

# Making it Work, or Not: A Longitudinal Study of Career Trajectories Among Online Freelancers

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Online freelancing is growing rapidly. However, despite this rapid growth, we have a limited understanding of online freelancers' long-term experiences and evolution, or how online freelancing influences freelancers' broader career goals. To address this gap, we interviewed a set of online freelancers at two time periods, two and a half years apart. We found that long-term engagement with online freelancing involves a unique set of financial, emotional, relational and reputational burdens that represent the overhead of maintaining an online freelancing career. We found that this overhead influenced online freelancers' participation and perceptions of online freelancing over time, as well as the strategies some freelancers employed to manage their careers. Our findings further highlight how online freelance platforms can afford unique career development opportunities over a longer period of time, including career exploration and transition, entrepreneurial training and reputation and skills transfer. Based on our findings, we present policy and design implications to increase the sustainability and accessibility of online freelancing.

CCS Concepts: • **Human-centered computing** → **Human computer interaction (HCI)**.

Additional Key Words and Phrases: Online Labor Platforms; Online Freelancing; Gig Economy; Career Trajectories; Career Development; Future of Work

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Careers no longer consist of a series of stable jobs within traditional organizations. Rather, they are evolving into project- or task-based engagements across multiple organizations, employers and work contexts, occasionally in short sequences or even in parallel [4, 14, 32, 44, 45, 65]. This recent fragmentation and taskification of careers is largely fueled by the rise of the gig economy and resulting “just-in-time workforce” [18] facilitated by digital labor platforms introduced over the last decade.

The global market for online labor has grown by approximately 50% over the last three years [1, 3] as millions of freelancers increasingly turn to online freelance platforms to access work. Online freelance platforms (e.g., Upwork.com, PeoplePerHour.com) allow independent employers (clients) to connect with workers remotely, offer temporary positions and accomplish a diversity

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of tasks and projects. These platforms remain a growing source of remote work for a large set of skilled occupations (e.g., software engineering, digital marketing, writing and translation).

However, despite millions of workers increasingly turning to online freelance platforms [1, 3, 42], it is unknown how this unique new form of work influences online freelancers' career experiences and evolution, especially in the long term [7, 32]. Furthermore, understanding career development, evolution and sustainability in new forms of work, such as online freelancing is of growing importance given that contemporary careers as a whole are becoming increasingly less structured, linear and predictable than in decades past [14, 44].

Prior research has largely described the challenges online freelancers experience in their day-to-day online freelance platform activities, such as heightened uncertainties from algorithmically controlled reputation systems, unmet information needs and power asymmetries (e.g., [11, 39, 49, 61]). Further research has identified that some freelancers have distinct career development motivations for online freelancing, such as skill development and entrepreneurship [9, 30]. Yet we do not know the extent to which these motivations are realized as individuals engage in online freelancing over many years, or how their career challenges, goals and strategies evolve as a result of online freelancing. We are also largely unaware of the practices they develop to participate in this form of work over a longer period of time. Thus, this paper focuses on the following central research questions:

- What is the longer-term experience of online freelancing?
  - What challenges do online freelancers experience sustaining their online freelancing careers?
  - What strategies do online freelancers develop over time to manage their online freelancing careers?
  - How do online freelancing activities relate to broader career goals?

To answer these research questions, we conducted interviews with a set of online freelancers at two time periods, two and a half years apart. Using this method we contribute a unique longitudinal perspective of the experience and evolution of maintaining an online freelancing career. First, we found that long-term engagement with online freelancing can involve a distinct set of financial, emotional, relational and reputational burdens that represent the overhead of maintaining an online freelancing career. Furthermore, we found that some online freelancers cope with these burdens by developing strategies in an attempt to ensure career security and sustainability. Finally, we found that online freelancing can support freelancers' career goals and development in unique ways. Specifically, we highlight three cross-cutting career development opportunities afforded by online freelancing that emerged frequently from our longitudinal data: career domain exploration and transition, entrepreneurial training, and reputation and skills transfer. Our findings raise critical questions about the potential and sustainability of online freelancing. We situate our findings within the broader discourse surrounding online freelance and gig work and outline policy and design implications based on the results of our longitudinal study, including a multifaceted approach to mitigating the overhead of online freelancing, supporting on- and off-platform career fluidity and fostering productive online client-freelancer relations.

This paper further contributes to the growing research on career and professional development research outside of a traditional organization or workplace settings (e.g., [21, 36, 56]) in both the Computer-Supported Cooperative Work (CSCW) and Human-Computer Interaction (HCI) communities. Career research within CSCW and HCI has examined the needs of low-resource job seekers [21, 22], how online communities can support career transition and informal professional development [56], and how people leverage online tools and their online presence to build a professional identity [24]. Our research contributes to this body of work by not only informing

our understanding of careers in online freelance platforms, but also by articulating the relevance of longitudinal research within HCI and CSCW career literature. We argue that HCI and CSCW researchers and practitioners need to consider the longer-term impact of sociotechnical systems on career development and evolution. Such a perspective is essential to identifying what workers, policymakers and designers can implement to adapt to and support new career structures in a rapidly changing world of work [7, 32].

## 1 RELATED WORK

### 1.1 Online Freelancing as a New Work Genre

Online freelancing constitutes a specific new genre of work. A large number of online freelance platforms (e.g., Fiverr.com, Upwork.com, PeoplePerHour.com) utilize a consistent interaction model and set of contractual terms between the client and freelancer [46]. Prior work suggests a variety of motivations and levels of freelancing engagement, both offline and online. For instance, in one large-scale survey, 60% of freelancers reported freelancing by choice, whereas 40% reported it as a necessity. Furthermore, while 50% of freelancers reported viewing it as a temporary way to make money, an equal number reported perceiving freelancing as a long-term career choice [1].

While online freelance domains are rapidly evolving, the Online Labor Index [3, 42] disaggregates projects mediated through platforms into six occupations: clerical and data entry, professional services, software development and technology, creative and multimedia, sales and marketing support, and writing and translation. Online freelance platforms similarly attract a diversity of clients, ranging from corporate employees at Fortune 500 companies [53] to small business owners or individuals seeking to outsource a single task. Furthermore, online freelance platforms facilitate both short- and long-term projects, ranging from a few hours to multiple months; the project-based nature of online freelance platform work often requires many online freelancers to engage in multiple, parallel projects across different clients. Though our research focuses on online freelancing, it is possible that our results may be relevant to other new alternative work arrangements characterized by a similar absence of an “organizational holding environment” (i.e., belonging to an organization) that can provide psychological and financial stability and direction for workers [60], and to a growing number of workers who are less likely to receive traditional career support in new forms of work [32, 59, 69].

### 1.2 Benefits of Online Freelancing

A large body of research sheds light on the potential benefits of online freelancing, including monetary gains, career flexibility (necessity and choice), increased access to domain-relevant work, and skill development (e.g., [1, 30, 43, 66]). In the following section, we highlight specific topics and unaddressed questions that are critical to studying and supporting online freelancers’ career trajectories.

*1.2.1 Online freelance platforms as potential outlets for experimenting with new skills and entrepreneurial aspirations.* Though limited, recent research on identity construction in the gig economy highlights how working on online platforms can enable freelancers to experiment with new skills and off-platform opportunities [9]. Specifically, Bellesia et al. interviewed online freelancers on Upwork and found that they often adapt their skills to adjust to the platform’s unique features. The freelancers in their sample reported occasionally using online platforms as a place to experiment with different skills and to access off-platform opportunities, specifically with regard to entrepreneurial aspirations. However, this research also highlights a gap in our understanding of the longer-term impact and interplay between freelancers’ on- and off-platform career aspirations. To address this gap, the present study expands beyond online freelancers’ experiences on a single

platform or online context, and highlights both the opportunities and challenges that emerge from the relationships between individuals' on- and off-platform career goals.

*1.2.2 Skill development and evolution among online freelancers.* Recent research indicates the potential and role of skill development in online freelance platform work. For example, in a survey of 167 microworkers and online freelancers, Margaryan et al. found that online freelancers are highly self-regulated and learning-oriented [54, 55]. Related research highlights that learning new skills to obtain better offline jobs in the future is a key motivator for many on-demand workers [30]. Additionally, in two large-scale case studies on skill provisions and utility on Fiverr and Upwork, Anderson and Huang et al. found relationships between performance, income and different skill set combinations on these two online labor platforms [5, 35]. Huang et al. found that developing a skill related to a worker's existing skill set correlates with better performance of the new skill [35], and Anderson [5] found that workers with diverse skills earn higher wages than those with more specialized skills. Overall, their results point to potential relationships between skill development and performance among online freelancers. However, they call for an understanding of the underlying factors behind online freelancers' skill and domain provision patterns, including the factors that influence this evolution, which we contribute in the current paper.

### 1.3 Challenges of Online Freelancing

Despite the reported benefits of online freelancing, prior research has shown critical and pervasive challenges in this new form of work. In this section, we draw specific attention to how algorithmic management and the platform-based nature of online freelancing contribute to rising inequality and heightened uncertainty among online freelancers.

*1.3.1 Algorithmic control creates new challenges for career management.* A growing body of research reveals how online freelance platforms can impact and shape the degree to which workers experience flexibility and precarity (i.e., insecure employment). Several studies have investigated how the high degree of commoditization, labor fragmentation and power asymmetries, expose workers to the unpredictability of a contingent labor market in the absence of labor regulations and rights (e.g., [29, 47, 49, 72, 73]).

