



CROWD WORK IN EUROPE

Preliminary results from a survey
in the UK, Sweden, Germany,
Austria and the Netherlands



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Foreword

A connected 'Digital Single Market' has been listed under the ten priorities of the current European Commission and has been a main topic of interest in the European policy arena, in particular since the launch of the Digital Single Market Agenda in May 2015. Digitalisation and the connected transition to Industry 4.0 will create a new global division of labour as digitalisation compresses time and space and introduces new requirements for a simultaneous local and global presence. Previous analyses conducted on the future world of work point in the direction of a hyper-mobile labour market, where workers shift between various forms of employment and will at times have multiple, simultaneous workplaces. The first signs of a hyper-mobile labour market are reflected in the recent emergence of 'new forms of work' organised via online platforms.

This so-called collaborative economy, which is also known as the 'gig economy', covers various sectors and is rapidly emerging across Europe and beyond. The new phenomenon opens up many opportunities with regard to economic benefits for the European Union (EU) including for instance the creation of new employment structures, an increase in productivity and the improvement of consumers' access to goods and services. Nonetheless, these new forms of work also pose risks to our working culture, threatening to create a second (parallel) labour market with poorer social and fundamental rights leading to a hollowing out of Europe's social model.

The present report 'Crowd work in Europe – Preliminary results from a survey in the UK, Sweden, Germany, Austria and the Netherlands' briefly reviews the existing evidence on the extent and characteristics of 'crowd work' in general and presents the results of five surveys in the aforementioned Member States in particular. This joint research project is carried out by the University of Hertfordshire and Ipsos MORI in association with the Foundation for European Progressive Studies (FEPS) and UNI Europa, the European services workers union. In addition, several national funding partners contributed to it, so that the project could leverage on their local knowledge and expertise and ensure a broad dissemination of its main findings. The current report strives to picture the digitalised labour market and the diversity of new forms of labour and associated labour conditions in the EU. Based on the results presented here and in the subsequent final report, our research project intends to conclude with concrete policy proposals on the framing of a legal level playing field for crowd workers.

In this report Ursula Huws, Neil H. Spencer and Simon Joyce firstly investigate how crowd workers use online platforms in order to generate an income and secondly, identify their characteristics. The analysis shows that the gig economy is on the rise in the aforementioned five Member States, offering new employment structures and different types of work to various age groups. FEPS and UNI Europa as well as the respective co-funders published the results of each crowd working survey at press events and on their websites. The research project has attracted high media attention at the national level and the interest of several EU officials and academics across Europe, underlying the relevance and the innovative character of this project.

In light of this success, our next aim is to expand the coverage and conduct further crowd working surveys in other Member States before being able to draw a European comparison. We would also like to add a global dimension to this project, by exploring countries outside the EU using the same methodology. We hope that a European comparative analysis set within a global context might help us to develop possible scenarios and put forward an action plan to positively frame and shape our future world of work.



Acknowledgements

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Oliver Röthig, Regional Secretary, UNI Europa and Ernst Stetter, Secretary General, FEPS.



Executive Summary

Introduction

One of the most dramatic developments in European labour markets in recent years has been the introduction of online platforms to manage work, leading to an explosive growth in 'crowd work'. Commissioned by FEPS and UNI-Europa from the University of Hertfordshire, this interim report reviews the existing evidence on the extent and characteristics of crowd work before going on to present the results of an innovative series of surveys which, for the first time, give a representative view of crowd work in five European countries: Austria, Germany, Netherlands, Sweden and the UK.

The existing evidence

It is clear from the evidence that crowd work is not only growing fast but spreading into diverse occupational areas. There are currently four broad types of platform that match clients with workers for paid labour. These encompass: first, relatively high-skill creative and IT tasks that can be delivered electronically from anywhere in the world (*Upwork* is a typical example); second, lower-skill repetitive online 'click work' that can also be carried out independently of location (*Clickworker* is a typical example); third, manual service work that is carried out on a customer's premises (*Taskrabbit* is a typical example); and fourthly work involving driving or delivery (*Uber* is a typical example). However there is evidence that this model is spreading to other diverse areas including health services, teaching, legal services and a wide variety of manual and maintenance tasks.

A number of studies have looked at the business models of online platforms, the ambiguous legal status of their workers and the way the work is organised. However to date the majority of studies of crowd workers have focused on particular platforms or groups of platforms. No European study up to now has attempted to survey the general prevalence of crowd work or identify a random sample of crowd workers in order to identify their characteristics.

The Hertfordshire Business School Crowd Work Survey

In order to address this gap, FEPS and UNI-Europa commissioned Hertfordshire Business School to develop an experimental pilot survey covering the entire online adult population. This was carried out first in the UK and then repeated in Sweden, the Netherlands, Austria and Germany. The survey made it possible to investigate how people are using online platforms to generate an income, including paid crowd work, and to identify their characteristics. The survey was carried out by adding questions to existing online omnibus general population surveys in the respective countries, with a sample stratified by gender, age, region and working status. In the UK, 2238 respondents were interviewed, with 2146 respondents in Sweden, 2180 Respondents in Germany, 1969 respondents in Austria and 2126 respondents in the Netherlands. The results were weighted to be representative of the general population.

Participation in the online economy

The survey found significant participation in the online economy, with over half the respondents engaging in practices such as selling their possessions in online marketplaces. Between 8% (in the



Netherlands, Sweden and the UK) and 26% (in Austria) used online platforms for renting out accommodation to paying guests. The proportion who had ever carried out paid work via online platforms work was 9% in the UK and the Netherlands, 10% in Sweden, 12% in Germany and 19% in Austria. However for many of these respondents crowd working seems to have been an occasional experiment. The proportion reporting doing such work at least once a week was between 5% and 9% of respondents, with 6%-13% doing so once a month.

Crowd work is generally a small supplement to total income. For around 45% of crowd working respondents who answered this question (varying from 58% in Austria to 33% in Sweden) it constitutes only 10% or less of all income. It constitutes more than half of all income for 2.4% of respondents in Austria, 2.6% in Germany, 1.7% in the Netherlands and 2.8% each in the UK and Sweden.

Demographic characteristics of crowd workers

There is little gender difference in the propensity to do crowd work. In the UK, women are somewhat more likely to do so (at 52%) but in the other countries men dominate, constituting between 56% and 62% of the crowd work force. Those who crowd work intensively (at least weekly) show a similar profile, with men forming 59% to 63% of the total outside the UK and 47% in the UK.

Crowd workers are more likely to be from younger age groups, especially in Sweden, where 57% of crowd workers are aged under 35 (compared with 42% in the Netherlands, 47% in Austria, 51% in Germany and 50% in the UK). Nevertheless, crowd workers can be found in all age groups, with between 11% (in Sweden) and 17% (in the Netherlands) of crowd workers aged 55 or over.

Type of work done by crowd workers

The evidence from the survey suggests that most crowd workers are not narrowly focused on particular types of crowd work but are using crowd work platforms as a means to generate income from whatever kind of work is available. Crowd workers are much more likely than non-crowd workers to be using general job search sites as well as online work platforms. General job search sites were used by 33%-47% of non-crowd workers, compared with 86%-93% of those who crowd work at least once a week and 78%-91% of more occasional crowd workers. Furthermore, crowd workers tend to offer their services quite indiscriminately. When asked to name which of three broad types of crowd work they were looking for (driving work, work that could be done from their own homes, or work that had to be carried out on customers' premises), the majority of people seeking crowd work named more than one (with an average ranging from 1.9 to 2.1 among men and 1.7 to 1.8 among women). Those who had actually carried out crowd work were given a more differentiated list of eight different types of work to name. This provided even stronger evidence that they seemed to be prepared to accept whatever was on offer, with men naming between 4.4 and 5.2 types of work on average, and women naming between 3.1 and 4.2. Among those who carried out crowd work at least weekly, the diversity was even greater, ranging from 6.0 to 6.7 among men and 4.6 to 6.4 among women.



Conclusion

Further research will be required to establish the extent to which the results from this online survey reflect trends in the broader population. This will be investigated by means of offline surveys, currently under development in some of the participating countries.

There is also a need for in-depth qualitative research to explore the motivations of crowd workers and collect information on their working arrangements, employment status, and other aspects of their participation in the online economy.

On the basis of this first representative snapshot of crowd workers in Europe we can, however, conclude that crowd work is an important phenomenon, most crucially involving some 5%-9% of the online population. There is also evidence that, for a small but important minority, it constitutes the major part of their income. The fact that the majority of crowd workers engage in multiple types of crowd work, rather than specialising in a single form, and are also actively seeking more regular types of work, suggests that they are choosing it from a desperation to find any source of income, rather than as an active career choice.



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Introduction

In January, 2016, Hertfordshire Business School was commissioned by the European Foundation for Progressive Studies (FEPS) and UNI-Europa to carry out a study of the impact of the rapidly-growing phenomenon of crowd work at the level of national economies in Europe.

Crowd work, defined broadly as paid work managed via online platforms, has been the subject of considerable popular interest in recent months but as yet little hard evidence existed as to its extent and characteristics.

Our first steps in this project were therefore firstly to carry out a review of the existing evidence and secondly, based on the gaps identified in this review, to carry out an experimental exploratory survey in order to estimate the prevalence of crowd work. The pilot survey, developed at the University of Hertfordshire and carried out by Ipsos MORI in the UK in January 2016, revealed results that were in some respects surprising, prompting a decision to repeat it, using the same methodology, in four other European countries: Sweden, Germany, Austria and the Netherlands.

Additional co-funding was provided in these countries by Unionen in Sweden, IG Metall and ver.di in Germany, the Vienna Chamber of Labour (AK Wien) in Austria and the Netherlands Organisation for Applied Scientific Research (TNO) in the Netherlands.

This interim report summarises the main results of the literature review¹ and exploratory online surveys.

It is anticipated that it will be supplemented, as the project progresses, by further quantitative and qualitative research, extended to other European countries.

¹ This literature review draws on an earlier review of the literature on crowdsourcing commissioned in 2015 from Ursula Huws by the European Agency for Safety and Health at Work (EU-OSHA) and available online at: https://oshwiki.eu/wiki/A_review_on_the_future_of_work:_online_labour_exchanges_or_crowdsourcing



Crowd work: an overview of the evidence

The recent emergence of apparently new forms of work organised via online platforms has attracted considerable attention in the media and, more recently, among policy makers, but so far the serious academic literature on the topic is rather sparse.

This chapter summarises the available literature. The first section looks at previous attempts to estimate the overall scale of, and participation in, crowd work, and the second section examines aspects of working conditions for workers engaged in crowd work. Subsequent sections discuss the questions relating to the employment status of crowd workers and a range of regulatory issues, including the collective rights of workers engaged in this type of work.

Towards a definition of crowd work

As the authors have noted elsewhere² there is currently no single definition of 'crowd work'. Work that is organised via online platforms covers a wide range of different variables, many of which overlap with other categories of work. It may be paid or unpaid, a sole source of income or carried out in addition to another job, carried out online or offline (albeit managed by online means), carried out on the worker's own premises, on a client's premises or in a public space, or producing a service for a member of the general public or for a corporate client. Furthermore, the worker may be regarded as employed, self-employed, an independent contractor or some other employment status.

