

Significant aspects, emerging opportunities of future of work in Digital era with specific reference to potential and challenges for online freelancing and Microwork in India

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ABSTRACT:

The traditional image of “labour” as referring to the hedgehog grind is giving way to a more liberated way of working, facilitated by ever-increasing digitization, which threatens to supplant labour as we have known it for centuries. Bots, or software designed to automate certain functions, are the most visible and popular manifestation of attempts to simulate simple human interactions like scheduling meetings and finding flight and hotel prices, to name a few. Bots will become more intelligent beasts as technology matures, capable of disrupting even more cognitive tasks currently performed by humans. Labor markets have undergone significant change as a result of the technological dynamic nature of societies and economies. Since 2010, the gig economy¹ has gained a lot of attention from the public and academics, owing to its rapid growth. The gig economy, which connects ‘workers’ with ‘requesters’ to facilitate on-demand work², is a rapidly growing labour platform that continues to develop and flourish globally. In a nutshell, the gig economy refers to labour market activities that are coordinated through the use of digital platforms. Companies that run these platforms act as “intermediaries,” allowing customers to order a specific task or project from an available service worker in exchange for a fee or commission when the service is completed or delivered. From the Neolithic Revolution, which transformed agriculture, to the Industrial Revolution, which transformed large-scale manufacturing and gave birth to the modern city, we are now in the midst of a digital revolution, which is expected to be the most disruptive in terms of its impact on the labour

market. Each technological revolution has reshaped the role of workers and “labour” in the economy, as well as the regulations that govern the market's institutional structure. For the record, an economy's labour force includes all those who are actively looking for work for a living, as opposed to those who are not expected to work, such as children, the elderly, or those who have voluntarily left the labour force.

Keywords: Institutional framework, Business management, technological disruption, digital era, freelancing, challenges

I. INTRODUCTION:

The traditional image of “labour” as referring to the hedgehog grind is giving way to a more liberated way of working, aided by ever-increasing digitization, which threatens to supplant labour as we have known it for centuries. Bots, or software designed to automate certain functions, are the most visible and popular manifestation of attempts to simulate simple human interactions like scheduling meetings and finding flight and hotel prices, to name a few. Bots will become more intelligent beasts as technology matures, capable of disrupting even more cognitive tasks currently performed by humans. Given how technologically dynamic societies and economies are, it's only natural that labour markets have changed dramatically. From the Neolithic Revolution, which transformed agriculture, to the Industrial Revolution, which transformed large-scale manufacturing and gave birth to the modern city, we are now in the midst of a digital revolution, which is expected to be the most disruptive in terms of its impact on the labour market. Each

technological revolution has reshaped the role of workers and “labour” in the economy, as well as the regulations that govern the market's institutional structure. For the record, an economy's labour force includes all those who are actively looking for work for a living, as opposed to those who are not expected to work, such as children, the elderly, or those who have voluntarily left the labour force. The incredible rise of the Internet, dubbed the Fourth Industrial Revolution² recently, is disrupting almost every industry in every country. The magnitude and scope of these changes are indicative of the ongoing transformation of entire production, management, and governance systems, which occurs only infrequently. It's one of those watershed moments in history that could cause yet another labour market disruption and completely reshape how we work. The number of jobs created (and where they are created) is determined by the rate of adoption, the economic activities that are based on them, and the social relationships that develop around them, all of which are influenced by the local context. Furthermore, job losses and new job offers may occur in different areas or at different times, and would almost certainly necessitate different skills, resulting in current mismatches as well as mismatches over time. Microwork and Online Freelancing are growing in India, providing an opportunity to work independently and temporarily thanks to the rise of web-based platforms that connect talent with businesses. These ideas are further developed in the research paper's subsequent sections. In 2012, the Harvard Business Review published an article on the Rise of the SuperTemp⁵, a group of former employees of large corporations, law firms, and consulting firms who value the autonomy and flexibility of temporary or project-based work and find that the pay is comparable to—and sometimes better than—that of full-time jobs. The phenomenon of online freelancing is becoming increasingly popular in India, especially among those with a laptop,

Internet connection, and in-demand skills. We present an overview of the online freelancing platforms and networks available in India, as well as a survey analysis of freelancer perceptions. The discussion also includes lower-skilled communities that engage in small, simple tasks referred to as microwork and completed via a web interface. It is necessary to first outline the current Indian labour market in order to contextualize this discussion into a policy narrative.