Related research further underscores the effects of algorithmic control and management on online freelancers' behavior and outcomes on the platform. For example, recent work demonstrates how platforms' use of algorithms can create modern-day "invisible cages," which impact how and why people find work [62]. While limited, other recent work has begun to highlight the tactics that some online freelancers leverage to cope with and react to platform algorithmic control. For example, in a qualitative study of online freelancers working solely on Upwork, Jarrahi et al. highlighted the additional demands and constraints online labor platforms often imposed on freelancers in their study, which led them to adopt critical literacies (i.e., gig literacies) to leverage platform features productively for tasks such as building a reputation and managing transaction risks [39]. However, absent from this growing body of literature is an understanding of the longer-term effects of platform control and constraints, and their impact on career trajectories. Changes in platforms' underlying algorithms may trigger corresponding changes in freelancers' experiences, motivations and behaviors that can only be understood over a longer period of time. Therefore, our current research thus examines the longer-term effect of platform control and constraints by looking at the longer-term trajectories of online freelancers who began on online freelance platforms.

*1.3.2 Unmet information needs and the burden of impression management.* Previous work suggests that online freelancers must engage in high levels of impression management, but they often lack the information needed to do so effectively. Online freelancers frequently experience heightened

uncertainty which can trigger them to seek new information to guide their behavior in the initial stages of their online freelancing career [13]. However, prior research has shown that the design of online freelance platforms often hinders opportunities to engage in traditional information-seeking behaviors (e.g., overt questions and observing) that are commonly used to reduce uncertainty and successfully navigate new roles and expectations among employees [11, 57]. For example, Blaising et al. found that freelancers seek referent information (i.e., knowledge necessary to succeed on an online freelance platform) to guide task selection and appraisal information (i.e., feedback indicating how well they are doing) to improve their performance, with both forms of information are currently lacking in most online freelance platform environments [12]. Related work extends the research on impression management among offline freelancers (e.g., [6, 15]) and the often new forms of “invisible labor” necessary to find work [16]. Specifically, Foong et al. developed sociotechnical systems to support freelancers in constructing impressions of themselves online and in coping with the growing importance and burden of impression management [24, 25]. We build on this research by studying the longer-term information-seeking and formation practices among online freelancers, including the strategies they develop to respond to uncertainty as their online freelancing careers evolve.

*1.3.3 Prior work primarily studies successful online freelancers and is limited to a single platform.* Finally, as Bellesia et al. highlight that, to date, research on online freelance platforms has been largely biased toward investigating and documenting the experience of successful online freelancers [9]; this bias can inadvertently overlook critical barriers to participation. To address this gap, we investigate and report on the career trajectories of online freelancers regardless of their online freelancing career’s ultimate success.

#### **1.4 Career and Professional Development Research in CSCW and HCI**

Finally, our longitudinal study builds upon career and professional development research within CSCW and HCI, while also acknowledging the increasing social and economic forces that influence career opportunities and outcomes in new forms of work [69]. For example, HCI researchers have designed tools aimed to mitigate challenges underserved and disadvantaged job seekers experience, such as powerlessness, and to help low-resource job seekers develop the skills and pathways necessary to meet their career aspirations while bolstering their self-efficacy [19–22]. Related research has looked at the challenges and strategies entrepreneurs in resource-constrained communities face [8, 37]. For instance, in multi-year studies of entrepreneurs in Accra and Detroit, Avle et al. found three key challenges to self-entrepreneurialization in the digital age: self-upgrading, maintaining technology and overcoming exclusion.

Another direction of career research within HCI and CSCW has concentrated on mentorship, social-networking technologies, and online communities of practice as support systems for offline careers (e.g., [36, 37, 56]). For example, Hui et al. investigated the role of sociotechnical tools (informal online communities around work) and presented an emergent theory of distributed apprenticeship [38]. They describe how professionals coordinate and combine distributed support with online tools to advance their offline careers in the absence of expert guidance. Additional HCI research demonstrates how people are increasingly turning to online resources for self-directed skill development and career support [56, 70]. For instance, in a study of career mentorship in online communities, Tomprou et al. found that people sought guidance to support specific offline career decisions, learn about best practices and receive immediate feedback. Our research builds on this research by taking a sociotechnical systems perspective to study career trajectories in online freelance platforms. Finally, we look at both the social and economic factors that influence careers

in an online freelance setting and consider the relationship between platform system design and longer-term career development opportunities in new forms of work.

## 2 METHODS

Our longitudinal study draws on interviews with online freelancers conducted two and a half years apart. First, we conducted interviews with 29 online freelancers and surveys with 198 online freelancers recruited from three online freelance platforms: Fiverr, Upwork and Etsy from June to August 2017 to understand participants' motivation and journey to online freelance platforms, as well as their initial work conditions. Based on the analysis of our initial data, we conducted 20 follow-up interviews with a subset of our original sample two and a half years later, focusing on how their work on online freelance platforms and careers as a whole had evolved. See Figure 1 for an overview of the research timeline.



Fig. 1. Schematic of our overall research method (numbers on arrows represent number of participants). This qualitative method follows a subset of freelancers over two years, and yields a detailed description of career evolution among online freelancers.

**2.0.1 Motivation and Benefits of Conducting a Longitudinal Study.** Longitudinal qualitative research (LQR) is distinct from other qualitative approaches as time is integrated into the research process so that change can be a key focus of analysis [68]. LQR has the unique potential to contribute to sustainable design, intervention and policy recommendations to support careers in new forms of work, as the long-term view of evolving in this relatively nascent type of work remains largely uncharted. For instance, LQR can enhance the validity in representations and explanations of an inquiry space and provides a unique opportunity to “reach areas that quantitative research cannot reach, producing high quality, in-depth data, and providing great explanatory value” by providing a more realistic understanding of causality [64]. Thus, LQR can provide a detailed and robust understanding of change over time (how and why things happen) and intervening social and contextual processes that interact and coalesce to produce individual outcomes, such as career trajectories among online freelancers [58, 68].

**2.0.2 Longitudinal Consent and Considerations.** Following recommended practices for LQR, we ensured that informed consent was “not a one-off event, but a process, with continuous consultation necessary throughout all phases of the research” [26, 64] by consulting and gaining additional consent from participants prior to their follow-up interview. Drawing inspiration from Howard and Irani’s call for ethics of care and collaboration in HCI, we further attuned ourselves to how our participants might be invested in our research process and findings and how our research can and should respond to this investment [17, 34, 48]. In addition to consulting and gaining consent

for our follow-up study, we sought to care for participants by expressing our gratitude for their commitment to our project, closing interviews by inviting participants to share anything they thought we should know or any questions they had for us and reiterating our availability should they have any questions or concerns or interest in our research following our interview. Finally, the first author conducted both sets of interviews and was thus able to “maintain continuity for participants” by remaining a consistent point of contact and interviewer [64].

## 2.1 Initial Data Collection with Online Freelancers in Summer 2017

*2.1.1 Interviews.* We began by conducting semi-structured interviews with 29 online freelancers in June and July 2017. We recruited participants from three online freelance platforms: Etsy.com (marketplace for handmade and vintage goods), Upwork.com and Fiverr.com (marketplaces for digital services such as writing and web development). While all companies are based in the United States, their platforms are used by a globally diverse population. In all, we conducted 29 semi-structured interviews in the first time period. Interviewees were online freelancers (ages 18-60; 17 female, 12 male); 15 Upwork, 8 Fiverr, 6 Etsy. We worked to recruit online freelancers with diverse levels of experience (e.g., duration of online freelancing, education, offline work history), success (e.g., profile rating, jobs completed, hourly rate, total earnings) and demographics (e.g., ethnicity, age, gender). To recruit participants, we used a combination of targeted and snowball sampling [52]. To aid in recruitment, we created job postings and messaged participants using tools provided by the platform. Interviews were conducted in English, via video or phone call or messenger and ranged from 30 minutes to one hour. Participants were compensated \$10. Interview questions focused on their motivation for online freelancing, as well as their experiences and challenges of being an online freelancer, such as skill-development activities and interaction with clients and other freelancers.

*2.1.2 Surveys.* In order to obtain baseline experience data from a larger, more representative pool of online freelancers for later follow up, we also conducted a survey with online freelancers between July and August 2017. For this survey, we recruited 204 freelancers from the same three platforms (Upwork, Fiverr, Etsy); however, we excluded from our analysis participants who spent less than five minutes on our survey, leaving us with 198 responses. We structured our survey questions to complement our interview findings, creating closed-ended questions about activities and challenges based on codes from our interview responses. In total, our survey included 18 questions: 4 free responses, 14 multiple choice (select all and only one answer). Participants were compensated \$5 (<30-minute task). Similar to interview recruitment, survey recruitment used a combination of snowball sampling and targeted outreach. Interview participants were not allowed to participate.

*2.1.3 Data Analysis of 2017 Interviews and Surveys and Design of Longitudinal Study.* In the two years leading up to and during our follow-up interviews, we actively immersed ourselves in our data and related literature. In particular, we performed qualitative coding and affinity diagramming of the skill and career-related portions of our 2017 interview and survey responses, developing themes to explore in more depth. From June to September 2019, all authors met to review and compare themes from our initial dataset with emergent online freelancing literature. During this review of our data and recent literature—including both unique and overlapping career and skill development themes—we noted critical, yet unanswered research questions related to these topics, as well as dominant themes within our data that would be valuable to explore longitudinally. Based on our preliminary analysis from 2017, we also decided at this stage to focus solely on online freelancers recruited from Upwork and Fiverr (rather than Etsy) because the nature of their work was fundamentally different than that of the sellers in Etsy.