Nevertheless, for the purposes of carrying out this research, it was useful to have a working definition and typology, even in the knowledge that such a definition may not be completely precise, or the typology comprehensive. In the rest of this report we therefore use the term 'crowd work' to refer to paid work that is organised by an online platform (in the knowledge that there may be situations where payment is withheld by the client). This work includes work that falls into two broad categories: first, work that is both managed online and carried out online, and thus capable of being delivered to clients anywhere in the world; and second, work that is managed online but carried out offline, and therefore restricted to labour markets that are spatially accessible to the worker (although the platform itself may be located remotely).

These two categories broadly correspond to non-manual work, requiring digital skills, and manual work, requiring task-specific skills. In both cases, of course, the workers require access to an online device such as a smartphone, tablet or laptop that enables them to be notified of new assignments, accept or reject them, log their working hours and/or task completion and request payment.

Each category covers a very wide range of skills and types of activity, too heterogeneous to summarise in full. For the purposes of this report we do, however, add one further level of differentiation. We divide the non-manual online work into two broad sub-categories: high-skill work (for example providing creative or IT services, or professional services such as accountancy, consultancy or legal services) and low-skill work, involving short, repetitive routine tasks or 'click work'. The manual tasks are also divided into two broad sub-categories. The first of these involves

² Huws, U. (2016) *A Review on the Future of Work: Online Labour Exchanges, or 'Crowdsourcing': Implications for Occupational Safety and Health*, European Agency for Safety and Health at Work, Bilbao.



driving or delivery work in public spaces. The second involves providing services in people's homes or business premises.

This leaves us with four broad types of crowd work, corresponding to four types of platform.

1. Non-manual high-skill online workers (working for platforms like *Upwork* or *PeoplePerHour*)
2. Non-manual low-skill online workers (working for platforms like *Clickworker*, *Crowdfunder* or *Amazon Mechanical Turk*)
3. Manual driving workers working offline but managed online (working for platforms like *Uber*, *Blablacar* or *Lyft*)
4. Manual service /maintenance/construction workers working offline but managed online (working for platforms like *Taskrabbit*, *Helping* or *Myhammer*)

Extent of crowd work

Previous attempts to estimate the scale and extent of crowd work have been beset by a number of recurring problems. It is evident that the crowd-workforce is both highly diverse and growing rapidly. Yet, it lacks clear definitions and robust indicators. Consequently, there is a lack of reliable evidence. Previous estimates often rely on anecdote, research on particular platforms, or statistics produced by the platforms themselves. Such figures are typically based on the number of workers registered on a particular site; but these are likely to be inaccurate for a number of reasons. For instance, people who register may be inactive, or may register on a site multiple times using different identities, or may register on multiple sites. Consequently, attempting to generate a total figure is problematic.

Attempts to estimate crowd working at a global scale are rare. One approach starts from estimates of market size. *Elance/oDesk* estimated the total value of the market at \$1.6 billion in 2013, and projected growth to between \$16b and \$47 billion by 2020.³ Staffing Industry Analysts estimated the value of online crowd work to be \$1 billion in 2012, expecting it to double by 2014 and 'reach \$5 billion by 2018'.⁴ These estimates, however, appear to refer only to skilled professional freelance work. In 2012, Massolutions estimated the global number of crowd workers to be growing by more than 100% per year, with nearly US \$300 million of venture capital invested in 2011 alone. They reported, 'large enterprises with revenues above \$1B are early adopters of crowdsourcing; however, there is still significant untapped opportunity for crowdsourcing penetration across the board'.⁵ Kaganer *et al.* estimated that year-on-year growth in global revenue of 'human cloud' platforms was 53% for 2010 and 74% for 2011, with the numbers of platforms growing rapidly.⁶ There is no simple way, however, to translate such estimates of market size into numbers of workers.

³ Hippler, K. (2014) 'The online work revolution', presentation to Dynamics of Virtual Work (COST Action IS 1202) Meeting, University of Bucharest, 28 March, 2014.

⁴ The Economist (2013) "'Talent exchanges" on the web are starting to transform the world of work', *The Economist* June 1.

⁵ Massolutions (2012) Crowdsourcing Industry report: Enterprise crowdsourcing: market provider and worker trends, <http://www.massolution.com/>

⁶ Kaganer, E., Carmel, E., Hirschheim, R. and Olsen, T. (2013) 'Managing the Human Cloud' *MITSloan Management Review*, Winter.



An alternative approach could be based on an estimate of the number of platforms, together with an estimate of the number of workers per platform. Unfortunately, both components of such a calculation present significant difficulties. First, the number of platforms is very large. Exploratory research in Europe⁷ found many platforms, serving local, regional or national markets. *Crowdsourcing.org* provides a directory of sites⁸ and claims to list '2,967 crowdsourcing and crowd funding sites', including 135 in the category 'cloud labour', mainly in the USA but some in the UK. Yet, this list is far from complete – not least because a number of sites listed separately by *Crowdsourcing.org* under the category 'crowd creativity' (a category supposed to cover unpaid crowd work) plainly also offer the services of paid crowd workers.⁹

Second, while platforms organising online work often display a claimed number of registered workers, these figures vary considerably, and it is often unclear what they refer to. For instance, in March 2016 *Freelancer* was advertising some 18.5 million 'registered users' and over 8.5 million 'total jobs posted'.¹⁰ *Elance*, (which merged with *oDesk* in 2013 to form the new company *Upwork*, with a claimed combined workforce of some 10 million¹¹), has given more specific figures: over 359,000 programmers available, nearly 50,000 mobile developers, over 272,000 designers, 410,000 writers, and 87,000 marketers. European-based platforms are often smaller: German-based IT platform *Twago* claims over 569,000 experts, over 86,000 projects, worth €450,435,050.¹² At the top end of the professional scale, numbers are far smaller. For instance, in the UK, Axiom offers the services of 1,500 lawyers providing 'tech-enabled legal services',¹³ and Eden McCallum 500 management consultants.¹⁴ Clearly, these significant variations in the numbers of registered workers presents major difficulties for estimating overall crowd worker numbers by averaging participation across platforms.

For platforms that organise offline work, statistics are even harder to come by, partly because the local nature of service provision reduces the need for sites to advertise an overall workforce. Some large US-based platforms are expanding aggressively around the world. *Uber*, for instance, claimed it would 'create 50,000 European jobs in 2015'.¹⁵ Where the geographical expansion of US companies is more limited, other platforms may occupy a similar niche. For example, while *Taskrabbit* has a

⁷ Green, A., de Hoyos, M., Barnes, S-A., Baldauf, B. and Behle, H. (2014) 'Exploratory Research on Internet-enabled Work Exchanges and Employability. Analysis and synthesis of qualitative evidence on crowdsourcing for work, funding and volunteers', in European Commission Joint Research Centre Institute for Prospective Technological Studies, JRC Scientific and Policy Reports; Mandl, I., (2014) European Foundation for the Improvement of Living & Working Conditions, 'Status quo and first findings on crowd employment and ICT based, mobile work', presentation to Dynamics of Virtual Work (COST Action IS 1202) Meeting, University of Bucharest, 28 March, 2014.

⁸ <http://www.crowdsourcing.org/directory> (Accessed 17 March 2016)

⁹ For instance, <https://www.hiretheworld.com>, <http://99designs.co.uk>. See: <http://www.crowdsourcing.org/directory> (Accessed 17 March 2016)

¹⁰ <http://www.freelancer.co.uk> (Accessed 14 March 2016)

¹¹ The Economist (2015) 'Freelance workers available at a moment's notice will reshape the nature of companies and the structure of careers', *The Economist*, January 3.

¹² <http://www.twago.com/#sthash.iU4hWAjT.dpuf> (Accessed 14 March 2016)

¹³ <http://www.axiomlaw.com/what-we-do/> (Accessed 14 March 2016)

¹⁴ The Economist (2015) 'Freelance workers available at a moment's notice will reshape the nature of companies and the structure of careers', *The Economist*, January 3.

¹⁵ Waters, R. & Mishkin, S. (2015), 'Uber promises to create 50,000 European jobs in 2015', *Financial Times*, January 18. <http://www.ft.com/cms/s/0/489cf62a-9f2e-11e4-a849-00144feab7de.html#axzz3SUnYrJEm>



presence in only 18 US cities and London,¹⁶ *Mila* has been described as ‘the Taskrabbit of Europe’¹⁷ and *Youdo* ‘the Taskrabbit of Russia’.¹⁸ Other offline-work platforms are smaller. For example, UK-based *Taskpandas* provides household services in London, Birmingham, Manchester, Leeds and Glasgow, claiming ‘over 1,500 active Pandas looking to earn some extra money in these uncertain times’.¹⁹ Growth forecasts for offline-work platforms tend to be concealed within larger estimates of the ‘sharing economy’ that include other activities, such as accommodation rentals, crowd funding, and car sharing. Price Waterhouse Cooper, for example, predicts that by 2025 this market will be worth \$335 billion globally.²⁰ Again, these estimates exemplify problems caused by the varied definitions in use.

Another approach to estimating the crowd workforce starts from population statistics. One attempt, by Oxford Economic Forecasting for *Slivers-of-time*²¹ (a UK-based platform which provided social care, retail, hospitality and administrative services at short notice) estimated a potential workforce of 22 million people in the UK who could work in this way.²² Such a figure would indeed represent a very considerable proportion of the UK workforce. It is clear, however, that only a small fraction of this number is actually working in this way.

Attempts to estimate the number of crowd workers based on official employment statistics face a number of challenges. Not least among these is that existing official categories seem ill suited to capturing crowd work. These difficulties recently helped to generate a significant debate in the USA. Starting from official figures that show no increase in self-employment in recent years, an article in the *Wall Street Journal*²³ questioned the commonly accepted view that the online and ‘gig’ economy has grown significantly. It quickly became apparent, though, that other official statistics told a different story, indicating growth in this area.²⁴ This statistical uncertainty caused one analyst to comment ‘it seems ridiculous that it has proven so difficult to track and count these labor market trends’.²⁵ Ridiculous or not, the lack of official statistics presents significant obstacles for research in this area.

Studies aiming to measure the scale of participation in the online economy across whole populations in the USA have produced widely disparate results. Katz and Kreuger conducted a version of the Contingent Worker Survey as part of the RAND American Life Panel (ALP) in late 2015 and found that

¹⁶ Taskrabbit (2015) ‘19 cities and counting’. <https://www.taskrabbit.co.uk/how-it-works>

¹⁷ Fowler, N. (2013) ‘Zurich’s Mila raises €2.5m for peer-to-peer market in Europe and Asia’, <http://venturevillage.eu/zurich-mila-fund-3m>

¹⁸ Starkell, N. (2013) ‘Russian equivalent of TaskRabbit YouDo raises \$1 Million from Flint Capital’, October 3. <http://goaleurope.com/2013/10/03/russian-equivalent-of-taskrabbit-youdo-raises-1-million-from-flint-capital/>

¹⁹ http://www.taskpandas.com/about_us.php

²⁰ TechUK (2014) ‘New PwC analysis predicts dramatic rise of the sharing economy over next decade’. August 19. <https://www.techuk.org/insights/news/item/2041-new-pwc-analysis-predicts-dramatic-rise-of-the-sharing-economy-over-next-decade>

²¹ <http://www.sliversoftime.com/>

²² http://modernmarketsforall.com/wp-content/uploads/2013/05/OEF_-_Slivers_of_Time_-_Making_the_Labour_Market_work_better.pdf

²³ Zumbun, J. and Sussman, L. (2015), ‘Proof of a “Gig Economy” revolution is hard to find’, *Wall Street Journal*, July 26, 2015. See also, Zumbun, J. (2015), ‘An enduring mystery of the ‘Gig Economy’: why are so few people self-employed?’ *Wall Street Journal*, October 22, 2015.