The Labour Market in India:

Agriculture, also known as the primary sector, has historically provided employment in India. Agriculture and related activities employed the largest percentage of people for several years. However, as a result of trade liberalisation in the early 1990s, agriculture's share of employment fell from 68.5 percent in 1983 to around 46.1 percent in 2015-16. Although this has been a feature of the development processes of other East and Southeast Asian countries, the shift from agriculture to manufacturing has yet to occur on the same scale in India (and South Asia in general); instead, India has metamorphosed into a service-driven economy, which accounted for 62 percent of its gross value-added growth in 2016-17. The change in the distribution of employed persons by sector is shown in data from the most recent Employment-Unemployment Survey of India in 2015-16. The graph below (Figure 1.1) compares data from the 2nd and 5th rounds of the Annual Employment-Unemployment Survey (EUS) conducted in 2011-12 and 2015-16. It demonstrates that employment in the primary sector (agriculture) has decreased, while employment in the secondary (manufacturing) and tertiary (services) sectors has increased, with tertiary outnumbering secondary. Women's willingness to work, as well as their ability to do so, is influenced by a variety of factors, including educational attainment, fertility rates, marriage age, economic growth/cyclical effects, and urbanization.

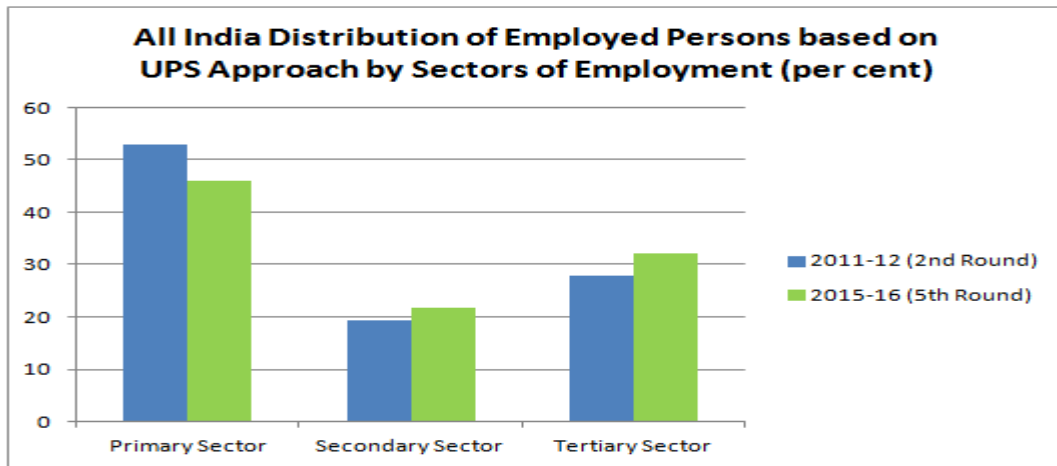


Figure to show distribution of employed persons by sectors

According to various rounds of the National Sample Survey on Employment and Unemployment, a significant proportion of females report that their primary activity is domestic duties. In India, women are still largely considered "untapped potential" in the labour force because they often end up in low-wage jobs, often at home (as a contributing family worker/unpaid worker). Furthermore, much of their work goes unreported or unaccounted for in official statistics, resulting in their economic contribution being under-reported. The digital economy's flexibility offers hope to this domestically bound segment of society. The other challenge in India's labour market is its segmented nature, which has resulted from the country's socioeconomic environment, which has led to the informationalization of labour. According to the 5th round of EUS data, there were more casual workers and contract workers in 2015-16 than in 2011-12. Agriculture continues to account for a large portion of employment in the Indian economy, but underemployment in the sector is well documented. Every year, a large number of people migrate to cities in search of work in the non-farm sector, though at rates that are unusually low when compared to other Asian countries. The informal workforce in India is rapidly growing, both in the unorganised and organised sectors. In India, the informal sector is defined as proprietary and partnership enterprises (excluding those run by non-corporate entities such as cooperatives, trusts, and non-profit institutions), as well as non-agricultural and agriculture-related activities that do not include crop production. India's informal sector is said to employ 75 percent of the population in rural areas and 69 percent in urban areas. This is largely due to India's manufacturing sector's strict size-based regulations. Based on two empirical facts – low levels of formal education