## 2.2 Follow-up Interviews Two Years Later

*2.2.1 Recruitment: Two rounds of interview data collection.* We conducted follow-up interviews in two rounds, allowing for iterative cycles of analysis and data collection recommended in a grounded theory approach [67]. In our first round of follow-up interviews, we sampled exclusively from initial interview participants. We contacted previous interview participants via messaging systems on social media (e.g., LinkedIn) or freelance labor platform (e.g., Upwork). Outreach via non-platform outlets was essential to avoid survival bias and allowed us to reach participants who had stopped working online or using the primary platform where we originally recruited them. During this first follow-up round, we conducted 10 follow-up interviews with previous interview participants (see Table 1a).

Our analysis of interviews from this first round raised additional questions and suggested several relevant participant variables and dimensions that might affect the representativeness of emergent themes within our data, such as the duration of online freelance work prior to our initial interview, reasons for online freelancing, as well as the domain, type and distribution of online freelance platform work. We then conducted a second round of follow-up interviews to extend our data collection. In this second round, we drew on our survey data corpus of open and closed-ended responses from 198 online freelancers to identify and recruit previous survey participants based on the aforementioned gaps in our data. Based on this, we targeted a subset of survey participants and invited them to participate in a follow-up interview. In total, we conducted six follow-up interviews with previous survey participants (See Table 1a). During this second round, we also conducted four additional follow-up interviews with previous interviewees who indicated interest following our first data- collection period. In all, we conducted 10 interviews in this second follow-up round (Table 1a). This second round of data collection helped address the identified potential gaps in relevant characteristics of our first round and also incorporated negative or atypical cases, strengthening our understanding and explanation of typical cases [51, 71].

*2.2.2 Protocol for Follow-up Interviews.* We followed a general protocol for each interview, focusing on participants' career experiences and evolution (on- and off-platform), career perceptions and future goals between our interviews. We tailored our follow-up probes for individual participants based on their previous interview or survey data. Before each interview, the first author reviewed and made detailed notes of each follow-up interviewee's previous transcript, codes and memos (in the case of previous interviewees) or survey responses (in the case of previous survey participants). Between our two data-collection periods: November to December 2019 (10 interviews) and March to April 2020 (10 interviews), we analyzed our data and iterated our protocol to further explore emergent themes related to our guiding research questions. Follow-up interviews lasted between 60–90 minutes (except in the case of P5 whose interview was 40 minutes due to caregiving constraints) via Zoom or Google Hangouts and were audio-recorded. Participants were compensated \$25.

## 2.3 Data Analysis

All audio recordings were partially transcribed with an automatic transcription service (Temi.com). We then reviewed and corrected transcriptions prior to loading interviews into the Dedoose software for analysis.

*2.3.1 Mapping Career Trajectories and Analytical Memoing.* Following our first data collection, we began by creating visual maps of the career trajectories of our first 10 follow-up interviewees. We used data from our initial interviews in 2017 to map their journey to online freelancing and their experience leading up to our initial interview, and used the follow-up interview data

Table 1. Follow-up interview participant demographics (n=20).

(a) Domain categories based on Online Labour Index categories of platform occupations [42].

ID	Age	Gender	Location	Platform in 2017	Years online freelancing prior to initial data collection	Primary online freelancing domain(s)
P1	40-50	M	US	Upwork	1-2 yrs	Software development and technology
P2	20-30	M	US	Upwork	<1 yr	Clerical and data entry; Writing
P3	30-40	F	South Africa	Upwork	<1 yr	Writing
P4	30-40	F	US	Upwork	<1 yr	Professional services; Creative and multimedia; Writing
P5	20-30	F	US	Upwork	1-2 yrs	Clerical and data entry; Writing
P6	30-40	F	US	Upwork	1-2 yrs	Writing
P7	30-40	F	Philippines	Upwork	3-5 yrs	Clerical and data entry
P8	20-30	F	US	Upwork	1-2 yrs	Software development and technology; Sales and marketing support
P9	30-40	F	Philippines	Upwork	<1 yr	Clerical and data entry
P10	30-40	F	US	Fiverr	3-5 yrs	Professional services; Sales and marketing support
P11	20-30	M	Jamaica	Fiverr	1-2 yrs	Professional services; Sales and marketing support
P12	20-30	F	Nigeria	Fiverr	3-5 yrs	Software development and technology; Professional services
P13	30-40	M	US	Fiverr	3-5 yrs	Creative and multimedia; Writing
P14	20-30	F	Nigeria	Fiverr	1-2 yrs	Software development and technology
P15*	60-70	F	US	Upwork	>5 yrs	Creative and multimedia; Writing
P16*	40-50	M	US	Upwork	3-5 yrs	Professional services; Writing
P17*	20-30	F	US	Upwork	<1 yr	Clerical and data entry; Writing
P18*	30-40	F	US	Upwork	3-5 yrs	Writing
P19*	20-30	F	US	Upwork	<1 yr	Clerical and data entry; Professional services
P20*	40-50	F	US	Fiverr	3-5 yrs	Sales and marketing; Writing

(b) \* indicates initial data collection was via survey rather than interview

to highlight major changes in terms of their activities, experiences and important events over the two-year period. Coupled with open coding and analytical memoing (as discussed next), we used this primarily exploratory analysis to begin to understand the effect of specific events or circumstances on participants' career trajectories (i.e., triggers of changes to where, what and how they worked) over time. Additionally, this exploratory analysis allowed us to identify initial categories of change in participation (e.g., moving off-platform, fully or partially abandoning online freelancing), which we returned to while qualitatively coding our data. During data collection and analysis, we wrote analytical memos to cultivate constant reflexivity—critically challenging our assumptions, examining our analysis process and iteratively expanding and connecting emergent themes in our data [10]. We met weekly during and after data collection to discuss and iterate these memos.

**2.3.2 Qualitative Coding.** We began analyzing our follow-up interview transcripts using a grounded theory approach [28, 67], beginning with open-coding of interview transcripts. Three researchers independently coded a subset of interviews and met to discuss and clarify codes and emergent themes. The first author open-coded all remaining interviews. We aimed for variation in participant variables and dimensions, and continued data collection until our analysis stopped generating new codes or themes, indicating that we had approached theoretical saturation [67]. Next, we performed axial coding, grouping similar codes and analyzing them to identify higher-level cross-cutting themes around our research questions. We applied these codes to transcripts via Dedoose [2]. During this period, we frequently returned to interviews and analytical memos to clarify codes. Finally, we refined the higher-level cross-cutting themes during the paper-writing process.

### 3 RESULTS

#### 3.1 Maintaining an Online Freelancing Career Involves Financial, Emotional, Relational and Reputational Overheads

Our longitudinal analysis of participants' trajectories revealed that the independent, precarious and platform-based nature of online freelancing placed unique financial, emotional, relational and reputational overheads on many freelancers. We found that these overheads had either persisted, compounded, or emerged since our initial data collection and made it difficult or impossible for some participants to maintain their online freelancing career or fully realize potential career development opportunities. Our longitudinal data allowed us to analyze how this overhead broadly influenced shifts in participation, perceptions and strategies over a longer period of time. In the following section, we highlight the nature of the overhead of maintaining an online freelancing career (as summarized in Table 2) and integrate examples of their effect on changes in freelancers' participation and perceptions between data collection periods.

Overhead	Definition	Experiences
Financial	Stress associated with income uncertainty and changing payment conditions.	Demand fluctuation Platform and client control Financial insecurity
Emotional	Stress associated with self-managed and time-limited nature of online freelance tasks.	Self-management stress Burnout from unique task demands
Relational	Stress associated with social interactions and connections required by online freelance work or lack thereof.	Limited social support and connection Online client-freelancer relations
Reputational	Stress associated with effort required build and maintain reputation to secure on- and off-platform work opportunities	Platform and client control External legitimacy

Table 2. Four types of overhead imposed by longer-term engagement with online freelancing.

**3.1.1 Financial overhead.** The financial overhead of maintaining an online freelancing career involved concern over the long-term financial sustainability of online freelancing, uncertainty and stress from demand fluctuation, platform and client control over income and prolonged difficulty finding work.

*Demand fluctuation.* The constant fluctuation in demand on online freelance platforms made it difficult or impossible for some participants to anticipate when they could find gigs on a single platform, or solely rely on online freelancing to remain financially afloat in the years following our initial interview. For a few participants who had specialized in specific skills and domains since our initial interview, demand fluctuation frequently resulted in seasons where they struggled to find a sufficient number of gigs within their skill or domain areas to financially sustain their work. For instance, the constant demand fluctuations on Fiverr required P14 (who specialized in software development gigs) to secure additional work on a microtask platform that he disliked in order to ensure a consistent income in the time between our interviews. P13 echoed the sentiments of several participants as she articulated how *“the demand [of online freelancing] is always so random.”*

For a few participants, mobility since our initial interview did little to mitigate the prominent effect of constant demand fluctuation. For instance, despite P5's upward mobility within her online freelancing career since our initial interview (e.g., expanded online freelance project portfolio and reputation), she was shocked by persistent demand fluctuation that made it challenging for her to plan or save over a longer period. Similarly, P12, a full-time online freelancer who relied solely on

his income from Fiverr, discussed his continued challenge over the years with rapid gig demand fluctuation on the platform, often oscillating from a few gigs to numerous gigs coming “*in bulk*”, making it nearly impossible to estimate how much work he could secure in a given week.