²⁴ Hill, S. (2015), ‘How BIG is the GIG (economy)’, *Medium*, September 9, 2015. <https://medium.com/the-wtf-economy/how-big-is-the-gig-economy-e674c7986a28#.q8j6v0zbf>

²⁵ *Ibid.*



'about 0.5 percent of workers indicate that they are working through an online intermediary, such as Uber or Task Rabbit'.²⁶ These workers were a sub-category of a much larger amalgamated category of workers with 'alternative work arrangements' (temporary help worker, on-call worker, contract company workers or an independent contractor or freelancer) which, the authors estimated, had risen from 10.1% of the workforce in 2005 to 17.2% in 2015. It is not clear to what extent there is overlap between these categories, with income from online platforms being used to top up earnings from other sources and therefore, perhaps, going unreported. Furthermore, the ALP study only looked at people who said that work mediated via an online platform was their main job; whereas there is already evidence to suggest that for many crowd work is a supplement to a main job. Farrell and Greig analysed data from the bank accounts of a randomised sample of 1 million customers of the Chase bank to see who was receiving an income from one of 30 identified platforms. This included not only income derived from work but also from such activities as renting out rooms through Airbnb or selling items on eBay. However it also, of course, excluded any income from organisations other than the selected 30 platforms and, more importantly, did not consider remittances from a third party payment system, such as PayPal. They found that one per cent of adults earned income from what they term the 'online platform economy' in a given month, while over four per cent participated over the full three-year period from 2012 to 2015²⁷. An online survey was carried out by Penn Schoen Berland for *Time* magazine (Steinmetz, 2016) exploring both the supply and demand side of the 'new' or 'gig' economy, again defined broadly to include accommodation sharing, ride sharing, car rental and 'service platforms' (e.g. *Handy*, *Care.com*, *Taskrabbit*). They found that 22% of US adults were involved as 'offerers', supplying such services and 42% as 'users'.²⁸ Other estimates for the USA have looked at Google searches.²⁹ This wide variety of methodologies underlines the difficulties involved in empirical investigation of a conceptually ill-defined field. Some of these studies used relatively narrow definitions of crowd work, and produced widely disparate estimates of participation in crowd work.

In part, these difficulties reflect a marked geographical unevenness in the growth of crowd work in the USA, with cities such as San Francisco and Austin, Texas, emerging as centres of these new forms of work organisation, while growth in other areas is far less significant.³⁰ Furthermore, authors point to problems of under-funding in government departments concerned with collecting such data. Perhaps more fundamentally, though, these new forms of crowd work organisation are often a poor fit with the established employment and occupational categories upon which official statistics are

²⁶ Katz, L.F. & Krueger, A.B. (2016) *The Rise and Nature of Alternative Work Arrangements in the United States, 1995*, Princeton University. Downloaded on September 3, 2016 from:
https://krueger.princeton.edu/sites/default/files/akrueger/files/katz_krueger_cws_-_march_29_20165.pdf-2015

²⁷ Farrell, D. & Greig, F. (2016) *Paychecks, Paydays, and the Online Platform Economy*, New York: JPMorgan Chase Institute

²⁸ Steinmetz, K. (2016) 'Exclusive: See How Big the Gig Economy Really is' *Time*, January 6. Accessed on September 3, 2016 from: <http://time.com/4169532/sharing-economy-poll/>

²⁹ Harris, S. and Krueger, A. (2015), 'A proposal for modernizing Labor Laws for Twenty-First- Century work: the "Independent Worker"', *The Hamilton Project, Discussion Paper 2015-10*, Washington, DC, December 2015.

³⁰ Hathaway, I. (2015), 'The gig economy is real if you know where to look', *Harvard Business Review*, August 13, 2015.



based: 'Increasingly ... more and more workers exist simultaneously in multiple worker categories'.³¹ Until official statistics catch up with these changing employment practices, estimates of the crowd workforce based on these figures will continue to present problems.

We must therefore conclude that, whilst there is clear evidence that crowd working exists on a significant scale, and is growing rapidly, there are currently no reliable estimates of its extent.

³¹ Hill, S. (2015), 'How BIG is the GIG (economy)', *Medium*, September 9, 2015. <https://medium.com/the-wtf-economy/how-big-is-the-gig-economy-e674c7986a28#.q8j6v0zbf>



Characteristics of crowd workers

Information about the characteristics of the crowd workforce is even scarcer than on their numbers. The most-studied group are 'Turkers' working for *Amazon Mechanical Turk* (AMT) in the USA and, to a lesser extent, in India. An early study³² (in 2010) found that they tended to be highly educated, with 63% having college degrees, compared with the US national average of 25%. Turkers were young, with a median age of 30, and 69% were female.³³ However as the practice has grown, the demography has changed.³⁴ Turkers are now considered representative enough of the general US population to be routinely used as a sample for surveys.³⁵ Lilly Irani reports, '[AMT] workers I have met include laid-off teachers, mobility-impaired professionals, military retirees, agoraphobic writers, undersupported college students, stay-at-home parents and even Malaysian programmers-in-training'.³⁶ A 2014 study of Turkers found that '52% of participants reported to be male'.³⁷ Nevertheless, Turkers remained young (48% born in the 1980s), college educated (over 90%), and 'Internet-literate'.³⁸ Another study found the mean age of AMT workers in India was 27 and in the USA 33, with 27% of the Indian sample female, compared with 58% in the USA.³⁹

Other evidence about crowd workers is more anecdotal. News media reporting tends to focus on individuals,⁴⁰ or on accounts of journalists who have enrolled on crowd work platforms to gain first-hand experience.⁴¹ These reports confirm the picture of a wide variety of platforms, difficulty in obtaining work, extremely low pay, haphazard organisational arrangements, absence of guarantees and lack of insurance. However, these accounts provide little evidence about the characteristics of crowd workers beyond emphasising their diversity. In the absence of survey evidence, journalism can only tell us that this workforce is large and heterogeneous, and includes people driven to seek this kind of work from economic desperation.

In Europe there is some limited case study evidence. One study⁴² looked at *People-per-hour*⁴³ and found that the majority of its users (63.5%) were based in the UK, with the next largest shares in

³² Ipeirotis, P. G. (2010b). 'Analyzing the Amazon Mechanical Turk marketplace'. *XRDS: Crossroads, The ACM Magazine for Students*, 17(2), 16-21.

³³ Cushing, E. (2012) 'Dawning of the Digital Sweatshop', *East Bay Express*, August 1.

³⁴ Ross, J., Irani, L., Silberman, M., Zaldivar, A., & Tomlinson, B. (2010) 'Who are the crowd workers? Shifting demographics in Mechanical Turk'. Proceedings of the 28th of the international conference extended abstracts on Human factors in computing systems, ACM. pp. 2863-2872.

³⁵ Zentz, D. (2015) 'Intellectual Piecework', *The Chronicle of Higher Education*, February 16.

³⁶ Irani, L. (2015) 'Difference and Dependence among Digital Workers', *South Atlantic Quarterly*, January: 231.

³⁷ Marshall, C.C. and Shipman, F.M. (2014) 'Who owns your social networks?' Center for the Study of Digital Libraries and Department of Computer Science, Texas A&M University, February 15-19.

³⁸ *Ibid.*

³⁹ Kittur, A., Nickerson, J.V., Bernstein, M.S., Gerber, E.M., Shaw, A., Zimmerman, J. Lease, M. and Horton, J.J. (2013) 'The Future of Crowd Work', *CSCW*, February 23-27.

⁴⁰ DePillis, L. (2014) 'At the Uber for home cleaning, workers pay a price for convenience', *Washington Post*, September 2014; Shontell, A. (2011), 'My nightmare experience as a TaskRabbit drone', *Business Insider*, 7 December 2011. <http://www.businessinsider.com/confessions-of-a-task-rabbit-2011-12?IR=T>

⁴¹ Kessler, S. (2014), 'Pixel and dined', *Fast Company*, 18 March 2014: <http://www.fastcompany.com/3027355/pixel-and-dined-on-not-getting-by-in-the-gig-economy>; Rich, L.J. (2013), 'So how much money can you make crowd working?', *BBC News*, 7 September 2013:

<http://www.bbc.co.uk/news/technology-23959890>.

⁴² Green, A. de Hoyos, M., Barnes, S-A, Baldauf, B. and Behle, H. (2013) *Crowdemploy Crowdsourcing Case Studies: an Empirical Investigation into the Impact of Crowdsourcing on Employability*, European Commission Joint Research Centre Institute for Prospective Technological Studies.



India (9.9%), the USA (5.3%), Pakistan (2.6%), the Philippines (2.0%), South Africa (0.7%) and Canada (0.7%). In the UK, 47% of users were in London. Just over half (52%) were female and there was a wide age spread, but the majority were in their 20s or 30s. Four of the six people interviewed for the case study said that their earnings from this site were a significant component of their freelance income. Another case study focused on *Slivers-of-time*, a site that organises offline work. Here the age profile appeared to be significantly older. It is not clear how representative the interviewees were of the 65,000 people reported by this social enterprise to be on its database, but the youngest was in the 50-59 age group and all but one were female. Again, survey evidence is lacking.

Working conditions of crowd workers

The conditions under which crowd work is carried out have important implications for its overall impact on the world of work. However, the sheer variety of crowd work once more complicates analysis. We focus separately here on online and offline workers, because their places of work (remote versus face-to-face) and relationships with clients (telemediated versus direct) create very different patterns of work, exposing them to different risks.

Working conditions for online work include a number of well-established and significant health and safety issues, which must be taken into account in understanding the impact of the growth of crowd work. There is a large literature on the ergonomics of office work and the safe use of display screens (addressed *inter alia* in the EC Directive 90/270/EEC). Known risks of working with computers include visual fatigue, musculoskeletal problems, stress and other disorders. When such work is done by employees, employers are advised (and often required) to carry out risk assessments, provide furniture, screens and keyboards that meet ergonomic standards, ensure that lighting, noise levels, temperature, humidity and air flow are comfortable, and that workers take regular breaks.⁴⁴

When work is classified as freelance, these obligations can be externalised to individual workers. Although systematic survey evidence is lacking, it seems highly likely that in crowd work many of these safeguards are breached. For instance, workers may use laptops or other devices on which the screen, keyboard and mouse do not meet ergonomic standards; they may work in domestic environments or public spaces (such as cafes) where seating and work surfaces require them to adopt poor postures, risking musculoskeletal problems; and they may be working in environments which are inappropriately lit, noisy, polluted, overcrowded or too hot or too cold for comfortable work. Pressure to meet tight deadlines or work targets may force a rapid pace of work without breaks, exacerbating visual and musculoskeletal strains. Workers may be unable to afford (or unaware of the need for) eye tests and the use of suitable lenses for screen work, leading to visual strain and problems such as headaches. All these factors, and their combination, and can be considered as potentially significant health and social costs externalised by employers to individuals and wider society by crowd working practices.

Crowd work carried out offline takes place in spaces that are even harder to map. Its diversity and geographical spread frequently place it in an ambiguous terrain which may be regulated in a poorly-understood intersection between laws designed to protect workers, those designed to protect consumers and those focused on public safety. Costs externalised to offline crowd workers may

⁴³ A company whose website claimed on 22/02/2015 that it had 40,000 'curated freelancers'.