and training and low productivity prevailing in this sector – employment in the informal sector is commonly thought to be largely low-skilled or unskilled. Nonetheless, it is likely to maintain its employment dominance now and in the near future. We'd like to believe that in India's current economic climate, the formal and informal sectors are complementing rather than competing. While the debate over labour reforms and the grounds for defining informational is resolved, the sector can grow with appropriate policies to reorient skills, allow easier access to credit, and make markets available. A well-crafted social security programme that is not linked to employment will also make the subject easier to understand. Technology advancements also present a significant opportunity for one of the economy's largest informal sectors, retail trade and distribution. Even mom-and-pop shops in most urban areas are expanding to omnichannel formats and owning or collaborating with an existing e-commerce platform. There is no doubt that Internet-based businesses and digitization hold enormous promise, not only in terms of expanding markets and their reach, but also, more importantly, in terms of loosening the wedge between the formal and informal labour markets in India. In a world of shifting production relations, the concept of work, as well as the future of work and production, is constantly reinvented. Much of this change has been fueled by technology, which has resulted in the expansion of the global supply chain for more than three decades. The gig economy arose out of this situation. These patterns are rapidly expanding in India, as they are in many other developing economies, particularly in urban and periurban areas, where there is an ever-increasing demand for such services.

Digitization and the Labour Market:

Bots and Artificial Intelligence (AI) have given rise to new job opportunities in traditional industries. Technology has created jobs, according to a recent Deloitte report, particularly in knowledge-intensive industries like medicine, education, and other professional services. It is, however, erroneous to believe that technology is only a privilege for the educated and an opportunity for the unemployed. Technology not only creates jobs for less educated workers, but it also gives informal workers the opportunity to use technology and digital platforms in their work. The rapid growth of digitally driven startups in India demonstrates the immediate impact of digitization on the country's informal labour markets. There are many different definitions of what constitutes the informal labour market; some distinguishing characteristics (also discussed above) include whether or not workers are subject to government taxes, have access to social security or insurance, or are paid minimum wage. The informal sector not only employs a large portion of India's existing workforce, but it also absorbs thousands of new workers each year. The informal sector employs more than 90 percent of India's workforce. Recent academic research²⁰ has looked at how to measure the impact of technology and innovation on the informal economy. Garment makers, construction workers, incense stick rollers, and waste pickers were among the occupations sampled for India in a study by the John F Kennedy School of Government. According to the findings of this study, informal workers and their organisations are starting to use technology in their work. Organizations use the Internet and online platforms, while individuals rely on mobile phones. Another study mentioned waste pickers in Bangalore using web-based platforms to track and trace trash in the city. I Got Garbage is a technology solution created by the company I Got Garbage. Tree of Thought Bangalore-based consulting and implementation has the potential to transform waste management solutions across the country. It also gives marginalized waste-pickers the opportunity to go about their work with more dignity and recognition each day. Technology advancements also present a significant opportunity for one of the economy's largest informal sectors, retail trade and distribution. Even mom-and-pop shops in most urban areas are expanding to omnichannel formats and owning or collaborating with an existing e-commerce platform. There is no doubt that Internet-based businesses and digitization hold enormous promise, not only in terms of expanding markets and their reach, but also, more importantly,

in terms of loosening the wedge between the formal and informal labour markets in India. Microwork and online freelancing have emerged as lucrative options in what is primarily India's informal labour market. The digitally enabled labour force can find work and increase productivity across the spectrum of rudimentary to complex business processes. The scope of work includes skill diversity, experience, and work schedule preferences, among other things. In fact, research has shown that introducing a dual job market within an organisation, which consists of a mix of high-paid commitment employees and lower-paid freelance workers²², can help employers eliminate inefficiencies and save money. Online freelance platforms are now being used by Fortune 500 companies to find specialized talent. Traditional staffing processes do not always align with the operations of some Indian companies. According to Fortune 500 case studies, work now determines the composition of the team, whereas previously, work determined the composition of the team. Furthermore, whereas previously companies had to choose between hiring freelancers and hiring permanent employees, these options now coexist. Aside from the cost savings of not having an office, the geographical distribution of workers on crowd platforms can be a valuable asset in and of itself. Clients can hire platform workers for "mobile crowdsourcing" on Clickworker, for example, in order to "monitor brand campaigns and receive instant, up-to-date local market input by engaging our crowd on the ground via smartphones." Clickworker, like another platform Streetspotr, is utilising the crowd's spatial distribution for these tasks, similar to how early citizen science projects like the Monarch butterfly tagging project did (Urquhart, 1976). Because the crowdworkers are already dispersed across the country, they are well-positioned to report on local conditions, such as the presence of a butterfly or the display of a specific product in a local store. The distribution of workers across global time zones allows information-based platforms like AMT and CrowdFlower to provide on-demand staffing and task completion 24 hours a day, seven days a week.