*Platform and client control over income.* For some participants, client and platforms’ largely unregulated ability to end a contract or close a freelancer’s account without forewarning or explanation often induced stress and exacerbated long-term financial uncertainty in the years between our interviews (P10, P13, P14, P12, P19, P16). Participants working on-platform, as well those who worked with clients directly off-platform, faced this uncertainty. For instance, P19 described the stress induced by a recent experience where her client kept her contract active, but unexpectedly reduced her previously full-time contract with no forewarning. P19 reflected on this recent experience:

“It seems like you’re a full-time employee of the company. You’re speaking to everyone there, but on paper, you’re an independent contractor [...]. They need us later, but because we’re independent contractors, they can keep the contract, but give us nothing to do at the moment.” (P19)

This abrupt shift in P19’s work with her client—going from full-time to essentially no online freelance work or income—highlights the power clients possess to alter payment conditions of their project-based contracts on Upwork and, as a consequence, online freelancers’ financial security. Other participants discussed degrees of uncertainty around a commonly observed situation in the time between interviews: platforms *closing* freelancers’ accounts, often with no warning or explanation. For a few participants, these realities solidified why “*job security is not a thing (P12)*” when working on online freelance platforms, especially in the long term.

Additionally, several participants discussed their hesitation around platforms’ increased service fees and roll out of various “*pay to apply*” policies that required freelancers to pay to apply for gigs in the years between our interviews (P5, P1, P13, P12). A few participants cited these policy changes as their reason for migrating off-platform, in addition to circumventing platform control over their income. However, moving off-platform was often a double-edged sword: on the one hand, it reduced platform control and fees; on the other hand, it often contributed to additional overhead as participants recounted the additional time and money it took for them to “*rebrand*” (P5) off-platform in the time between our interviews. Rebranding off-platform primarily involved learning how to professionally migrate connections and interactions off-platform with clients while maintaining trust and reputation, developing packages and contracts and building up a client referral network without direct access to gigs or clients on platform.

*Prolonged difficulty looking for work with no payoff.* Time spent searching or applying for work does not equate to time spent earning for online freelancers. Prolonged periods without consistent or financially sustainable gigs thus propelled a few participants to completely abandon online freelancing between our interviews (P1, P9, P2). For instance, following a decade-long career in the foodservice industry, P1 transitioned in early 2016 to work online with aspirations of working in the information technology (IT) field with increased flexibility. In early 2017, P1’s full-time remote position reduced his hours, which spurred him to focus more on expanding his work on Upwork. In our initial interview, P1 was optimistic that his new technical skills and side projects would continue to improve his reputation and access to IT gigs on Upwork.

However, in our follow-up interview, P1’s initial optimism about his future on Upwork was tempered by a perpetual “*lack of interaction*” with his proposals and inability to find consistent and relevant gigs despite several months of proactive efforts and strategies. P1 reflected on the limited number of times he was able to secure IT gigs on Upwork where he found the tasks and feedback from clients more rewarding, with increased opportunities for skill development compared to his

current remote job where he reported “*stagnation*” completing more mundane and repetitive tasks. Even still, P1’s prolonged inability to find gigs on Upwork, combined with his need for a consistent income, ultimately outweighed this benefit and led him to abandon online freelancing at the time of our follow-up interview. Similarly, P2 and P9’s discouragement over the unpaid labor of searching and applying for online freelance gigs, coupled with their stagnant growth on Upwork, led them to abandon online freelancing altogether.

*Concerns about long-term financial sustainability.* Participants frequently recounted uncertainty over whether they could make online freelancing financially viable in the long term, as well as the effect this uncertainty had on their participation and previous perceptions of online freelancing. For several participants, financial precarity induced practical and emotional strain over the two-year period that solidified the importance of the tangible benefits and security of traditional employment, such as a consistent salary, 401K, health benefits and paid time off. Several participants articulated how this strain fueled their eventual decision not to solely rely on online freelancing as their full-time, or in some cases, part-time, employment in the long term (P19, P2, P17, P5, P9, P8, P4, P18).

Additionally, a few participants who continued online freelancing full-time since our initial interview reported anticipatory anxiety over financial challenges they might face in the future. For example, despite P1’s confidence in her intricate plan to ensure her online freelancing career, focused primarily on social media coaching (now primarily via non-market platforms such as LinkedIn), and personal business, remained financially sustainable after over a year of unexpected “*absolute s\*\*\**”, such as going into credit card debt several months after our initial interview, her uncertainty frequently re-emerged as she observed others abandoning their seemingly successful online freelancing careers. She recounted a time shortly before our follow-up interview when she was shocked that a fellow online freelancer was departing due to financial challenges:

“I’m, like, I thought you [other freelancer] had a bunch of clients: ‘You’re leaving?’ I was like, ‘Is nobody doing well in these things?’” (P10)

Similarly, P13, who had been online freelancing for multiple years prior to our initial interview, articulated her growing awareness of the challenges she—alongside other online freelancers—faced as many policies failed to accommodate or support freelancers. For example, despite P13’s continued success in her online freelancing career, she articulated in our follow-up interview her emergent uncertainty over whether or not she could achieve her longer-term goals, such as obtaining a home loan, due to challenges proving a consistent income as an online freelancer.

*3.1.2 Emotional overhead.* The emotional overhead of maintaining an online freelancing career stemmed from stress and burnout some participants experienced as they dealt with the longer-term negative effects of being their own boss and the tension between unique pressures from the nature of platform-based freelance work and resulting creativity constraints.

*Self-management stress.* For a few participants, the constant additional labor required to be their own boss (e.g., independently defining and managing parallel projects on platform) induced long-term self-management stress, and in some cases, shifted their perceptions of the previous allure of online freelancing long term. For instance, P5 discussed the long-term stress of having to constantly manage her interactions and brand, while prioritizing fragmented tasks and client relations. This reality drove P5 from being passionate about an online freelancing career where she could be her own boss in our initial interview, to eagerly anticipating transitioning to a full-time traditional job in our follow-up interview:

“I look forward to times where I show up to work and you [future employer] just tell me what I gotta do. [...] I like that, where I don’t have to delegate my day. 9 am there is

a meeting, 10 o'clock I'm meeting with, I like that. Where it's not like I have to figure everything out myself. It's exhausting every day." (P5)

*Burnout from the unique demands of online freelance projects.* We found that several participants experienced periods of heightened burnout after a longer period of online freelancing. Thus, regardless of participants' experience prior to our initial interview, the presence and effect of burnout emerged primarily within the temporal window between our interviews. Specifically, we found that the presence of burnout was increasingly prevalent among online freelancers, with a diversity of effects. For instance, P11 shared her personal experience with the burnout that she frequently observed other online freelancers discuss online, and the influence this burnout had on her decision to shift focus toward her offline job since our initial interview:

"This whole onset that people [other online freelancers] are talking about online, like crazy burnout, I was having that. It was just not healthy, so that's when I made the decision to focus more offline." (P11)

For some, burnout since our initial interview was a function of the "always-on" nature of working both on-platform and offline jobs with blurred boundaries (P11, P5), stress from working across multiple client time zones (P7), discouragement from periods of constant negative feedback and rejection (P13), or even the time-limited nature of online freelance tasks that make it challenging be in the "right frame of mind" to think creatively (P3). For some participants, these factors compounded each other. For example, P3 articulated how the time pressure of her tasks frequently led to emotional fatigue that was further compounded by payment uncertainty: "*There's tiredness and there's the outcome tied to it [payment uncertainty] and so it makes it doubly difficult.*"

**3.1.3 Relational overhead.** The relational overhead of maintaining an online freelancing career stemmed from the longer-term effects of limited social support and connection as an online freelancer, and the additional labor and stress induced by difficult online freelance platform clients.

*Limited social support and connection.* Online freelancers often work alone and do not have access to dedicated mentors or colleagues more readily available in traditional organizations. For a few participants, the longer-term burden of this absence—such as the weight of failing without a team or mentor and negative career and psychosocial effects of working independently—shifted their participation over the two-year period (P6, P8, P17, P5). For instance, in our initial interview, P6 worked as a full-time remote customer service representative and part-time writer on Upwork where she was interested in "*getting into the tech field (2017)*" with the goal of using her blog-writing gigs on Upwork to "*get into some coding (2017)*" by learning and implementing HTML and CSS. At the time of our follow-up interview, P6 had transitioned to working at a local offline organization as a junior software engineer after a little over a year of taking online coding classes. However, P6's decision to pursue an offline software engineering job, rather than on Upwork, resulted from trepidation of failing without a team to support her during the early stages of her transition into a new career domain:

"I look at them [software jobs on Upwork] every other day or so just to see anything that I might feel confident doing. But I always end up talking myself down. I'm talking myself out of it. I know it's too scary. So I'm really hoping to get there soon. But again, I just have this support system of my team right now [at her current position as a junior software engineer at an offline organization] and it's kind of scary to go outside of that just yet." (P6)

While the financial uncertainty of online freelancing motivated many participants to shift towards relying on traditional (offline) full-time work, the limited social connection in their online freelancing career further solidified this decision for a couple of participants. For instance, P8

expressed her frustration with being a “*voice on the screen all the time*” at her previous online freelance job with an email marketing organization where everyone else was collocated. P8 reflected on her early notions of online freelancing at the time of our initial interview—when working solo at coffee shops seemed “*cute*.” Yet over time, she realized the longer-term cost of missing the “*the social element*” of a traditional workplace, such as peer recognition, networking and socialization. Similarly, P17, who began freelancing on Upwork a few months prior to our initial interview after being laid off from her full-time offline job, found that online freelancing full-time without an additional offline job negatively impacted her mental health and productivity.