⁴⁴ See for instance <https://osha.europa.eu/en/publications/e-facts/efact13>



include having to provide their own work tools, materials, and/or transport. Some crowd work is in occupations that are notoriously dangerous. One example is construction. The UK site *Mybuilder*,⁴⁵ for example, lists a wide range of 'trades' associated with above-average rates of accidents and injury to workers, including garage and shed builders, tree surgeons, roofers, demolition contractors, groundworkers, window fitters, fencers and stonemasons. It also includes many that are subject to regulations designed to protect consumers, such as gas engineers, electricians and insulation installers. *Taskrabbit* offers 'Taskers' who can be hired to assemble furniture, remove garden waste, 'repair and replace most household items', or perform 'heavy lifting'.⁴⁶ Needless to say, if these activities were conducted within a legally-constituted employment relationship, numerous duties would be placed upon the employer in relation to risk assessment, the provision and use of work equipment, personal protective equipment, and so on.⁴⁷

Crowd work carried out in other people's homes can be extremely varied. Alongside the potential for accidents, such crowd workers may perform emotional labour, which is known to carry psychosocial risks,⁴⁸ although research has not been carried out specifically among crowd workers. Such work may also result in inter-personal violence or harassment, both to workers and from them (including to children and elderly or vulnerable adults). Risks may be exacerbated by lack of training, lack of certification, lack of knowledge or understanding of relevant regulations lack of clarity in work specification, lack of safety equipment and clothing, pressure from tight deadlines, interruptions and distractions leading to errors. While some distractions may be extraneous (e.g. caused by the presence of children, pets, members of the public, etc.) others may be related to the nature of crowd work; for instance, the need to respond to alerts sent by online platforms via mobile phone apps (e.g. to respond to a new request for work or provide an update on the process of a job).

When the crowd work activity is driving, such risks are particularly high because of the potential for accidents to be very serious. Accidents may result from distractions caused by messages or phone calls, or exhaustion due to long and unregulated working hours, whether incurred in the crowd work or another job. Driving a taxi entails risks to drivers, customers, and other road users. *Uber* has already been sued for wrongful death by the parents of a six-year-old child killed by a car linked to the company.⁴⁹ There have been cases of *Uber* drivers accused of rape by customers in Chicago,⁵⁰

⁴⁵ <http://www.mybuilder.com>

⁴⁶ <https://www.taskrabbit.co.uk/m/featured> (Accessed 16 March 2016)

⁴⁷ To give one example, a *Taskrabbit* worker is quoted as saying 'I had a client a couple of months ago who wanted me to do his laundry. I did it and there was something kind of nasty on his stuff. ... I realized this nasty stuff was actually cat diarrhea all over his laundry. ... The third time this happened, I actually called TaskRabbit and I said, "Look this is what's happening. Plus I'm allergic to cats and it actually says that in my profile." I said, "I think I should get paid more than \$25 for doing this." ... I got an email from TaskRabbit shortly thereafter that I was unprofessional. They said if I did that again, I was fired.'

(<http://www.businessinsider.com/confessions-of-a-task-rabbit-2011-12#ixzz3SxHibIS7>).

⁴⁸ Pugliesi, K. (1999) 'The Consequences of Emotional Labour: Effects on Work Stress, Job Satisfaction and Well-Being', *Motivation and Emotion*, Vol 23 No 2,

⁴⁹ Gullo, K. (2014) 'Uber Sued for Wrongful Death Over 6-Year-Old Child', *BloombergBusiness*, January 28. <http://www.bloomberg.com/news/articles/2014-01-27/uber-sued-for-wrongful-death-over-6-year-old-child-killed>

⁵⁰ Collman, A. (2014) 'Uber driver 'raped 22-year-old passenger he drove home drunk from bar', *Mail Online*, December 30. <http://www.dailymail.co.uk/news/article-2891248/Uber-driver-court-allegedly-raping-22-year-old-passenger-drove-home-drunk-bar.html>



Boston,⁵¹ and Delhi,⁵² as well as numerous other serious allegations.⁵³ Drivers are also vulnerable to attack and harassment by customers. Female *Uber* drivers have been tracked down at their home addresses and harassed by former passengers using a combination of *Uber's* 'lost-and-found' system and *Apple's* 'find my iPhone' app.⁵⁴ The vulnerability of women drivers may be exacerbated by the use of sexualised advertising in which women drivers are presented in erotic costumes and poses, illustrated by the 'Avions de chasse' campaign organised by *Uber's* Lyons office in France.⁵⁵ Lack of insurance, or lack of clarity about who is responsible for insurance (the online platform, the employer/client or the worker), are likely to shape working practices and the reporting of accidents. In the case of drive-share companies such as *Uber*, *Blablacar* and *Lyft*, externalised costs also include the cost of purchasing and maintaining the vehicle.

Turning to issues common to many types of crowd work, one widespread feature is its often extreme precariousness.⁵⁶ Many crowd workers face significant uncertainty over when they will have work, what it will consist of, and when they will be paid. The inability to predict working hours makes it difficult to plan ahead, with consequences for personal and family life. Crowd work often features the requirement to work at very short notice, and crowd workers may miss a job if they hesitate a few moments before clicking to 'accept' a task. Uncertainty is exacerbated in many cases by the knowledge that no payment may be received at all if the work is deemed unacceptable by the client.⁵⁷ Ratings from employers or clients can determine whether the worker receives further work, or is able to charge a reasonable rate, or even whether they remain on the database at all. Normally there is no right of appeal against such decisions, nor any procedure to evaluate the quality of the work independently. It is a common complaint of crowd workers that failure to pay is unjust and may be a form of 'scamming for free work'.⁵⁸ Moreover, precarious employment is not only found in work that is formally designated as freelance, but also where *bona fide* employees have contracts with unspecified numbers of hours.⁵⁹ The precarious nature of crowd work is therefore directly linked with income insecurity.

⁵¹ WBUR (2014) 'Boston Driver Accused of Raping Customer', *WBUR News*, December 18.

<http://www.wbur.org/2014/12/18/mass-uber-rape>

⁵² BBC (2015) 'Uber Delhi "rape": India court begins driver's trial', *BBC News India*, 15 January.

<http://www.bbc.co.uk/news/world-asia-india-30828132>

⁵³ <http://www.whosdrivingyou.org/rideshare-incidents> (Accessed 16 March 2016)

⁵⁴ Bhuyian, J. (2015) 'Men Are Using Uber's Lost-And-Found Feature To Harass Female Drivers', *Buzzfeed News*, February 10, <http://www.buzzfeed.com/johanabhuiyan/faced-with-harassment-female-uber-drivers-often-left-to-fend#.qkvA5JmRy>

⁵⁵ Warzel, C. (2014) 'Sexist French Uber Promotion Pairs Riders with "Hot Chick" Drivers', *Buzzfeed News*, October 21. <http://www.buzzfeed.com/charliewarzel/french-uber-bird-hunting-promotion-pairs-lyon-riders-with-a#.gyom00L3V>

⁵⁶ For a discussion of the link between precariousness and psychosocial risk factors, see Eurofound (2009) *Rise in Psychosocial risk factors in the Workplace*. Dublin: European Foundation for the Improvement of Living and Working Conditions. Available at: <http://kernelmag.dailydot.com/features/report/4732/my-gruelling-day-as-an-amazon-mechanical-turk/>

⁵⁷ Many accounts of *Amazon Mechanical Turk* describe large numbers of rejections. See for instance:

<http://www.cnet.com/news/amazons-mechanical-turk-lets-you-make-sort-of/> and

<http://kernelmag.dailydot.com/features/report/4732/my-gruelling-day-as-an-amazon-mechanical-turk/>

⁵⁸ See for instance, complaints by *Elance* users on <http://www.consumeraffairs.com/employment/elance.html>

⁵⁹ See Pennycook, M., Cory, G. & Alakeson, V. (2013) *A Matter of Time: The rise of zero-hour contracts*, Resolution Foundation.



It seems likely that crowd workers are also affected by emotional demands. The literature on this is scant, which is interesting given that one of the tasks widely regarded as most suitable for crowd labour is 'affective computing';⁶⁰ a term which covers a number of different practices, including coding for 'emotions' expressed in photographs, social media, and other digitised sources. Online crowd workers, acting as 'commercial content moderators',⁶¹ are often asked to tag or assess offensive content (including images of beheadings, bestiality and child pornography) on the Internet and decide whether it should be removed. While no research appears to have been carried out among crowd workers, the adverse – indeed, often traumatic – effects of exposure to such disturbing media images are well documented among other workers exposed occupationally to them.⁶²

In many cases, the cost of insurance and the risk of ensuring safety is also externalised to crowd workers. Sarah Kessler provides an illustration of this when reporting on her experience with *Postmates*, a New York-based company providing a crowd sourced courier service: 'I ask whether there are any health insurance or safety policies for couriers. He tells me in no uncertain terms, "You are not an employee of *Postmates*. So when it comes to safety, you are on your own." (I am, after all, my own microbusiness.) When I later visit the web page that *Postmates* uses to recruit employees, I can't help but notice that it boasts that *Postmates* pays 100% of its employees' medical, dental, and vision insurance premiums. "Your physical and mental health is a priority to us," it says. But that's only for *Postmates*' 45 engineers, designers, and executives. It does not include the 2,000 people who are making deliveries'.⁶³ In Europe, the extent to which lack of secure and permanent employee status affects access to and the costs of health services varies from country to country. But even when health care is available free of charge, many workers face a lack of pay during periods of illness or injury. They may also lack other benefits, such as maternity or paternity leave or compassionate leave, the absence of which does not just add to the economic pressures of precariousness but also creates psychological burdens, impacting family life as well as working life.

These difficulties are likely to be exacerbated by the fact that workers may lack direct channels of communication with the ultimate client and are thus deprived of an individual or collective voice, giving them no say in influencing the decision-making that shapes their labour processes.⁶⁴ Even in online work carried in 'virtual teams', it is likely that many of these effects will still occur, because the geographical distance from the employer acts to reduce the kinds of direct interaction that occur when employees are co-located. Isolation, lack of social support, and the requirement to be autonomous all increase psychological stress. Additional psychosocial strain may come from the

⁶⁰ Morris, R.R. and McDuff, D. (2014) 'Crowdsourcing Techniques for Affective Computing', *Handbook of Affective Computing*, MIT Media Lab, MIT.(2014) <http://affect.media.mit.edu/pdfs/14.Morris-McDuff.pdf>

⁶¹ Roberts, S. (2016) 'Commercial Content Moderation: Digital Laborers' Dirty Work', in S. U. Noble & B. Tynes (eds) *The Intersectional Internet: Race, Sex, Class and Culture Online*, Peter Lang Publishing.

⁶² Perez, L.M, Hones, J., Englert, D.R and Sachau, D. (2010) 'Secondary Traumatic Stress and Burnout among Law Enforcement Investigators Exposed to Disturbing Media Images', *Journal of Police and Criminal Psychology*, 25 (2).