The online freelancing revolution:

The term "freelancer" has been used to refer to a hired lance, a mercenary who offered to fight for the highest bidder since mediaeval times. Over time, the term gained popularity in the business world, referring to someone who is willing to offer unique and in-demand skills to those willing to pay for them. The Internet facilitated the rapid expansion of freelancing. For

independent professionals, it became much easier to publish their profiles, and for those looking for a service, the Internet allowed for a far more efficient and expansive search. Freelancers were no longer limited to cold calling, print advertisements, and local area networks to find freelance opportunities due to time and geography constraints. In 1998, Harvard Business Review published a foreshadowing article titled "The Dawn of the E-Lance Economy," which appeared to foreshadow many of the ways in which the internet might alter the way people work. The 'gig economy,' as it is known in the literature, refers to a growing number of workers who are abandoning traditional 9 to 5 jobs in favour of working independently for various employers on a task-by-task basis. With the advent of online platforms such as Guru.com, Truelance, and Elance.com, the nature of freelancing has completely changed (Now Upwork). It has completely changed how a client hires and interacts with freelancers. Clients and freelancers who have never met in person or over the phone are collaborating to complete and deliver projects for the first time. Freelancers have a wide range of skill sets to choose from and can work from anywhere in

the world while sitting at home. This is especially beneficial to people in countries with a high service sector, such as India, where local compensation is lower than the global average. Microwork is a subset of such online "outsourcing" channels in which simple and small jobs require basic literacy and numeracy. Impact sourcing refers to the practise of outsourcing microwork to vulnerable and disadvantaged populations in developing countries such as India. In the sections that follow, we'll go over the various definitions of online outsourcing and freelancing. The rapidly increasing digital penetration has aided in the growth of the online freelancing trend in India, which has grown exponentially in the last five years. According to some estimates, India has the world's second-largest freelance professional market (around 15 million), second only to the United States (approx. 53 million). These 15 million Indian freelancers account for roughly 40% of all freelance jobs available worldwide. Platforms will evolve as the market matures to deliver higher-quality searches and to tailor their services to specific demographic groups.