Notably, remnants of the effects of limited social support and connection among other online freelancers emerged for one participant later in her online freelancing career. P20, a full-time top-rated digital marketing freelancer on Fiverr, described how prior to finding a community of sellers on Fiverr during the year prior to our follow-up interview, she felt increasingly disconnected after years of being surrounded by people who failed to understand the legitimacy and unique challenges of online freelancing. However, while P20 was able to temper her isolation by collaborating with the sellers she managed through her new role as a Fiverr studio lead, many online freelancers around her were unable to find a similar community:

“But me coming in [to online freelance platforms] seven years ago and talking to other people who came around that time or within a five-ish [year] frame thereafter, they still kind of feel disconnected. I mean, even this week, I was talking to somebody who’d been here [Fiverr] for five years and she was like, ‘Oh, you’re like the first person I’ve really talked to.’ And I’m like, ‘Really?’” (P20)

*Difficult online client relations.* Managing client relations remained a constant source of frustration and uncertainty for many participants even as their online freelancing careers progressed. For example, client ghosting, whereby clients would unilaterally cease communicating (P16, P1, P8), steal long-term freelancers’ work (P13, P5), unclear expectations and rude communication (P16, P10, P19, P20, P13, P8, P7, P12). For a few participants, the persistent need to field difficult online client interactions and relations, despite continued progress in their online freelancing career since our initial interview, came as a shock. For example, despite P20’s long-term success and reputation on Fiverr, the effect of difficult clients persisted. She described how the digitally mediated nature of interactions between clients and freelancers can lead to abusive language:

“But more so now I think people [clients] hide and they’ll just say some of just the most cruelest (*sic*) things. They don’t even think I deserve to be where I am.” (P20)

Others highlighted their experience with clients consistently disrespecting their boundaries over the years; for example, clients texting them in the middle of the night (P5), or expecting them to be available around the clock (P8, P16, P9, P5). Combined, these examples demonstrate the immense relational burden that client relations frequently impose on online freelancers as many attempt to field these interactions, or are forced to adapt due to underlying power and information asymmetries, where clients often control their income and reputation for a project.

**3.1.4 Reputational overhead.** Online freelancers in our study had to perform extra work to offset power platforms and client hold over their online reputation, to translate and gain legitimacy for online freelance work in traditional offline settings and to manage conflicting offline and online career aspirations.

*Platform and client control over reputation.* As several participants migrated or expanded off-platform since our initial interview, we found that reputational concerns often evolved as their network reliance increased. For instance, P13 discussed the additional lengths to which she went to avoid tarnishing her reputation among her off-platform client network. Similarly, P5 and P10’s

experience and fear of a theoretical domino effect among their off-platform client networks if they were unable to live up to one of their clients' expectations brought a new form of reputational anxiety. For example, in our initial interview, P10 discussed her anxiety over the "leverage" (2017) her Fiverr clients had to damage her reputation through a single bad review, and thus her likelihood of success on Fiverr. However, as P10 expanded off-platform shortly after our interview, her anxiety shifted from client reviews and ratings on Fiverr to fear of letting one of her clients down due to the interconnected nature of her off-platform client network. For instance, P10 shared: "My [online] reputation is everything. If I screw something up, there's a risk there, because more people will know about it immediately than [they] would if I was a random person on the job."

As P10 further articulated, the interconnected nature of many participants' online client networks, coupled with the rapidly increasing currency of reputation in a sea of competition since our initial interview, placed a growing burden on many participants to be hyper-cognizant and calculated in their work and client interactions over a longer period of time. While the reputational weight among client networks was critical for many participants who ventured off-platform between our interviews, other participants who continued to work primarily on platform discussed ongoing uncertainty over the possibility of having their reputation jeopardized by a single bad gig or negative review, as well as the additional labor often required to avoid the reputational repercussions of canceling a job on platform. Thus, across on- and off-platform freelance engagement, our longitudinal data highlights the longer-term weight of reputation maintenance as an online freelancer.

*Barriers to translating and gaining legitimacy for online freelancing experience.* Reputational overhead expanded off-platform for a few participants who struggled to gain legitimacy for their online freelance work from traditional employers between our interviews (P2, P11, P5). For example, P11 discussed her desire for "local experience" after facing unexpected obstacles translating and gaining external legitimacy from offline employers; P11 recalled being asked if she was "committing fraud" or "lying" about her online freelance platform experience in interviews with local organizations. Similarly, P5 discussed her experience as a double-edged sword when applying to offline organizations; while some potential employers lauded her initiative, most made it clear that they viewed her as "too independent" and "not trainable."

In total, four participants stopped online freelancing altogether since our initial interview. However, as highlighted in the previous section, several participants significantly reduced their reliance upon and participation in online freelancing due to the overheads of maintaining their online freelancing career over a longer period of time. In the following section, we focus on the most frequent strategies participants employed in an attempt to mitigate different facets of overhead and establish more security and sustainability in their careers.

## 3.2 Overhead Management Strategies

Our longitudinal analysis revealed not only the overhead of maintaining an online freelance career, but also the cross-cutting strategies participants who still pursued online freelancing in any capacity leveraged to manage distinct and overlapping facets of this overhead. These strategies included a variety of practices to diversify their work sources and contexts, modulate their repertoire of online freelance skill domains, delegate or 're-outsource' their work and increase client- and gig-vetting practices.

*3.2.1 Diversifying and expanding work sources.* To manage the financial, reputational and relational overhead of their online freelancing career, some participants worked across multiple platforms, leveraged their off-platform work and network and appropriated platform algorithms.

*Multi-platforming.* Some online freelancers in our study engaged in ‘multi-platforming’ by finding gigs and clients on multiple platforms in order to cope with the challenges and unpredictability of working on a single platform (P13, P10, P16, P14, P17, P4, P18, P3). Working across multiple platforms allowed some freelancers to mitigate the effect of demand fluctuation, potential reputational damage on a single platform or even account closure. However, the degree to which participants leveraged multi-platforming to mitigate overhead varied in terms of the nature of engagement and motivation (e.g., consistently multi-platforming versus ad hoc multi-platforming) between our interviews. For instance, P13, whose multi-platforming strategy was more passive, transitioned to primarily connecting with freelance clients off-platform between our interviews. Thus, P13 only returned to Fiverr when a prospective client reached out to her, or as a future backup strategy to mitigate low demand off-platform: “I still use Fiverr on occasion, but it’s only if someone reaches out to me. I don’t do much prospecting on Fiverr anymore.” By contrast, a few participants needed to consistently multi-platform to financially sustain themselves and manage the persistent demand fluctuation that occurred between our interviews that contributed to financial overhead.

*Expanding offline.* Several participants who continued online freelancing in some capacity decided to pursue part-time or full-time offline work, or increased their reliance on offline networking opportunities between our data-collection periods. Offline expansion frequently mitigated income uncertainty and lack of social support, reducing the financial and relational overhead of online freelancing. For instance, at the time of our follow-up interview, P19 transitioned from working as a full-time online freelancer to working a full-time offline job and freelancing part-time on Upwork. During our follow-up interview, P19 articulated her increased satisfaction with her online freelance work once she did not have to deal with the heightened income uncertainty or isolation as she had in 2017.

A few participants (P8, P13, P12) further combated the demand and income uncertainty of online freelancing between our interviews by increasing their reliance on referrals from their offline network. For instance, P12 discussed securing on-platform jobs from his friends who ran local small businesses and sought out his business proposal gigs on Fiverr. For P13, sharing her freelance journey at local offline events at a local co-working space opened doors to expand her network of online freelance clients while enjoying community support that was often challenging to find as an online freelancer:

“I’ve been meeting people at those events because people hear my story about how I got into freelance and then people want to know more about, ‘Well, how do I get into freelance and what’s the first step that I should take?’ And having those open and honest conversations and being able to share my experiences with other people has unlocked so many doors for me [and] networking.” (P13)

P13 thus leveraged networking opportunities from her offline community to grow her portfolio of online freelance clients. Her strategy represents a fluidity between offline and online freelance work and opportunities that emerged frequently in our longitudinal data.

*Appropriating platform algorithms.* For several participants, continued experimentation and iteration with platform algorithms was essential to garnering additional clientele and combating fluctuation in demand over a longer period of time. While two participants (P18, P17) reported continuing to experiment with different strategies in an ad-hoc attempt to understand and manipulate platform algorithms to maintain or increase visibility over the years, several participants’ strategies evolved to require more deliberate research and iteration. Participants often employed meticulously researched ‘hacks’ (i.e., ways of effectively appropriating or leveraging platform algorithms for individual benefit) to improve visibility to potential and existing online freelance clients and ensure more consistent work. Visibility-hacking generally occurred on-platform (P18,

P17, P20, P3, P15). For example, between our interviews P3 identified patterns in Upwork’s referral system and strategically accepted gateway gigs that triggered Upwork’s algorithm to recommend her to clients, which in turn facilitated a rapid transition across domains.

Two participants discussed expanding visibility hacks to non-market freelance contexts, such as LinkedIn, as they migrated off-platform (P10, P13). For example, P10 shifted her focus from experiments with Fiverr’s gig-ranking algorithm to LinkedIn between our interviews. As she migrated off-platform, she continued to adopt an intricate cycle of study and experimentation with LinkedIn’s algorithm—sometimes for months on end—before making a post that garnered tens of thousands of views and significantly increased her online-freelance clientele visibility. Thus, across on- and off-platform freelance engagement, our longitudinal data highlights the increasing relevance of platform-algorithmic experimentation and adaptation as participants progressed and sustained their online freelancing careers.