⁶³ Kessler, S. (2014) 'Pixel & Dime: On (not) getting by in the gig economy', *FastCompany*, March 18. <http://www.fastcompany.com/3027355/pixel-and-dime-on-not-getting-by-in-the-gig-economy>

⁶⁴ For a discussion of the links between interruptions, work intensification, multitasking and work strain and distress in work involving ICT use, see Chesley, N. (2014) 'Information and communication technology use, work intensification and employee strain and distress' *Work, Employment and Society*, Volume 28 (4) 589-610.



combined impacts of multiple jobs which may interact with each other in diverse ways.⁶⁵ When employers do not take responsibility for working conditions, this does not just transfer a range of risks to individual workers. Worker who are unmonitored and unsupervised other than by indirect means (performance or output indicators, payment by results, customer ratings, etc.) are also unobserved in other ways. Deteriorating physical and/or mental health, or health-threatening means of coping with stress (such as use of alcohol or drugs), which would be spotted in a normal working situation, can escalate rapidly if nobody is aware of them. This can lead not only to serious life-threatening risks for the worker concerned but also to clients and the general public.

⁶⁵ For a detailed discussion of the impact of multiple job-holding on psychosocial risks, see Brun, E. and Milczarek, M. (2009) *Expert forecast on emerging psychosocial risks related to occupational safety and health*, European Agency for Safety and Health at Work. <https://osha.europa.eu/en/publications/reports/7807118>



Employment status of crowd workers

The employment status of crowd workers is a central but contentious issue. The legal presence, or otherwise, of an employment relationship is crucial to determining the financial costs and benefits of this way of organising work, and to determining the employment rights of worker employed in this way. Therefore, this question is of the utmost importance for the potential impact of crowd work. For companies which utilise this form of labour, the opportunity to externalise costs associated with direct employment is a key motivating factor. The 'manifold assurances and protections' for workers that companies in the USA avoid when work is done by non-employees include 'overtime compensation, minimum wage protections, health insurance, disability insurance, unemployment insurance, maternity and paternity leave, employer-sponsored retirement plans, workers' compensation for injuries, paid sick leave, and the ability to engage in collective action'.⁶⁶ To this list can be added costs associated with the provision of work space, work equipment, materials, transport, training, and insurance. Employers of crowd workers in the USA tend to avoid a legal employment relationship in preference for 'independent contractor' status, facilitated by a variety of intermediation models, including the use of companies which act as the 'employer of record'.⁶⁷ Four different models have been proposed for the governance of 'human cloud platforms': 'arbitrators', 'governors', 'facilitators', and 'aggregators'.⁶⁸ Although in each case workers are selected and managed differently, in none are they direct employees of the ultimate customer.

Nevertheless, it seems clear that in many cases workers have an ongoing employment-like relationship. For example, the life insurance company *Aegeon* 'has an on-demand workforce of 300 licensed virtual agents managed through another online intermediary, *LiveOps*. Although not legally *Aegeon* employees, they are scheduled for inbound and outbound calling through *LiveOps*' routing software'.⁶⁹ Some US corporate literature sees the 'marketplace model' – the triangular relationship of platform, service buyer, and independent contractor – as creating too much legal uncertainty, and proposes instead a 'general contractor model', in which the platform enters into 'master service' agreements with both the other parties.⁷⁰

This situation, however, is increasingly contested. Law suits demanding employee status for workers have been filed or considered on behalf of workers for *Handy*⁷¹ in California and *Homejoy* in Massachusetts (which has since gone out of business), despite the latter's insistence that it was 'not a cleaning company but a platform'.⁷² In San Francisco, similar class action suits have been filed against *Uber* and *Lyft* demanding employee status for their drivers.⁷³

⁶⁶ Dokko, J., Mumford, M. and Schanzenbach, D.W. (2015), *Workers and the Online Gig Economy: A Hamilton Project Framing Paper*, The Hamilton Project, Brookings, Washington.

⁶⁷ Karpie, A. (2014) *Engaging the 21st Century Professional Workforce*, MBO Partners.

⁶⁸ Kaganer, E., Carmal, E., Hirschheim, R. and Olsen, T. (2013) 'Managing the Human Cloud' *MITSloan Management Review*, Winter.

⁶⁹ Kaganer *et al*, Page 1.

⁷⁰ Onforce (2013) *The General Contractor Model: A competitive advantage in It Field Services Delivery*, Onforce White Paper.

⁷¹ Montgomery, K. (2014) 'Handy Sued for Being a Hellscape of Labor Code Violations' *Valley Wag*, 12, November. <http://www.cnbc.com/id/102435316#>.

⁷² <http://www.washingtonpost.com/news/storyline/wp/2014/09/10/at-the-uber-for-home-cleaning-workers-pay-a-price-for-convenience/>

⁷³ CNBC.com (2015) 'Lawsuits facing Uber, Lyft could alter sharing Economy', 20 February. <http://www.cnbc.com/id/102435316#>.



Moreover, in addition to contractual features that suggest forms of dependency that resemble an employment relationship, there is also evidence that *Uber* drivers are pressured into dependency on the company by other means, such as loans for the lease or purchase of new cars.⁷⁴

In Europe, the situation is, if anything, even more complex. Sometimes, workers appear to be treated as genuine employees. Although it is not entirely clear from its website, Berlin-based *Mila*⁷⁵ (which also has offices in Switzerland, Romania, Indonesia and China⁷⁶) seems to treat its workers (termed 'friends'⁷⁷) as employees, on a similar basis to a temporary employment agency. This company also claims to provide 'excellent social and accident insurance'.⁷⁸ In the UK, the legal service platform *Axiom* describes its legal staff as 'employees'.⁷⁹ Other sites go to considerable lengths to ensure that workers who use them comply with the legal requirements of self-employment. For instance, the French *Freelancer* site not only describes itself as a 'marketplace' that simply 'puts employers and contractors in direct contact with each other', it also specifies the documents a worker must provide to comply with freelance status under French law.⁸⁰ Despite the formal position, however, some platforms include requirements that sit uneasily with freelance status. For instance, in creative crowd work it is common for intellectual property rights to rest with the client not the worker, as would more usually be the case for freelancers. Some platforms, such as *oDesk*,⁸¹ encourage clients and workers to use software that enables real-time surveillance of work done; a feature of more traditional employment relations. Reflecting this unevenness, Eurofound reported that in most European countries 'pay, working conditions and other issues, notably intellectual property rights, [may be] determined either by the two parties or the terms and conditions of the platform'.⁸²

Further complexity can arise when companies use crowd work methods for assigning tasks, in conjunction with zero-hours contracts for the workers to whom these tasks are assigned. Zero-hours contracts commonly fall outside the legal definition of employee. Nevertheless, research in the UK found that 64% of employers classified zero-hours staff as employees and only 3% regarded them as self-employed,⁸³ despite 'confusion among employers over what employment rights "employees" are eligible for'.⁸⁴ Of course, it cannot be presumed that all zero-hours workers are organised through in-house crowd work arrangements, or that the UK is typical of Europe. This does suggest, though, that even where the employment status of workers is unclear, in practice they may often be treated as employees – though it does not follow that such workers necessarily enjoy full employment rights, given their employers' uncertainty as to what those might be.

⁷⁴ Henwood (2015) 'What the Sharing Economy Takes', *The Nation*, January 27. See also <http://valleywag.gawker.com/uber-and-its-shady-partners-are-pushing-drivers-into-su-1649936785> and <http://bostinno.streetwise.co/2014/12/27/uber-santander-lease-to-own-for-uberx-martha-coakley-santander-investigation/>

⁷⁵ <https://www.mila.com/>

⁷⁶ <http://venturevillage.eu/zurich-mila-fund-3m>

⁷⁷ <https://www.mila.com/friends>

⁷⁸ <https://www.mila.com/jobs>. Accessed 9th February, 20--15.

⁷⁹ <http://www.axiomlaw.com/what-we-do> (Accessed 15 March 2016)

⁸⁰ <http://www.freelance.com/en/contents/products-and-services>, accessed on February 20, 2015.

⁸¹ Caraway, B. (2010) 'Online labour markets: an inquiry into oDesk providers', *Work Organisation, Labour and Globalisation*, 4 (2): 111-125

⁸² Eurofound (2015), *New Forms of Employment*, Publications Office of the European Union, Luxembourg: 109.

⁸³ *CIPD (2013) Zero-hours contracts: Myth and Reality*, Chartered Institute of Personnel and Development: 29

⁸⁴ *Ibid.*: 30



Where online platforms are used internally, the situation regarding employment status may be relatively clear because there are only two actors – the employer and the worker – and therefore the main question is whether the worker has the same rights as other employees. Where three actors are involved, however, – the ultimate client, the online intermediary, and the worker – the situation is more complicated. Platforms matching professional freelancers with clients generally make clear the self-employed status of the freelancer (though there may be borderline cases). The most contentious cases, however, are those involving the online co-ordination of low-skill work, both online and offline.

In the USA this question has been addressed in some depth in the literature in relation to online 'click work' or 'cognitive piecework' platforms.⁸⁵ Such sites typically publish disclaimers telling 'requesters' and 'providers' that they use their services at their own risk. The implication is that workers are 'independent contractors' rather than employees. Nevertheless, the platforms often attach conditions such as requirements for all financial transactions to be processed via the site, and 'satisfaction' clauses which legitimate the rejection of unsatisfactory work without justification. Thus, *Amazon Mechanical Turk* mandates that the work product is 'made for hire' which means that ownership rights, including intellectual property, remain with the 'requester' even if the work has been rejected.⁸⁶ It also has the right to 'terminate' workers, barring them from further participation in the platform. Such conditions suggest a level of control that goes beyond the mere provision of an introduction between two independent parties, and which resembles more closely a traditional employment relationship.

Nevertheless, a number of conditions apply that make it difficult to establish definitively that click workers should be regarded as employees. For instance, workers may work for multiple platforms, and/or supply their own equipment. In relation to offline workers, as noted earlier, there have been some class action suits in the USA seeking employee status for workers providing taxi services and domestic help but no clear judgement has yet been reached. Specific conditions vary from site to site but there are several in which pay rates are set by the online intermediary, who may also have the power to discipline or bar particular workers, suggesting a pattern of control and dependency that resembles a temporary employment agency or service provider rather than a labour exchange or listing service; but such hypotheses have yet to be tested legally.

In a potentially significant response to such difficulties of legal definition in the USA, Seth Harris and Alan Krueger⁸⁷ have proposed a new legal classification of 'independent worker', in order to permit the restoration of a number of benefits and protections to workers in the online gig economy; including freedoms to organise and collectively bargain, civil rights and anti-discrimination protections, workers' compensation insurance, wage and hours protections, unemployment insurance, and affordable health care insurance.

The situation is unclear in Europe but it seems likely that, in many Member States, workers doing manual or low-skill clerical work organised via online platforms might be regarded as their

⁸⁵ For an overview, see Felstiner, A. (2011) 'Working the Crowd: Employment and Labor Law in the Crowdsourcing Industry', *Berkeley Journal of Employment & Labor Law*, 32 (1).

<http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1433&context=bjell>

⁸⁶ AMT agreement quoted in Felstiner *op cit.* p 163.

⁸⁷ Harris, S. and Krueger, A. (2015), 'A proposal for modernizing Labor Laws for Twenty-First- Century work: the "Independent Worker"', *The Hamilton Project, Discussion Paper 2015-10*, Washington, DC, December 2015.



employees. In the case of more highly-skilled freelance workers, further tests would have to be applied to establish whether workers are genuinely self-employed according to the relevant national regulations (for instance, working for multiple clients, tax status, etc.). Overall, then, the employment status of crowd workers is one of a number of unresolved issues surrounding this way of organising work.