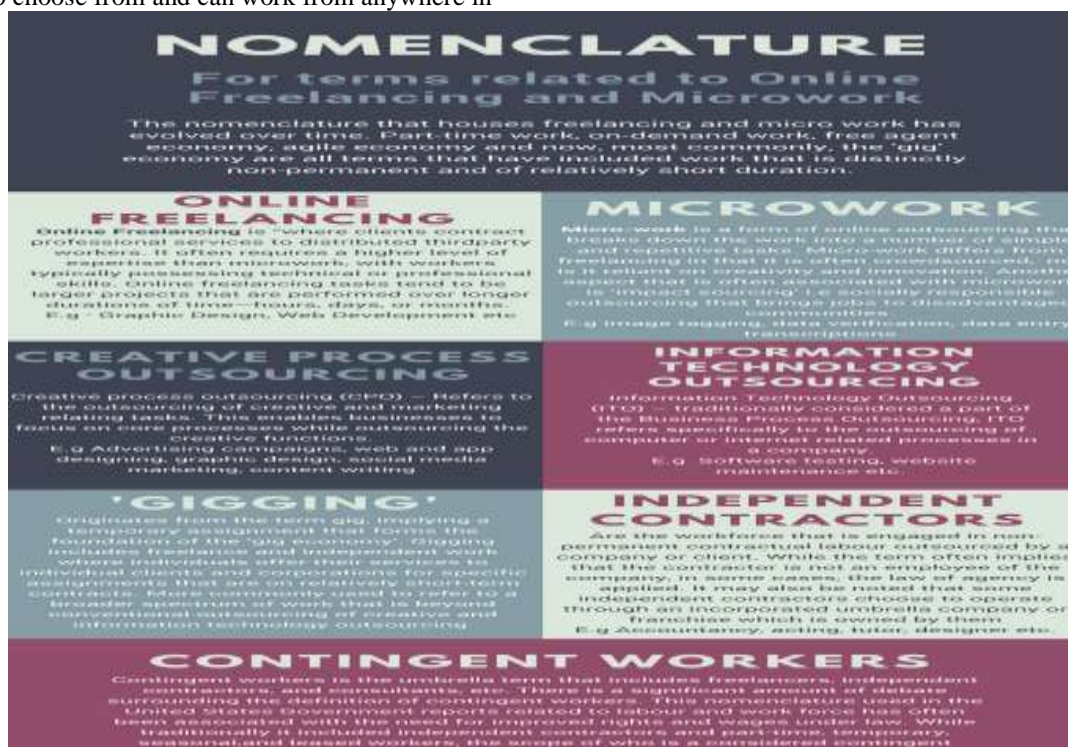


Figure to show nomenclature and definitions to understand the online freelancing and microwork universe

When companies outsource to suppliers who employ people from the poorest socioeconomic groups, this is known as impact sourcing or socially responsible outsourcing across

microwork models. Similarly, we can distinguish between online freelancing models based on the platform owners' intermediation, the types of tasks posted on these platforms, the freelancers' target

market, and so on. Some of these issues are discussed in the World Bank Report on the Future of Online Outsourcing. The next section uses data from our stakeholder interactions to discuss the variety of freelancing and microwork platforms. The "gig economy," popularised by platforms like Fiverr and Craigslist in the early days of the market, refers to parts of the online labour market that are characterized by the prevalence of short-term contracts rather than permanent jobs. According to popular belief, this is

the world of the millennials, who have unquestionably embraced the freelance economy. Surprisingly, several mid-career professionals in the United States are now using online outsourcing as a platform to work past the traditional retirement age of. We anticipate that this trend will continue in India. We refer to Flexing It, an online freelancing platform that focuses on experienced professionals looking for freelance opportunities, in our detailed discussion of online platforms in the following section.