*3.2.2 Modulating online freelance skill domain repertoire.* Participants often carefully monitored trends in supply, demand, and feedback within the online freelance market environment to guide modulation of their online freelance skill domains between our data-collection periods. This strategy most frequently helped mitigate demand fluctuations, financial insecurity and reputational repercussions induced by being unable to adapt to ongoing client requests.

*Abandoning competitive online freelance skill domains.* For several participants, careful monitoring of platform freelance market saturation and competition since our initial interview propelled them to abandon or recalibrate the domain(s) of the online freelance work they offered. For example, P5, who focused on social media management work in 2017, noticed both an influx in the sheer volume of online freelancers offering social media management Upwork, as well as a surge in online freelancers with specialized degrees and formal training that she did not have: “Now all of a sudden everyone’s a social media manager.” P5’s observation of market saturation thus led her to abandon this domain of work between our interviews and redirect her attention to skill domains where she could more consistently secure online freelance gigs.

A few participants even abandoned domain(s) of online freelance work between our interviews after determining low personal competitiveness based on client feedback and internal platform ranking. For example, P3 jettisoned her previous aspiration to transition into website copywriting in our initial interview based on one of her clients’ dissatisfaction with the results of her project deliverable. Despite P3’s client’s acknowledgement that her dissatisfaction with P3’s deliverable could have been a result of her own poor project instructions, P3 nevertheless decided to drop this domain of work based on her perceived lack of competitiveness securing consistent gigs going forward. Similarly, P14 determined he was not “good” at writing- or proofreading-related gigs based on client feedback and how well those gigs performed on Fiverr between our interviews:

“I wrote something the client returned it to me, complaining that it’s not good, it’s below what he expected. So writing never came good to me [on Fiverr]. What else? Proofreading, anything that involves that gig. That gig was not good for me, so I stopped doing those things [on Fiverr].” (P14)

By contrast, participants often expanded the types of online freelance skill domains they offered between our interviews based on market demand and client relationship maintenance.

*Adapting to changes in online freelance market demand.* To mitigate demand fluctuation contributing to financial overhead, some participants discussed frequently monitoring and temporarily expanding the type of freelance work they offered during periods of low demand or periods of success finding work in their primary domain (P16, P19, P10, P14, P4). Still, others expanded their skill domains in order to access more in-demand clients and gigs (P12, P3, P20, P5, P15). For instance, during our follow-up interview, P3 discussed noticing a trend in demand for software-focused

writing gigs on Upwork shortly before our follow-up interview, which led her to pursue learning about and writing on software topics:

“I started seeing a trend. Many people [clients on Upwork] want writers who are clued [into] this recent big data topic, machine learning, how to use cloud technology. And you can see that they are very serious clients, they want people who understand the content. So I told myself, ‘Hmm this is a path to pursue.’” (P3)

For P3, identifying and acquiring in-demand skills via off-platform courses and resources to access more consistent work in new skill domains emerged as an increasingly relevant practice since our initial interviews where she discussed her early attempts at learning what “*skills are in demand from the job postings [on Upwork]*” (2017).

While several participants similarly looked to gig postings to monitor in-demand skill domains that could provide more financial stability in the time between our interviews, others looked to client requests to forecast what skills they should acquire and what work they should offer in the future (P20, P12, P10). Some participants even identified new and potentially fruitful online freelance domains to pursue via their more immediate networks (e.g., friends and off-platform network) (P13, P10, P14). For instance, in 2017, P13 shared her recent pivot from public relations and entertainment journalism to search engine optimization (SEO) content writing on Fiverr after she realized that the demand for online journalism gigs was decreasing: “*I knew that my days were really limited within the online journalism*” (2017). However, during our follow-up interview, P13 shared her unexpected pivot *back* to online journalism and public relations freelance work after being continuously approached by prospective clients with requests and referrals between interviews. Combined, these examples illustrate the critical role participants’ skill domain adaptability played as their online freelancing careers progressed over the two year period.

*Maintaining client relationships.* Several participants discussed adapting the type of work they offered since our initial interview in order to maintain client relationships (P5, P3, P19, P12). For some participants, it was a “*slow escalation*” (P5) of client requests that eventually landed them in uncharted territory and thus required them to learn new skills and technologies to adapt to client requests. While some participants described their evolution into new skill domains of freelance work based on client requests as an opportunity to learn new skills (P12, P3), adapting to client requests always required rapid unpaid learning. For example, in 2017, P12 focused on consulting and software development work on Fiverr, which included quantitative analysis. However, in our follow-up interview, P12 reported transitioning into qualitative data analysis after his current client requested additional help with the qualitative aspects of their analysis.

Yet despite the significant additional labor necessary to learn new methods and software based on his existing client’s request for additional qualitative data analysis, P12 appreciated the process as it allowed him to identify a new in-demand skill domain while maintaining his reputation with his client and thus access to more consistent gigs. For others, however, such as P5 and P19, adapting to client requests was merely a means to an end, as they were largely uninterested in the new skills or domains of work that they had expanded into in order to maintain client ties, their reputation and access to additional work.

**3.2.3 Re-outsourcing online freelance tasks.** Several participants described different forms of *re-outsourcing* where they recruited or hired friends, family, or most frequently, other online freelancers to help complete certain tasks or portions of tasks.

*Re-outsourcing to keep up.* For some participants, re-outsourcing enabled them to keep up with unpredictable demands and client relationships to minimize or prevent future financial, reputational and relational overhead. Specifically, when participants were unable to complete a task (either lacking knowledge or ability) or had difficulty with specific, yet necessary tasks, they described

re-outsourcing tasks or portions of tasks to friends, family or other online freelancers (P10, P5, P18, P15). For instance, P10, shared her experience re-outsourcing aspects of her projects on Fiverr that were difficult to complete, but necessary to maintain her reputation and flow of consistent freelance work: “I have this [task] that I would not have had the capacity to do because it would’ve hurt my brain because that’s something that’s hard for me.”

*Re-outsourcing to scale up.* By contrast, other participants re-outsourced to manage high levels of demand and expand their reach to new clientele markets while maintaining their reputation. This scaling allowed them to ensure a consistent income stream and maintain or bolster their reputation by combining the skill sets of an organized network recruited via online platforms to tap into a new market of online freelance work (P20, P15, P18). For instance, P15, a top-rated writer with over seven years of experience on Upwork, leveraged her expert gig “skimming” skills—skills that she noticed many people attempting to transition to online freelancing do not have and struggled to identify. Thus, in combination with her network’s diverse skill set, P15 tapped into new topics and markets on Upwork that she would not have felt comfortable entering, while simultaneously helping friends or family earn needed money and exposure to online freelancing through the tasks she re-outsourced to them.

**3.2.4 Client and gig information-seeking.** A majority of participants emphasized the growing frequency and weight of client and gig vetting as their online freelancing career progressed. Participants’ increased fluency and evolving repertoire of information-seeking tactics informed new selectivity practices aimed to prevent multiple facets of client-induced overhead.

*Scanning relational signals.* Online freelancers in our study reported their increased reliance on prior reviews, gig posting(s) and pre-contract communication to quickly identify client *relational signals* (e.g., client motivation, willingness to collaborate, communication tone and latency, etc.) to filter and select the right clients (P20, P3, P7, P20, P17, P19, P16, P12, P5, P18, P10, P5). Obtaining reliable relational signals allowed some participants to minimize or prevent multiple facets of client-induced overhead. For instance, to get a sense of how a future client might treat her or what their future relationship might look like, P17 searched other freelancers’ platform reviews of clients for clues about what she could expect from a prospective client:

“But the main thing I look for in the reviews is that sometimes they’re all really generic like: ‘that was good’, or ‘I liked that’, or they don’t tell me anything. But the [other] reviews are like, ‘Hey, I really liked working with [client name], she was a good communicator, the project was really interesting.’ That [is] telling me this was more of an in-depth relationship between these two people and it seemed to work out well.”  
(P17)

*Testing clients for fit.* Other participants implemented test projects to access otherwise unavailable insight about clients before fully committing. For example, if P13 (who primarily worked with clients off-platform) had concerns about potential challenges with a prospective client (e.g., unrealistic client expectations that could exact burnout or reputational repercussions), she proposed a “test project” that involved completing a small portion of a potential client’s larger task or project to determine if there was a fit between their communication style and ideas.

Similarly, P12 proposed “feasibility projects” to determine if a potential client’s data analysis requests were realistic given the nature of the data and task constraints. By learning how to better filter out difficult clients apriori, freelancers were able to avoid some of the relationship-management overhead more challenging platform clients often imposed.

*Customizing gig and client relationship duration.* Over time, we found that participants often purposefully customized the duration of their gigs and client relationships (i.e., long- versus short-term) based on their experience with different facets of overhead between our interviews. For

example, while P11 mentioned the value of long-term clients in 2017 as this allowed her to see the progress of her work, her perspective shifted after she experienced burnout trying to balance her new full-time offline and online freelance work since our initial interview. Specifically, P11's long-term clients' expectations to consistently go "*above and beyond*" in her work quality exacted burnout.