Tax, insurance and regulation of crowd work platforms

The growth of online work exchanges raises new and, as yet, unresolved questions for policymakers concerned with the governance of labour and consumer markets, and the protection of the rights of workers, consumers and the general public. Among these unresolved questions is the status of online work exchanges – the platforms at the heart of these new forms of work organisation. These platforms have diverse origins and take multiple forms and are therefore difficult to categorise. Potentially, they might be regarded as markets, temporary work agencies, labour exchanges, social enterprises, service providers, advertising platforms, or online directories.

Regarding them as ‘private employment agencies’ would bring them within the scope of ILO Convention No 181, which would require adopting countries to ensure a range of measures to protect workers and jobseekers including freedom of association, collective bargaining, minimum wages, access to training, occupational safety and health, compensation in case of occupational accidents or diseases and working time. Private employment agencies must also have procedures for dealing with complaints – something notably lacking from many of the platforms discussed above. The Convention addresses the possibility that workers may be recruited in one country to work in another both in relation to migrant workers and to the possibility of fraudulent practices in cross-border transactions. There are also restrictions on the processing of personal data, and on the fees that workers may be charged.

Two alternative options would be to regard these platforms as employers, or as temporary work agencies, which would immediately confer on them all the associated responsibilities in any given national context. If they are not regarded as falling into any of these three categories, then the open question remains: what are they? Until this can be answered it is difficult to know what regulations should apply.

A similar lack of clarity pertains in relation to insurance, a question that is particularly important in relation to offline work. If an accident occurs in the home of a client who has booked a cleaner via an online platform, for example, who is responsible? Should it be covered by the insurance of the householder or that of the platform? Or could the individual worker be held responsible? What if the worker were attacked or had an accident on the way to or from the job? In the case of online work, who would be responsible if an article commissioned from a writer via an online platform turned out to be libellous? Some online platforms include clear statements about insurance and liability. For instance, *Taskrabbit* advertises that ‘Every task is insured up to \$1 million’.⁸⁸ More often, though, statements on platforms take the form of disclaimers.

Another area of uncertainty is how national and EU regulations can be applied. At the European level, these include Directives on Working Time, Part-Time Work, Temporary Agency Work, Undeclared Work, Equal Pay and Equal Treatment and Parental Leave. Of particular relevance in this

⁸⁸ <https://www.taskrabbit.co.uk/trust-and-safety> – Details of the policy, here:
<https://www.taskrabbit.co.uk/guarantee> (Accessed 17 March 2016)



context is the Directive on Health and Safety in Fixed-Term and Temporary Employment (91/383/EEC) which extends the same level of protection to fixed-term and agency workers as to other employees. It also imposes a duty on undertakings to give adequate information and training to these workers to protect their safety and health, specifies appropriate medical surveillance, and clarifies the division of responsibilities between temporary employment agencies and user undertakings. It is difficult to apply this, or other Directives, to online work exchanges if their legal status, and that of their workforce, is unclear.

At a national level, similar problems arise in relation to the applicability of national regulations such as those referring to minimum wages, equal treatment, tax and national insurance deductions, and safety regulations. A particularly important question is what forms of social protection are available to crowd workers, how eligibility can be established and how rights can be claimed.

Where workers organised by online platforms are providing services directly to the public there is considerable overlap between issues relating to worker protection and those relating to consumer protection. In some cases there is a lack of clarity about whether the consumer's 'contract' is with the crowd worker or with the online platform. This affects the consumer's rights, for instance to fair contract terms and guarantees. Consumers also have specific rights in relation to unsafe, dangerous or faulty goods, pre-contract information, data protection, misleading advertisements for goods and services, and purchases made over the Internet, which may be applicable when they use online work exchanges.

More broadly, issues relating to safe and healthy working practices in public spaces or private residences may affect both workers and members of the public. It is not always clear, however, whether they should be addressed as matters of public safety, using environmental protection or public health regulations, or more specifically as labour or consumer protection issues. In many countries this question has practical implications since it will determine which body should be responsible for inspection, dealing with complaints and enforcement.

Many online platforms advertise the services of workers with particular skills. However it is not always clear what evidence exists that they actually have the relevant qualifications or whose responsibility it is to check these credentials. This question has implications for professional responsibility, especially important in cases where there are regulations in place requiring that practitioners have the relevant certification (e.g. in accountancy, medical services, electrical installation) or requirements for checks for past convictions (e.g. for theft, dangerous driving, child abuse, sexual assault). Some platforms, but by no means all, state that all their workers are fully vetted (without necessarily explaining how). The absence of such checks can lead to situations where the safety and health of the worker concerned, and of clients and members of the public, can be put at risk.

Conclusions

We can conclude from this overview that there is currently both a lack of reliable evidence on the extent of crowd work in Europe and a lack of information about the demographic characteristics of the crowd workforce. Qualitative information about their working conditions and employment status is also lacking.



The Hertfordshire Business School Crowd Work Survey

Research Questions

The literature survey summarised in the previous section made it clear that there were a number of unresolved questions that would have to be addressed before any serious research could be carried out about the social and economic implications of the development of crowd work. These can be summarised as follows:

1. How can crowd workers be identified?
2. How many people are carrying out crowd work?
3. What are their demographic characteristics and how do they compare with the rest of the labour force?
4. To what extent does this crowd work constitute a main source of income?
5. What kinds of work are they doing?

Only when these questions have been answered will it be possible to design qualitative research that will make it possible to answer the further questions that are of such strong interest to policy stakeholders, such as: what are the working conditions of crowd workers? To what extent are they covered by current regulatory, tax and insurance arrangements? What are the motivations for working in this way? How does crowd work contribute to work-life balance? Does crowd work provide the basis for sustainable new careers?

Survey design

In order to address these questions, it was decided to carry out a pilot survey to establish the extent and characteristics of crowd work and explore some features of their working arrangements. Because of budgetary restrictions, it was further decided to carry this survey out online, using the method of adding additional questions to an omnibus survey known to be representative of the general population.

Designing the survey presented a number of challenges. First, since there is no generally agreed definition of 'crowd worker', it was out of the question to ask the simple question 'Are you a crowd worker?'. Drawing on the extensive experience of the Principal Researcher (who has in the past pioneered research on other new technology-related phenomena such as teleworking, telemediated mobile working and offshore outsourcing), the method selected for this exploratory study was to collect information about the full range of online behaviour connected with income-generation or work-seeking that might encompass crowd work, in order to isolate crowd workers, by elimination, from broader categories of online behaviour. This would enable a typology of crowd workers to emerge by a process of cross-tabulation with other variables (such as age, gender, occupation, employment status etc.) to produce a tentative profile of the crowd workforce.

Because our working definition referred only to paid work (i.e. the sale of personal labour) managed by online platforms, it was important to collect information on other sources of income derived via online platforms from which it could be separated, such as income from selling, or reselling possessions or craft products or renting out rooms. In the recognition that some respondents might be seeking work on online platforms without necessarily having found it, it was also considered important to capture information on this work-seeking process. However it was also important to distinguish this behaviour from other online job-search processes that were not connected with



seeking crowd work. In order to achieve this separation, it was decided to ask additional general questions about online job search activities. Finally, it was recognised that many of the practices involved in crowd work may also be present in other forms of employment. These activities include use of online 'apps' for notification of new tasks or customers or logging of working hours, and using email or SMS messages for out-of-hours communication with employers or clients. These were therefore made the subject of further questions.

Information was thus collected about a wide range of practices connected with ICT-mediated work, providing a rich source of data from which different dimensions of crowd work could be studied. Once participants who had at some time engaged in paid work organised via an online platforms had been identified, it was then possible to ask further questions about the type of work carried out, the frequency of such work and its contribution to total earnings.

Sampling

The survey was carried by Ipsos-MORI as part of its regular iOmnibus online survey, initially in the UK and subsequently in Sweden, Germany, Austria, and the Netherlands. The reasons for this choice of survey method were twofold. First, budgetary considerations prohibited the use of large-scale offline surveys. Second, the omnibus survey made it possible, without additional cost, to collect information on a large range of demographic variables. Third, the Ipsos-MORI iOmnibus survey makes it possible to construct a stratified sample which is representative of the wider national population in a number of demographic dimensions – principally age, gender, region and working status – and, where necessary, weight the findings to represent the total population. In practice, stratification varied slightly according to the market research practices in each country (Table 2.1 provides details). In particular, the age ranges of the samples varied from country to country (see Table 1). Nevertheless, despite these small variations, each survey sample was representative of its national population in important respects. We can thus state with some confidence that the samples of crowd workers produced by the survey in each country are representative of the broader populations of crowd workers there. Nevertheless, because only an online population was sampled, we cannot state with complete confidence that the percentages found engaging in particular types of online activity can be extrapolated to the entire population of these countries.

Such extrapolations will be carried out in the next stage of the research when, we hope, it will be possible to conduct a comparable survey using face-to-face and or telephone methods, thus making it possible to calibrate the results more precisely. The survey presented here is designed to provide base-line data on which further research can be built in the future.



Table 1 Samples and stratification

Country	Sample size	Survey dates	Age range	Stratification
UK	2,238	22-26 Jan 2016	16-75	Age, gender, region, social grade, working status
Sweden	2,146	26 Feb-7 Mar 2016	16-65	Age, gender, region and working status
Germany	2,180	1-4 April 2016	16-70	Age, gender, region, population density of respondent settlement, chief income earner of household, household size, working status
Austria	1,969	1-4 April 2016	18-65	Age, gender, region, and working status
Netherlands	2,126	22-27 April 2016	16-70	Age, gender, economic activity, region, working status