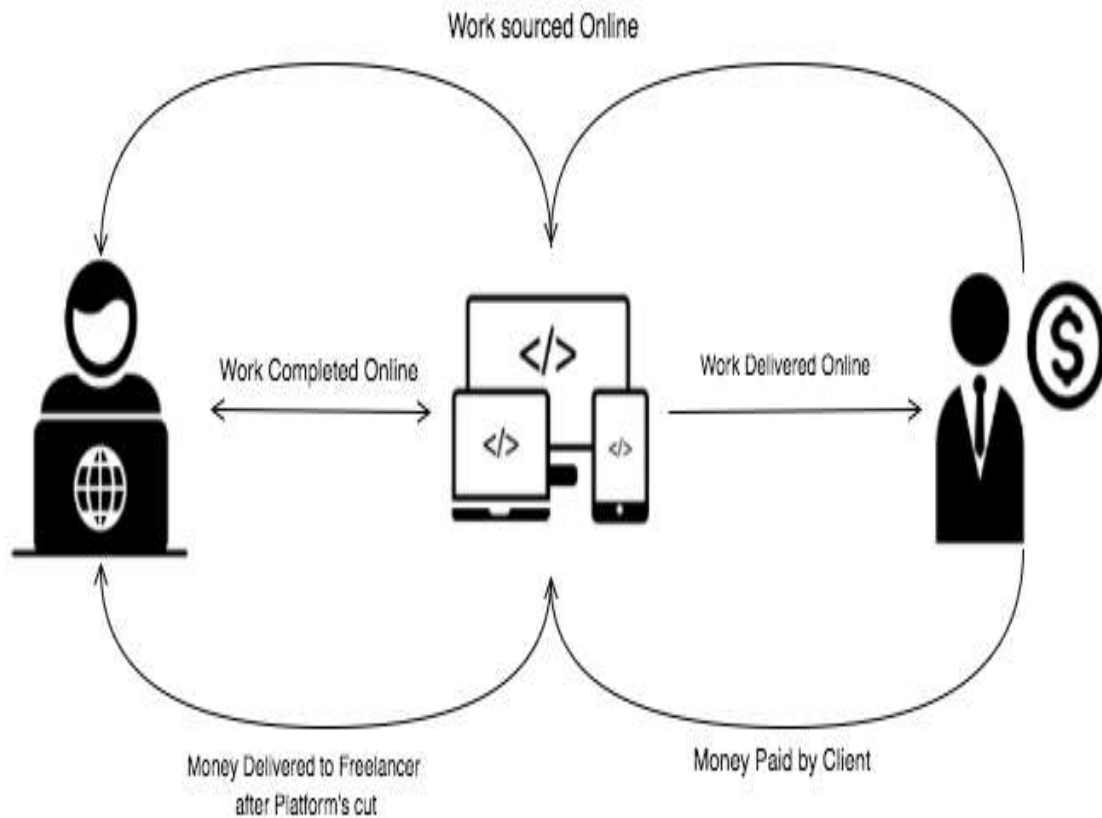


Figure to show sourced online, completed online, delivered online

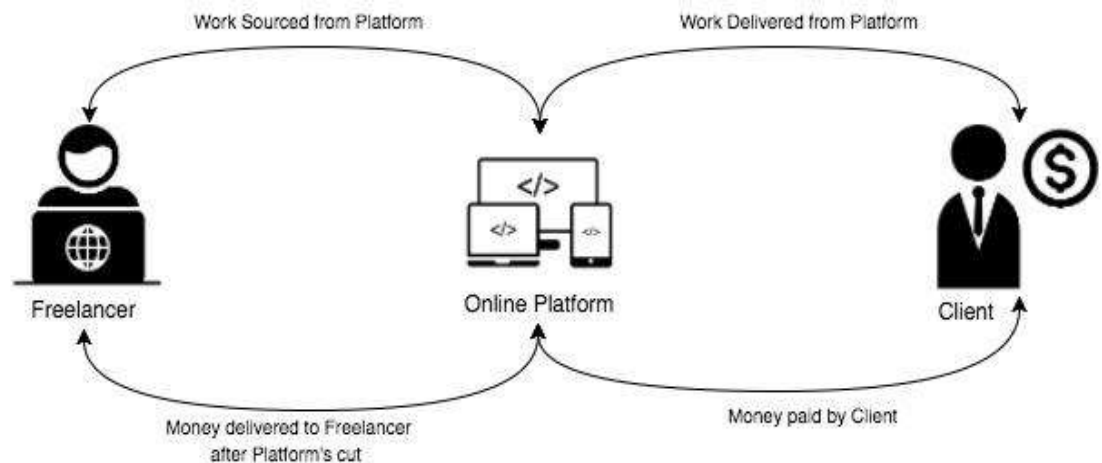


Figure to show sourced online, completed offline, delivered online

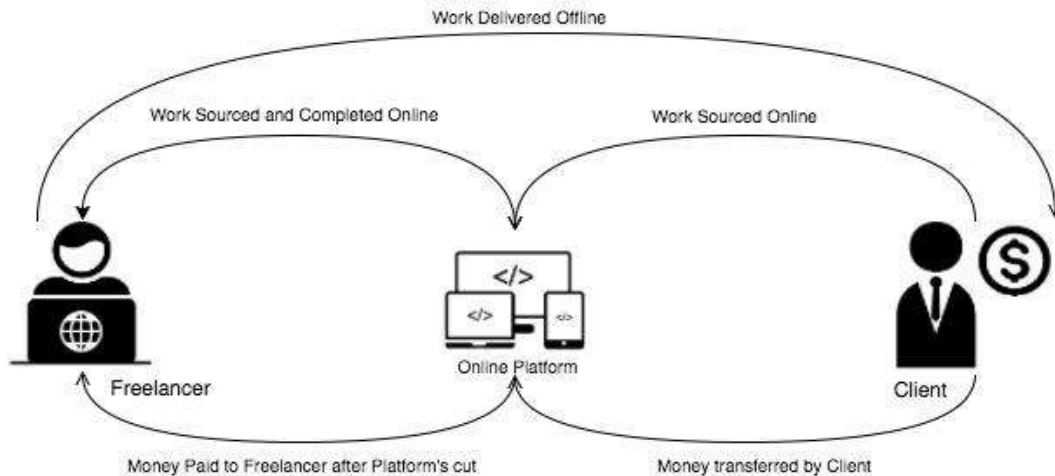


Figure to show sourced online, completed online, delivered offline

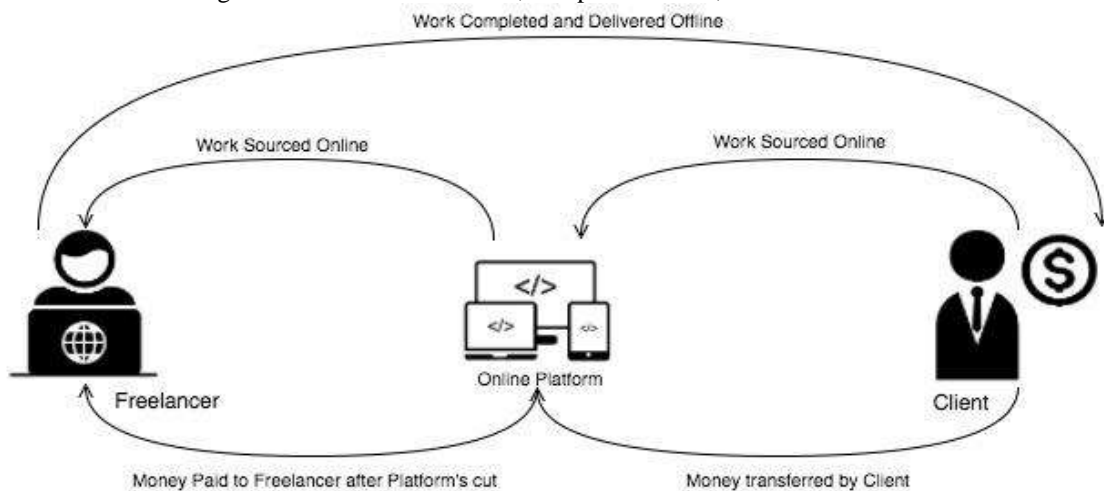


Figure to show sourced online, completed online, delivered online

Analyzing the ecosystem using data from stakeholder interactions:

As part of the research design, we spent time browsing the Internet and interacting with freelancers to identify companies that made up India's microwork and online freelancing sector. We compiled a list of 50 firms³⁹ who were contacted by email and phone to discuss how we could better understand India's microwork and online freelancing ecosystem. While not exhaustive, the list reflects the ecosystem's diversity, including clients, platforms (service providers), and freelancers, as well as how they interact. Other research into this market before us has focused on the current state and future of online freelancing around the world. A study focused on the future of freelancing in IT selected a list of ten platforms based on the number of registered users, traffic, mentions of the platform in academic writing, and other Google trends. Platform competition analysis revealed a monopolized demand structure, whereas

the IT provider market, even across global regions, is highly competitive. Platforms, their benefits and drawbacks, and their potential to influence the global workforce have all been studied in other studies. Surprisingly, India appears as an important part of the overall discussion in the majority of these narratives. Because this report focuses solely on India, microwork and online freelancing platforms have been interviewed in the context of their impact on the Indian economy.

The list of **nine characteristics** which help summarise the objective, operation and impact of each platform are:

- (i) **Primary Objective of the Platform:** While business models may overlap, the key driver of each organisation type is fairly distinct. For example, in the microwork category, several organizations that worked on the direct model in India (DataHalli, Desicrew) placed social upliftment of the local community as their primary objective. Platforms such as