Thus, to minimize the emotional overhead of her online freelance work, she shifted to working solely with short-term clients on Fiverr. For P11, short-term clients made her work more sustainable as they allowed her to balance her offline job and avoid compounding client expectations by way of mutual agreement of long-term clients' task-relative priority.

By contrast, other participants discussed the importance of long-term clients to reduce financial uncertainty and the stress of proactively seeking new gigs (P19, P16, P18, P17, P10, P14). For others, long-term clients and gigs allowed them to develop more personal client relationships and thus reduce the lack of connection that contributed to relational overhead. For example, P18 discussed her preference for long-term clients that afford more time to build trust, rapport and camaraderie with her client and even other freelancers on a project, while also feeling like a part of her clients' "*team*" of Upwork online freelancers—P18 expanded on her rationale:

"I think there's a difference with people [other online freelancers] who are just doing work they might only take two weeks to do or a month to do compared to 'Hey, I feel like I'm really part of this team.'" (P18)

For some participants, successful client matching was the sole reason they were able to sustain their offline and online freelancing careers in parallel without experiencing burnout. For instance, P17, who had spent the week before our follow-up interview working overtime at her offline job recounted her relief knowing that her Upwork client would be empathetic and flexible when she asked for an extension: "*When I was coming home, I was done. My brain was tapped out and I sent her [Upwork client] the message and she was like, 'Oh yeah, I get it.'*"

Career Opportunities	Definition	Opportunities
Career domain exploration and transition	Leveraging online freelance platforms to identify, explore and experiment with new online and offline career domains	Exploring online career domains Exploring online career domains
Entrepreneurial training	Leveraging online platforms identify market gaps and develop skills relevant to entrepreneurial aspirations via platform opportunities	Gaining market insight and exposure Developing skills relevant to entrepreneurial aspirations
Reputation and skills transfer	Leveraging and/or transferring reputation and skills from online freelance work to accelerate career	Transferring skills and reputation Acquiring within platform mobility

Table 3. Three unique cross-cutting career development opportunities afforded by online freelance platforms that frequently emerged in our longitudinal data: career domain exploration and transition, entrepreneurial training and reputation and skill transfer.

### 3.3 Career Development Opportunities of Online Freelancing

Despite the overhead and diverse array of strategies participants employed to cope, we found three cross-cutting career opportunities that emerged frequently from our longitudinal data: career domain exploration and transition, entrepreneurial training and reputation and skills transfer.

**3.3.1 Career domain exploration and transition.** Our longitudinal data highlights the prevalence and degree to which online freelancers leverage the access and visibility of different career domains

on online freelance platforms to either intentionally or fortuitously explore and transition into new domains and career paths. Notably, freelancers' exploration occurred with no explicit support from platforms. For example, several participants used online freelance platforms to explore new *online* career domains before and between data-collection periods (P7, P20, P6, P11, P15, P3, P10, P19, P13, P4, P14).

For instance, in our initial interview, P10 shared how Fiverr had served as a unique "*testing ground (2017)*" to quickly explore and identify where her skills, interest and market demand aligned. In the time since our initial interview, P10 leveraged insights from her intricate experimentation on Fiverr and offline interactions at a networking event to successfully explore and transition into a new career: social media coaching. While P10's exploration was more linear, several participants used online freelance platforms for parallel or adjacent career exploration by exploring new domains outside of their primary domain with career development goals, even when they did not anticipate an entirely new focus within their on- or off-platform career. For example, P3, who began online freelancing to stay home with her children after receiving her PhD in Chemical Engineering, leveraged Upwork to experiment and ultimately transition into content writing; at the time of our follow-up interview, she was continuing to pursue this career domain on Upwork even after she had transitioned back to her offline engineering career.

Similarly, P15, a children's literature author and freelancer on Upwork, had no intention of changing her primary career domain, but enjoyed challenging herself to test new creative domains slightly outside of her primary skill domain on Upwork; for example, advertisement and card writing. For others, online freelancing served as an outlet to test offline career paths between our interviews (P8, P11, P17). For instance, online freelancing allowed P8 to test web design before committing to a full-time offline web design job:

"And then, over all that time [doing web design online freelance platform work], I've come to the conclusion that's not something that I really want to do full-time." (P8)

P17 similarly experimented with "*coding and computer software (2017)*" when she first started working on Upwork after being laid off from her offline job, yet ultimately decided she was uninterested in pursuing this career path full-time offline. Furthermore, frequency and duration of exploration varied across participants. For example, exploration via online freelance platforms occurred before and after our initial interview for a few participants. For instance, following our initial interview, P11 explored social media management gigs on Fiverr as a potential career path; and in the time between interviews, she explored and tested tutoring and consulting gigs while deciding whether or not to pursue a master's degree and teaching.

For a few participants, career exploration was facilitated through happenstance exposure to new career domains through their work with on-platform clients. For example, between our interviews, P7 transitioned from online freelancing to direct publishing after being introduced to Kindle Direct Publishing (KDP) while working as a virtual assistant for her Upwork client who sold KDP books. Echoing the practice of several other participants, P7 leveraged online courses and tutorials to narrowly target and acquire skills she identified as relevant via on-platform exploration.

**3.3.2 Entrepreneurial training.** Online freelance platforms allowed several participants to identify market gaps through on-platform client interactions and exposure. In combination with developing both domain-specific and business skills relevant to their entrepreneurial aspirations, online freelance platforms thus served as a unique form of entrepreneurial training for several participants. For instance, in our initial interview, P13 shared how the market exposure she gained on Fiverr allowed her to connect with diverse companies and identify "*a need for women of color to actually step in and do freelance work for these companies (2017)*." At that time, P13 launched a platform aimed to connect freelancers with companies looking "*for the diverse talent they so desperately need*

(2017).” During our follow-up interview, P13 shared that her staffing business was “*really taking off*” was on track to becoming profitable enough for her to “*focus on providing opportunities for other freelancers [through her staffing agency].*”

For a few participants, the client relationships they developed as freelancers on-platform even evolved between our interviews to entrepreneurial business partners (P4, P15, P13). For instance, P4, who worked on social media management projects with an Upwork client in our initial interview, reported in our follow-up interview her transition to helping her previous client hire freelancers on Upwork, with plans to start a new business venture that leveraged their unique backgrounds in social media influencing and counseling in the coming year.

For other participants, entrepreneurial aspirations remained unrealized. Yet some participants shared their plans to employ the skills they had developed through online freelance platforms for future entrepreneurial endeavors (P3, P12, P5, P14, P18). For instance, P3 shared how online freelancing provided her an otherwise unavailable outlet to hone market insight and writing skills outside of her primary offline career, which she planned to leverage to build her own business later on in her career. Similarly, the unique consulting skills P12 acquired from working with non-expert clients on Fiverr supported his future plans to start his own local consulting firm.

**3.3.3 Reputation and skills transfer.** For many participants, online freelancing enabled them to leverage, and in some cases, transfer the reputation and skills they acquired from their on-platform freelance work to accelerate their online or offline careers.

For some, it was increased reputation garnered from their online freelancing career since the time of our initial data collection that bolstered their confidence and allowed them to acquire in-platform mobility (e.g., increased hourly rates, access to more clients and platform perks) from compounding platform reviews and referrals (P10, P3, P15, P12, P20). For example, the online marketplace context offered fewer cues (and thus, the potential for less bias and discrimination), which recently enabled P20 to gain recognition and mobility in her online freelancing career on Fiverr. She felt it was difficult, or nearly impossible, to obtain this previously in her offline job:

“It [online freelancing on Fiverr] afforded me a different role that I don’t think, even when I was in traditional [offline] roles, it was really hard to climb up because it’s more afforded to men at the time.” (P20)

For other participants, the reputation and skills they developed from online freelancing allowed them to build their resume and portfolio for offline jobs during periods of unemployment (P19) and even early on in their career (P11, P2, P5). Our longitudinal perspective allowed us to identify the unique ways that participants leveraged the skills and reputation they developed on-platform in off-platform career contexts.

For instance, several participants described the synergistic interactions between the skills and reputations they developed across different work contexts or mediums (e.g., offline-online, off-on-platform). For instance, P5, P2, P17, P4 and P11 shared how they transferred the skills they had developed online freelancing (e.g., domain-specific skills, communication and professionalism with clients who lacked domain expertise) to accelerate their offline career in the time between our interviews. For instance, in 2017, P17 worked full-time on Upwork and Chegg with the goal of “*using and expanding (2017)*” her skills after being laid off from her full-time offline job. At the time of our follow-up interview, P17 continued online freelancing on the side after finding a full-time job at a museum. Her motivation stemmed in part from the opportunity this combination afforded her to develop her writing and public relations skills across different environments and projects:

“I’m doing that [translating complex information for general audiences] in both places, and then I feel like the more I’m doing that, the better I am at that [skill] in general. So they sort of feed off of each other in that respect.” (P17)

While several other participants discussed similar examples of off- and on-platform work interacting to support career development over a longer period of time, it was the insider knowledge P4 gained through her experience freelancing on Upwork that allowed her to effectively hire and manage freelancers in her new full-time position. For example, P4 leveraged her understanding and empathy for the fragmented nature of online freelancing and how this impacts freelancers’ schedules and availability to identify relevant hiring signals and management practices on Upwork.

## 4 DISCUSSION AND DESIGN IMPLICATIONS

In this discussion, we situate our findings within related work and propose implications for future research, design and policy. Rather than present specific implications based directly on each of our findings, we instead suggest a set of implications that encapsulate our findings holistically. Even as we outline implications for design and research, we acknowledge that our research also suggests that effective change will require a multifaceted approach, including platform redesign, development of career support tools and resources, as well as new laws, regulation and freelancer organizing efforts (e.g., [27, 30, 41]). For instance, our findings contribute to and support an ongoing call to create a more egalitarian online marketplace, where freelancers have more power and access to benefits [30].