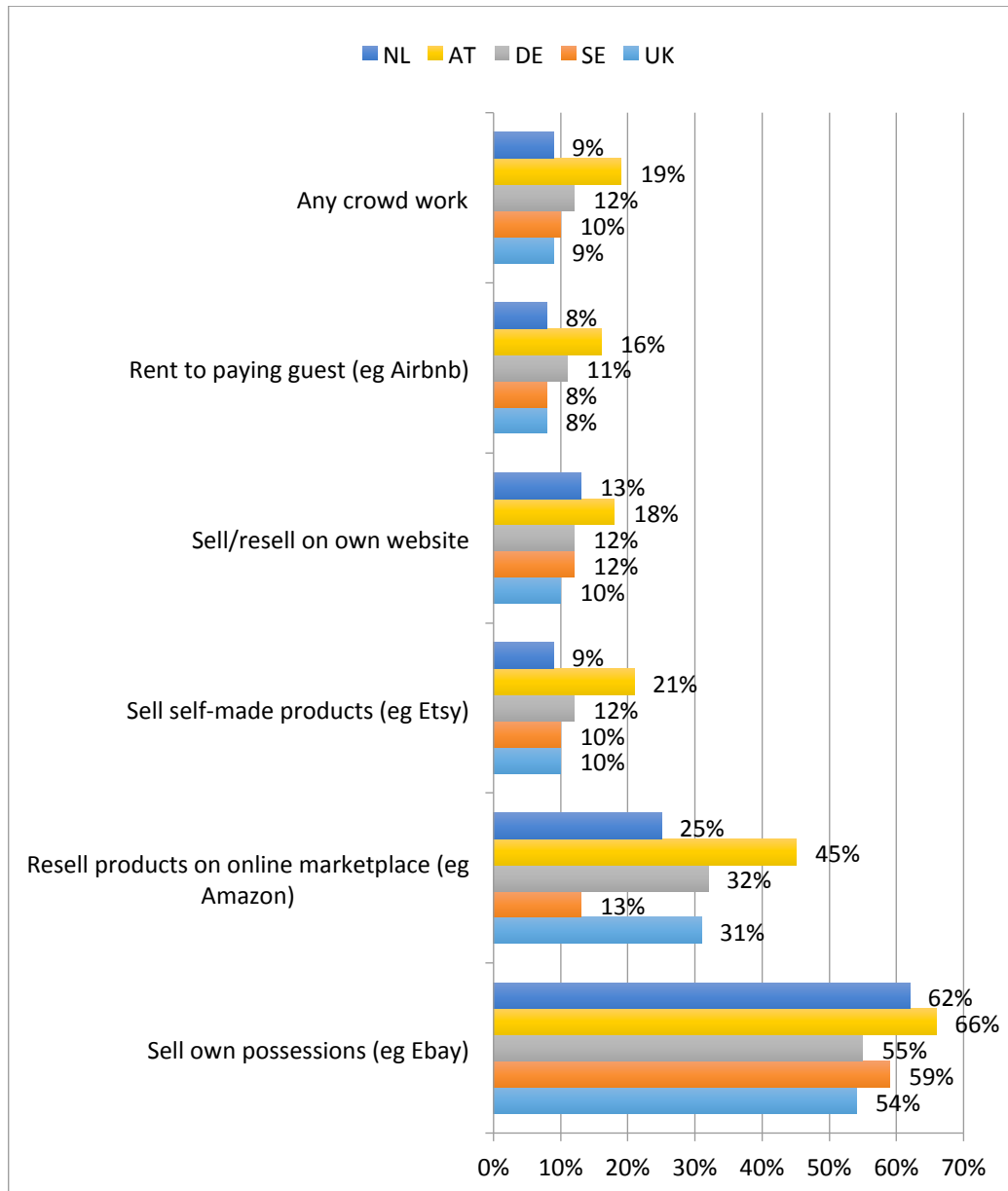


Research findings

The context: general participation in the online economy

The first task was to establish the extent to which respondents in the countries surveyed participate actively in the online economy by using online platforms to help generate income.

Figure 1. Participation in the online economy as a source of income, by country



Source: Hertfordshire Business School Crowd Work Survey, 2016

Base: 2238 respondents in the UK, 2146 respondents in Sweden, 2180 Respondents in Germany, 1969 respondents in Austria and 2126 respondents in the Netherlands (weighted).

Figure 1 summarises the ways in which participants in the survey gained income from online sources. Participants were asked to code as many categories as applied, so the totals exceed 100%.



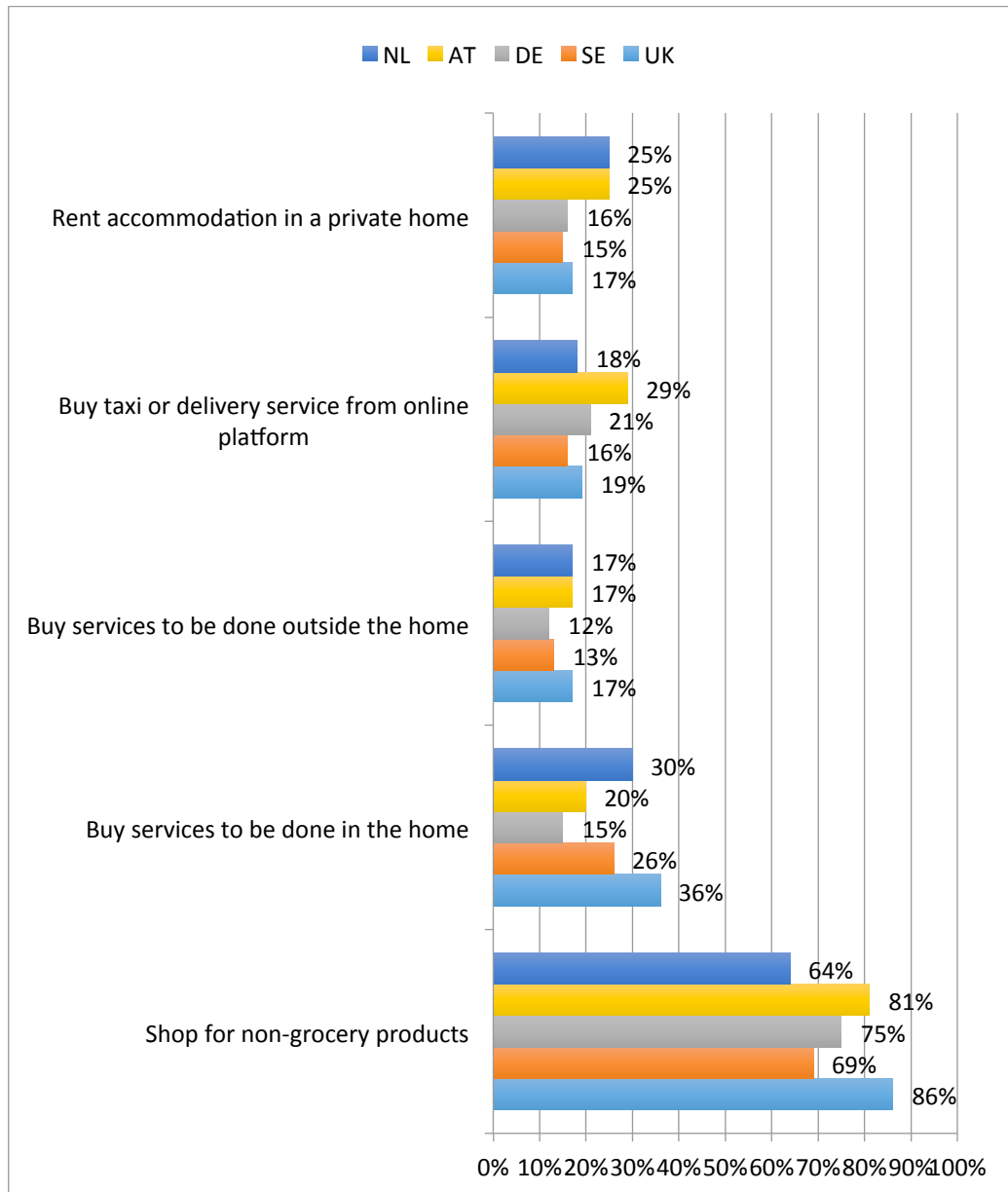
As can be seen, the most popular means of making money via the Internet is selling one's own possessions, second hand, on platforms such as *eBay*, used by more than half the sample in each country. This was followed by the practice of reselling goods in online marketplaces, or on the participants' own websites. Significant proportions (ranging from 9% in the Netherlands to 21% in Austria) also sold self-made products on sites such as *Etsy* (which specialises in hand-made craft products), while the proportion deriving an income from renting out rooms on sites such as *Airbnb* ranged from 8% to 16%.

Crowd work, defined as paid work via an online platform, had generated an income for 9% of the UK and Dutch samples, 10% in Sweden, 12% in Germany and 19% in Austria. Crowd work was thus less prevalent than all other forms of online income generation except renting out rooms and selling self-made products and, in some cases, selling on a personally owned website. Nonetheless, it is clearly an important source of income for a significant minority of the population.

Figure 2 shows the demand side of the story: the extent to which respondents participated in the online economy as customers. Here, unsurprisingly, online shopping for non-grocery items is by far the most common practice (grocery shopping was excluded from the survey because of its very high prevalence). However there are also significant numbers buying services from online platforms which correspond, from the point of view of the worker supplying the service, with forms of crowd work. Here, the largest category is services provided in the home (such as cleaning or household maintenance tasks), used by 36% of the sample in the UK, 30% in the Netherlands, 26% in Sweden, 20% in Austria and 15% in Germany. This is followed by the use of platforms for driving or delivery services used by 29% of respondents in Austria, falling to 21% in Germany, 19% in the UK, 18% in the Netherlands and 16% in Sweden. Between 12% of the sample (in Germany) and 17% (in the UK, Austria and the Netherlands), with Sweden at 13%, are purchasing services to be carried out outside the customers' homes.



Figure 2. Participation in the online economy as a customer, by country



Source: Hertfordshire Business School Crowd Work Survey, 2016

Base: 2238 respondents in the UK, 2146 respondents in Sweden, 2180 Respondents in Germany, 1969 respondents in Austria and 2126 respondents in the Netherlands (weighted).

Use of the Internet to find work

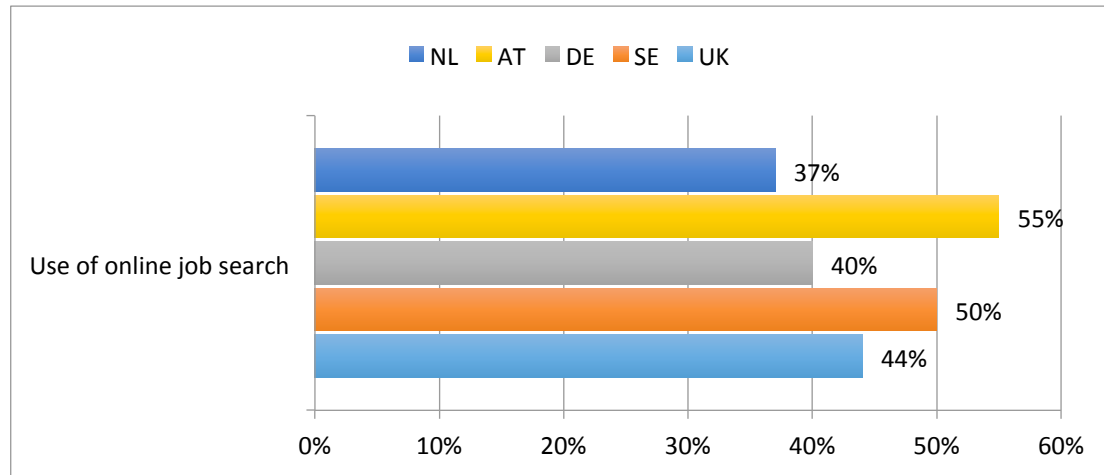
A key objective of the research was to isolate the search for crowd work from other kinds of job search carried out via online platforms. Job seekers are encouraged to search for work by any means possible, but there are important differences between using an online job recruitment site to find a position (whether permanent or temporary, part-time or full-time) with a regular employer, for which a formal appointment will be made, with an ongoing contractual employment relationship, and seeking casual work paid by the task.



Accordingly, all respondents were asked whether they had ‘Look[ed] for a job on a job search website such as *Jobsite, Manpower, Universal Jobmatch, JobCentreGuide* or *Reed*⁸⁹ as well as more detailed questions about searching for crowd work.

As Figure 3 shows, extensive use is made of such platforms, ranging from 37% of the sample in the Netherlands to 55% in Austria, with Germany at 40%, the UK at 44% and Sweden at 50% in between.