JobsForHer and SHEROES address gender issues and focus primarily on employability of the female work force.

- (ii) **Type of Platform:** Each interviewed organisation is classified by its platform type. We have covered a mix of organisations across the entire spectrum of microwork and online freelancing.
- (iii) **Task Complexity:** The segmentation in task complexity is based on a general understanding of the skills and training required to complete a task. Task complexity is also closely tied to the level of compensation associated with the corresponding task. For this analysis we adopt the definition used by the World Bank Report on “The Global Opportunity in Online Outsourcing” published in 2015. Low complexity tasks refer to those where no specialized skills or training is required including activities such as search and click, voting, data entry, etc.; medium complexity tasks require basic literacy, numeracy, and some degree of soft skills that include activities such as translation, content development, etc.; high complexity tasks require specialized technical knowledge that often involves vocational training, experience and a university degree.
- (iv) **Skill/ Applicable Sector:** Some platforms offer generalized posting of tasks, cutting across sectors and skill type while others are niche that curate the best talent for a particular type of task. For example, Truelancer and Upwork are platforms that allow postings for all types of freelancers. The range of services for Upwork includes coding, software development, content writing, administrative support specialists, finance professionals, etc. However, there are some platforms that provide only specialized services for a given sector.
- (v) **Revenue Model:** Most platforms earn revenue as a share of the payment made by clients to engage freelancers on the platform. This could range from 5 - 20%, depending on the platform, nature of work, value of transaction, etc. On some platforms freelancers are charged an upfront registration fees and occasionally a transaction related fee. In services that are managed by the platforms or where the platform plays an active role in the identification, initiation and completion of a task, the fee is often higher, paid by both parties and linked to the value of transaction.
- (vi) **Target User Groups:** This aspect of the business model is very closely related to the

