more than an economic benefit from each transaction has been largely unaddressed. This research is aimed at helping us begin to understand how to unlock benefits available to both sides of the relationship in on-demand work by getting at how, for the on-demand worker, intrinsic motivation increases when such work fulfills important and universal personal needs such as autonomy and relatedness, and how, for the firm, the fulfillment of such needs fosters long-term beneficial outcomes like organizational identification. Continued research in understanding how to structure on-demand work relationships that are productive to both sides of the employer-employee relationship is critical so that we can maintain a productive balance of power between firms and employees in this emerging domain of work.

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Table 1

Study 1: Confirmatory Factor Analyses

Item	χ^2	<i>df</i>	RMSEA	CFI	TLI
Full three-factor model	83.82	32	.071 (.053, .090)	.97	.96
Two-factor (motivation factors combined)	568.84	34	.220 (.205, .236)	.72	.63
One-factor model	1557.57	35	.366 (.351, .382)	.20	-.03

Table 2

Descriptive Statistics and Intercorrelations for all Study 1 Variables (N = 324)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Earnings (log)	3.71	0.79				
2. Extrinsic Motivation	5.41	1.35	.18**			
3. Intrinsic Motivation	5.48	1.15	-.03	-.12*		
4. Recent Earnings (log)	2.24	1.35	.43**	.03	-.05	
5. Organizational Identification	4.22	1.31	-.04	-.03	.36**	.07

Note. Listwise deletion used.

* $p < .05$ ** $p < .01$

Table 3

Study 1: Regression Results

Organizational Identification				
Variable	Model 1		Model 2	
	B	SE	B	SE
Constant	4.57	.42 ***	2.02	.54 **
Recent Earnings	.10	.06	.13	.06 *
Total Earnings	-.13	.11	-.14	.10
Extrinsic Motivation	-.02	.06	.03	.05
Intrinsic Motivation			.43	.06 **
R^2	.01		.13	
Change in R^2			.12 **	

Note. $N = 324$

* $p < .05$ ** $p < .01$

Table 4

Study 2: Confirmatory Factor Analyses

Item	X ²	df	RMSEA	CFI	TLI
Full six-factor model	265.31	137	.055 (.045, .065)	.96	.95
Five-factor (motivation factors combined)	933.40	142	.133 (.125, .142)	.74	.68
Four-factor (needs items combined)	581.47	146	.098 (.089, .106)	.85	.83
One-factor model	1650.85	152	.177 (.170, .185)	.50	.44

Table 5

Descriptive Statistics and Intercorrelations for All Study 2 Variables (N = 314)

	Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1	Earnings (log)	4.10	0.73						
2	Need for Relatedness	3.02	0.87	.10					
3	Need for Competence	4.50	0.54	.28**	.21**				
4	Need for Autonomy	4.41	0.57	.19**	.32**	.56**			
5	Extrinsic Motivation	3.23	0.78	.21**	.15*	.14*	.19**		
6	Intrinsic Motivation	4.17	0.69	.07	.25**	.25**	.32**	.17**	
7	Organizational Identification	4.10	1.40	.05	.51**	.14*	.29**	.15*	.38**

Note: listwise deletion used.

* $p < .05$ ** $p < .01$

Table 6

Study 2: Regression Results for Mediation Tests

Variable	Intrinsic Motivation		Organizational Identification					
			Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE
Constant	2.00	.36 **	.45	.61	.48	.67	-.54	.67
Total Earnings	-.02	.05	.01	.10	-.05	.10	-.03	.09
Extrinsic Motivation	.09	.05	.16	.10	.11	.09	.06	.09
Need for Competence	.12	.08			-.13	.15	-.20	.15
Need for Autonomy	.24	.08 **			.41	.15 **	.29	.14 *
Need for Relatedness	.12	.04 **			.74	.08 **	.68	.08 **
Intrinsic Motivation			.74	.11 **			.51	.10 **
R^2	.13		.15		.27		.32	
<i>Change in R</i>							.05 **	

Note. $N = 314$

* $p < .05$ ** $p < .01$

Appendix 1

Need for Competence

I feel competent when I do work for NEO.

I am good at the work that I do for NEO.

I have the feeling that I can accomplish the most difficult tasks assigned to me by NEO.

Need for Autonomy

I feel like I can be myself when working for NEO.

The tasks that I do at NEO are in line with what I really want to do.*

I feel free to do my work at NEO the way I think it could best be done.

Need for Relatedness

At NEO, I feel like a part of a group.

At NEO, I can talk with other people about things that really matter to me.

I don't really feel connected with other people when working for NEO.#

Intrinsic Motivation

Because I derive much pleasure from learning new things.

For the satisfaction I experience when I am successful at doing difficult tasks.^

For the satisfaction I experience from taking on interesting challenges.

For the pleasure it gives me to know more about my profession.

Extrinsic Motivation

For the income it provides me.

Because it allows me to earn money.

Because this type of work provides me with security.*

Organizational Identification

If someone were to criticize NEO, it would feel like a personal insult.

I am very interested in what others think about NEO.

If I were to talk about NEO, I would say "we" rather than "they."

NEO's successes are my successes.

If someone praised NEO, it would feel like a personal compliment.

*dropped due to poor internal consistency

reverse scored item

^added for Study 2