### 4.1 Mitigating the Overhead of Online Freelancing

First, our findings on the unique aspects of the overhead associated with maintaining a career online unify and extend a large body of literature on the characteristic precarity and uncertainty of gig work. Specifically, while previous work illustrates the heightened uncertainty of online freelancing (e.g., [13, 49]), our longitudinal perspective articulates the overhead this uncertainty and precarity incites, and the influence that overhead has on participation in online freelancing, in varying degrees, and over time. In doing so, our findings can inform future policy and design of technology to increase both the accessibility and sustainability of online freelancing.

With respect to platform redesign and tool development, one principle for how platform and systems designers could develop policies and tools would be to amplify existing strategies some online freelancers employed or created to help establish sustainability and security in their online freelancing career. Designing tools based on this general principle may reduce the current onus and additional labor required to identify and piece together strategies, and increase the accessibility of such strategies to those less likely to exhibit or develop necessary adaptive career behaviors in new forms of work [32]. For instance, drawing inspiration from existing ‘re-outsourcing’ practices (i.e., contracting out certain tasks or portions of tasks to friends, family or other online freelancers to extend capabilities or manage high levels of demand) to support new forms of distributed collaboration and learning among online freelancers. Similarly, drawing inspiration from freelancers expanding their work portfolio to maintain client relationships, platforms may design paid support or training for online freelancers to develop skills to adapt to changes in market and client demand or tools to scale and incentivize mentorship that provides critically absent social and informational support [11].

### 4.2 Supporting On- and Off-Platform Career Fluidity

As prior research hypothesized, our understanding of careers must be re-conceptualized to account for the digitization and fragmentation of work and careers [32, 63]. Our findings suggest a multitude

of ways in which this is necessary. Specifically, our findings reveal that online freelance work is neither a straightforward alternative to a fully offline career nor a simple stop-gap source of livelihood while job seekers find offline employment. Rather, there is a critical emergent interaction between offline and online freelancing that necessitates expansion and re-conceptualization of our notions of career development and career trajectories in this new form of work. Concretely, the interaction between online freelance platform work and offline work emerged as critical component of many participants' career trajectories—for instance, influencing financial sustainability, career exploration, and skill development and transfer. We draw attention to both the opportunities and limitations of this interaction to investigate via future research, policies and tools.

First, our findings demonstrate how external legitimacy and portable reputation is a critical barrier to the interaction between on- and off-platform career development opportunities. For instance, internal platform reputation (e.g., reviews, ratings) and experience held limited signaling value or credibility for some participants as they attempted to transfer their experience across platforms or to a traditional employer. Prior research has focused on supporting impression management [24] strategies among online freelancers through their online portfolio. Future research could investigate and design to support impression management techniques for online freelancers to effectively communicate and demonstrate their online freelance reputation (e.g., experience and skills) across and beyond online freelance platforms. However, platforms lack the incentive to support transfer as internal reputation systems keep freelancers and clients tied to the platform. Thus, our findings point to an overarching need to investigate partnership and policy opportunities to support reputation transfer. For example, future policy might be necessary to regulate public indicators of internal platform reputation and support platform credentialing and certification.

Second, our findings suggest that online freelance platforms often serve as an outlet to explore both online and offline career possibilities through acting as diverse job boards and vehicles for more rapid exploration. The potential for online freelance platforms to support career exploration is an increasingly important area of study given the relevance of career exploration in the rapidly changing future of work (e.g., [40]). Yet despite the prevalence of career exploration among our participants, critical barriers remain. For instance, a low success rate finding work in a new domain due to the expert-centric design of online freelance platforms that does not support exploration, the absence of a team or mentor, or even negative client feedback, hampered the efficacy of participants' exploration. Recall P6 whose exposure to web design coding through her blogging gigs on Upwork enabled her to identify a new career of interest: software engineering. Yet to pursue this path further, she felt compelled to venture offline, where she could access support from a mentor and team during her career transition. Thus, as workers increasingly turn to online freelance platforms for career exploration and online freelancers adapt in the face of changing demand for certain skills, platforms and system designers should consider how to make career exploration and transition more accessible and effective given its growing relevance to career adaptability [33]. For example, by integrating and extending career development research to provide accessible forms of career support and reducing the risks of exploration (e.g., [40, 50]), future platform re-design and tool development might assist freelancers to identify pathways, gain necessary skills and mentorship, secure opportunities (e.g., paid apprenticeship with other online freelancers) and access reliable feedback on their work in new domains.

Third, our findings suggest that some online freelancers leverage online freelance platforms to gain new skills and work experiences throughout their career, but particularly during constraining life circumstances, periods of unemployment, or when access to domain-relevant offline work is limited locally. In these situations, questions such as “What skills will be required, which institutions will provide them, who will pay the costs and who will have access?” [63] have heightened relevance. Community colleges, apprenticeship programs and online education, for example, have all been

proposed as accessible solutions to labor market challenges. And yet, it is unclear if these solutions are indeed accessible to individuals turning to online freelance platforms, with their flexibility and precarity and additional overhead and constraints. Future work could introduce more tailored training opportunities by considering labor market challenges and interactions between online freelancing and off-platform employment.

Finally, our findings on the immense pressures and overhead of online freelancing suggest potential challenges of crafting and navigating a career across online freelancing and off-platform or offline work contexts. For instance, the pressure of managing the overhead of online freelancing often exacted burnout and required participants to become hyper-focused on simply sustaining their online freelance career in the short term. In this way, our findings support prior hypotheses about the increasing challenge, yet growing importance of construal-level ambidexterity, or “the ability to switch perspectives, specifically to zoom out to a higher level of construal to get a broader picture of one’s job and career” for gig workers [7]. Future research could further investigate macro-career-management challenges and opportunities for systems and tools to support careers crafted across offline and online freelance platform work contexts; for example, by scaffolding online freelancers’ career development practices and reflection across work contexts.

### 4.3 Fostering Productive Client-Freelancer Relations

Our findings highlight the myriad of ways clients interact and influence online freelancers’ career trajectories. On the one hand, our findings suggest that some clients can play a positive role in a freelancer’s “developmental network” [31]. Yet, on the other hand, the power and information asymmetries between clients and freelancers [72], coupled with poorly incentivized (and largely absent) client socialization, placed a significant overhead on freelancers, particularly in the long term. Prior work suggests a number of challenges that might result from such relationships. For instance, psychological safety (e.g., shared belief held by members of a team that the team is a safe space for interpersonal risk-taking) and team-learning behaviors (e.g., seeking feedback, discussing errors) are important for satisfaction and performance in teams [23]. However, these behaviors can be hampered by large power differences and potential for retaliation—conditions often rampant in an online freelance context. Moreover, online freelancers are often forced to piece together information, such as context support and feedback, largely on their own, with little to no help from collocated clients or colleagues, while navigating informational needs often in high-risk contexts (e.g., presence of client power and information asymmetry in an online freelance context). Our findings thus highlight ample opportunity for future policy and design to mitigate the overhead of client-relationship management. For example, platforms could leverage their unique intermediary role to use natural language processing to provide real-time feedback and nudges to incentivize and scaffold effective mentorship behaviors, while also providing outlets for freelancers to recognize and report unethical or rude client behaviors without relational or reputational repercussion. Another potential opportunity for platform redesign and tool development is highlighted by P4, who transitioned from working as a freelancer to primarily hiring on Upwork for her company, and was able to hire and work with freelancers more effectively after having been on the other side. While not all clients can achieve the same level of experiential understanding as P4, this example suggests some effective incentives for platform-based client training.

## 5 LIMITATIONS AND FUTURE WORK

Despite our systematic efforts to recruit a diverse group of online freelancers (including recruitment off-platform to connect with participants no longer online freelancing on the platform we recruited them on or at all), it is important to acknowledge the limitations of our recruiting method and current follow-up sample. While we did not bias our follow-up interview recruitment toward females,

many of the males from our previous study did not respond to our follow-up outreach, and thus our sample is biased towards female freelancers. Additionally, though roughly split between non-U.S. and U.S. participants in our original study, our follow-up sample is similarly biased towards U.S. participants. Future work could extend the generalizability of our longitudinal study with a larger population of online freelancers. We also emphasize the need to investigate causal relationships in online freelancers' career trajectories to develop more equitable policy and design. For example, future work could investigate if and how specific factors (e.g., participant-level variables, nature of work on platform) influence the presence and degree of overhead online freelancers experience, as well as their ability to identify strategies necessary to adapt and evolve, thus making online freelancing financially sustainable or reap skill or career development opportunities.

## 6 CONCLUSION

Online freelancing represents a new and increasingly important form of work, with enormous flexibility and precarity, independence and uncertainty, potential and challenges. Through our longitudinal study of online freelancers' career trajectories over a period of more than two years, we found that online freelance platforms afforded three cross-cutting career development opportunities: career domain exploration and transition, entrepreneurial training, and reputation and skills transfer. At the same time, a nuanced picture emerged of the unique overhead of maintaining an online freelancing career, the influence of this overhead on participation over time and the strategies freelancers employ to adapt. Based on our longitudinal findings, we suggest a set of implications for future research, policy and design to help minimize the risks and overhead of online freelancing and support online freelancers' career trajectories.

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