primary objective of an organisation. Generic platforms that work towards creating a marketplace for online freelancing keep the platform open to all categories of users. However, during our interactions we found several platforms that worked dedicatedly towards women empowerment, employability of the specially-abled, etc. In fact, niche consulting firms also target users groups that are trained in specific skills.

- (vii) **Level of Intermediation by platform:** Platforms can be divided into two main categories based on the platform's involvement in completing a transaction - open services platform and managed services platform. In an open services platform, workers and employers connect and negotiate directly based often on a process of competitive bidding. Under the managed services model, platforms take care of finding and hiring individual workers and are accountable for the quality of work.
- (viii) **Availability of Job-Seeking options:** Some online freelancing platforms are vertically integrating their service supply chain to offer recruitment services. This was especially true in case of platforms that focused on helping women join or reenter the labour force. The process of job placements was often accompanied with a mentoring facility that helped women feel ready for work outside of their homes.
- (ix) **Provisions for training and up skilling:** Training and skilling form an integral part of the microwork culture, especially in case of the direct model where a group of microworkers operate.

What are Microtask platforms?

Microtask platforms are crowdwork platforms that give businesses access to a large flexible workforce located all over the world to perform a variety of small and quick, often repetitive tasks. AMT, one of the most well-known micro task platforms, bills itself as a "marketplace for work" that connects "businesses and developers" with a "on-demand, scalable workforce." AMT, like other microtask platforms, can be thought of as a "global online labour market for small information tasks" (Silberman, 2015). These "information" tasks include everything from image recognition to content moderation to voice transcription, but they all require the ability to work remotely and on a computer. Clients or requesters use the platforms to post large-scale tasks that must be completed, such as a survey requiring thousands of responses or a collection of

hundreds or thousands of photos of streetscapes requiring workers to identify and mark certain features (such as medians, centre lines, pedestrians and cars). Workers use the platform to find tasks for which they are qualified, and they are paid for each task or piece of work they complete, such as each survey response or photo tagged. Some tasks, such as surveys, may only be completed once by each worker; however, bulk tasks, such as photo tagging, may require a worker to complete a large number of individual instances of the posted task.

II. CONCLUSIONS AND POLICY RECOMMENDATIONS:

Much had already been written about the rapid growth of online freelancing and microwork in India before this study was conceived and research began. The presence of an English-speaking young population as well as a thriving IT sector was essential ingredients in the country's development of a sustainable freelancing ecosystem. There is a challenge as well as an opportunity with any disruption. The threat of job loss posed by digital technology could be turned into an opportunity through online freelancing and microwork, which could provide work for at least a portion of the millions of new and young workers entering the workforce. It provides an opportunity to the country's vast pool of informal workers, particularly women. The platforms' flexibility may be well suited to the needs of an evolving society seeking fulfilling and self-sufficient livelihood opportunities that include working part-time. The study emphasizes the ecosystem's growing scope and scale, which now includes a wider range of skills, work types, and commitment to freelancing. Platforms have also acknowledged teething issues with payments, bidding, and navigating websites – algorithmic upgrades are aimed at making it easier for clients and freelancers to use platforms. Even though data-related tasks and content writing continue to dominate a large portion of the online freelancing and microwork tasks outsourced to India, our findings corroborate with others on online freelancing who report a rising trend of freelancing among students and professionals in India, as well as new tasks and skills being added to the list of freelancing opportunities. According to the latest figures from the Online Labour Index (OLI), India controls 55% of the global market for outsourced software development and technology jobs.

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