Figure 3. Online job-search, by country (%)



Source: Hertfordshire Business School Crowd Work Survey, 2016

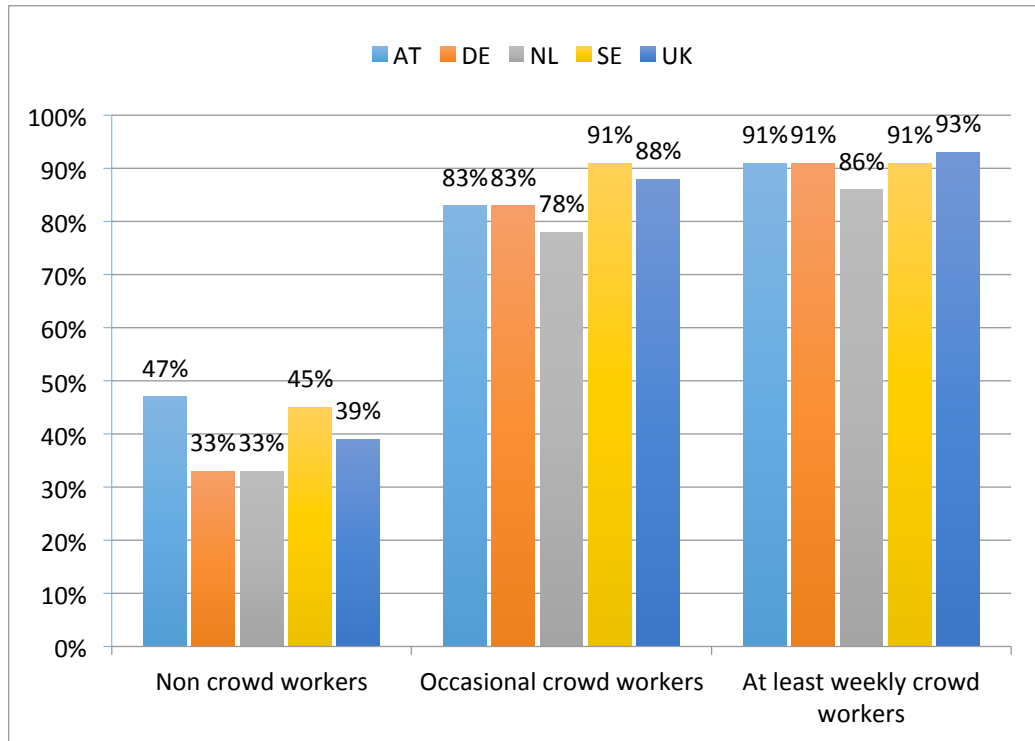
Base: 2238 respondents in the UK, 2146 respondents in Sweden, 2180 Respondents in Germany, 1969 respondents in Austria and 2126 respondents in the Netherlands (weighted).

We were interested to find out to what extent participants searching for crowd work were also searching for regular jobs. To address this question a detailed analysis was carried out comparing frequent crowd workers, occasional crowd workers and non-crowd workers in all five countries. The results are shown in Figure 4. This shows that, while non-crowd workers are still likely to be using job search sites, ranging from 33% in Germany and the Netherlands to 47% in Austria, with the UK at 39%, they are much less likely to do so than crowd workers, whether frequent (at least weekly) or occasional. Crowd workers are, indeed more than twice as likely as non-crowd workers to be using such sites. Apart from the Netherlands, where it is nevertheless high, at 86%, the proportion of frequent crowd workers using such sites is over 90% in each country, while the use by occasional crowd workers is not much lower (at 78% in the Netherlands, 83% in Austria and Germany, 88% in the UK and 91% in Sweden).

This suggests that crowd workers are searching for any form of work they can be find, and may be accepting crowd work only because they cannot find a more regular or permanent position. Detailed qualitative research will be required to establish whether this is in fact the case.

⁸⁹ The questions quoted here are taken from the English-language version of the questionnaire used in the UK. In some other countries, the names of different platforms were substituted, depending on their presence in local markets, popularity and brand recognition.

Figure 4. Use of job search platforms by frequent crowd workers, occasional crowd workers and non-crowd workers, by country (%)



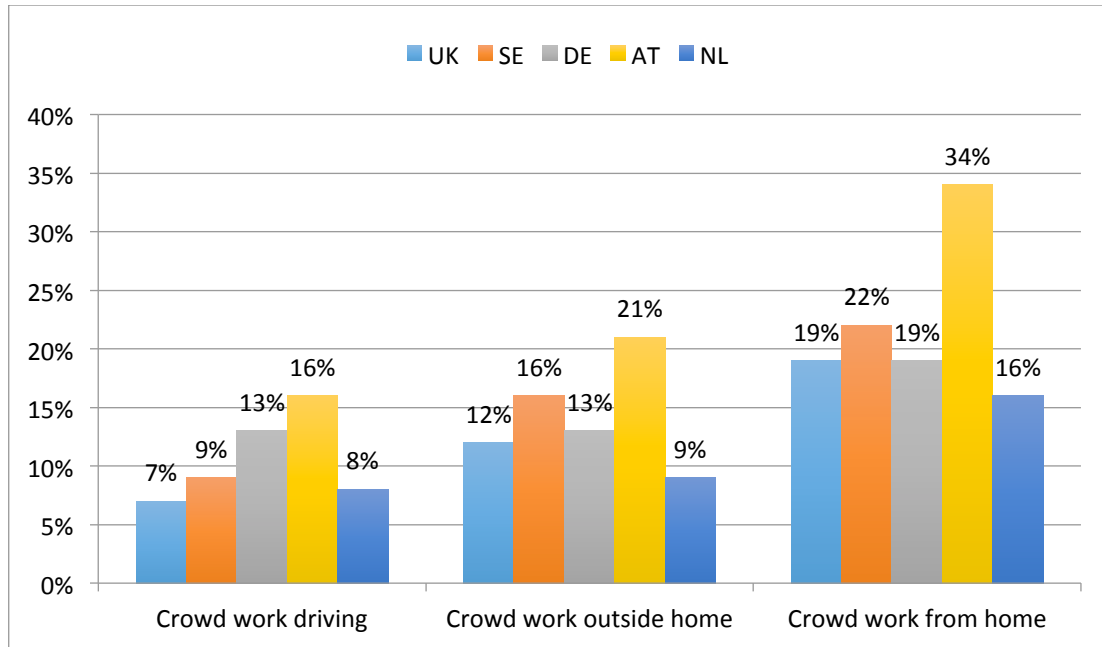
Source: Hertfordshire Business School Crowd Work Survey, 2016

Base: 2238 respondents in the UK, 2146 respondents in Sweden, 2180 Respondents in Germany, 1969 respondents in Austria and 2126 respondents in the Netherlands (weighted).

We now turn to the search for crowd work. Figure 5 shows the percentages of respondents in each country who said that they had looked for work on online platforms. These responses are relatively high because they include all those who had ever sought such work, no matter how infrequently. They may therefore include some individuals who might be termed ‘platform tourists’ who had registered their details with platforms but not actually carried out paid work by this means. The ‘driving’ category represents positive responses to a question asking respondents whether they had ‘offer[ed] to drive someone to a location for a fee using an app or website such as *Uber* or *Blablacar*’. The second category, termed ‘outside the home’, represents positive responses to a question whether they had ‘look[ed] for work you can carry out for different customers somewhere **outside your home** on a website such as *Handy*, *Taskrabbit* or *Mybuilder*’, while the final one, encompassing both high-skill and low-skill online work, represents positive responses to a question whether they had ‘Look[ed] for work you can carry out **from your own home** on a website such as *Upwork*, *Freelancer*, *Timeetc*, *Clickworker* or *PeoplePerHour*’.⁹⁰

⁹⁰ The questions quoted here are taken from the English-language version of the questionnaire used in the UK. In some other countries, the names of different platforms were substituted, depending on their presence in local markets, popularity and brand recognition.

Figure 5. Search for crowd work, by country



Source: Hertfordshire Business School Crowd Work Survey, 2016

Base: 2238 respondents in the UK, 2146 respondents in Sweden, 2180 Respondents in Germany, 1969 respondents in Austria and 2126 respondents in the Netherlands (weighted).

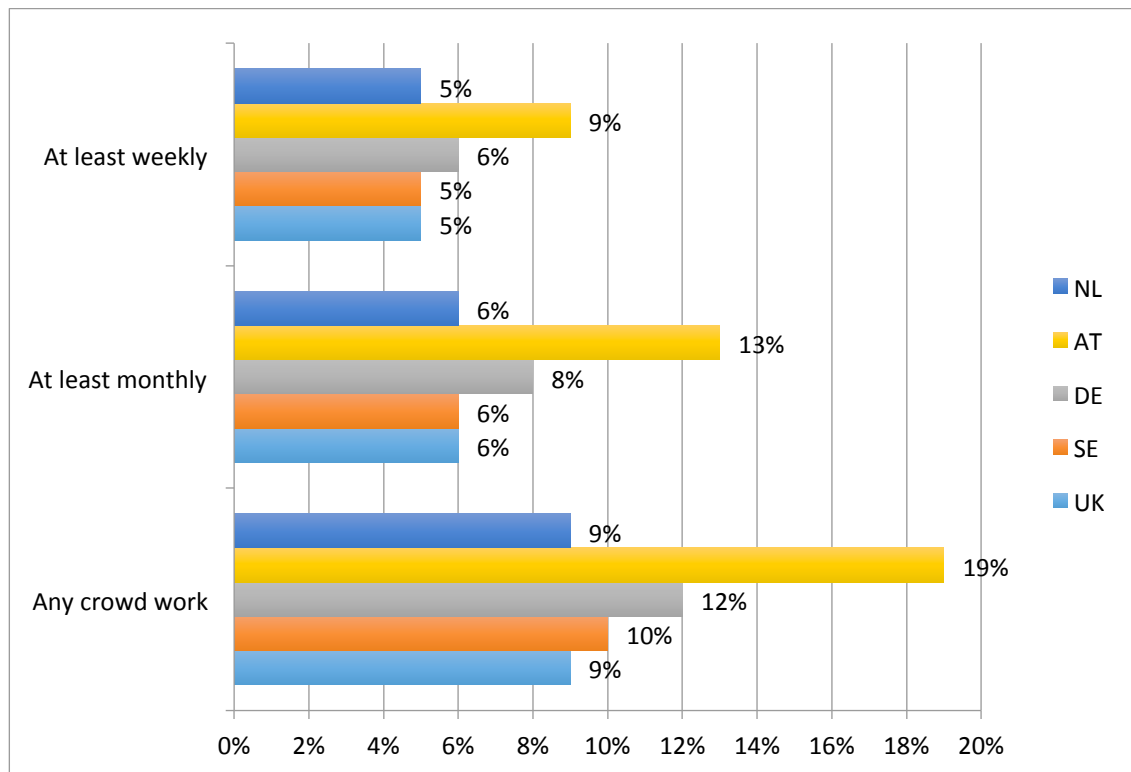
As can be seen, national differences in these patterns were rather small, with the partial exception of Austria, which scored higher on each of these three types of crowd work search. Explanations for this difference must remain speculative in the absence of follow-on qualitative research but they may indicate a higher inclination to experiment with crowd work. As we shall see later, this higher propensity to seek online crowd work does not correspond with a higher proportion of people treating crowd work as their main source of income in Austria, compared with the other countries surveyed.

Participation in paid crowd work

Survey participants were also asked whether they had actually done crowd work and, if so, how frequently they did this. Figure 6 shows the proportion earning an income from crowd work by frequency. As can be seen, many crowd workers do so only occasionally. However 5% of the sample in the UK, Netherlands and Sweden do so at least weekly, with the proportion in each of these countries going up to 6% when asked whether they do so monthly. In Germany, the proportion doing so are a little higher (with 6% crowd working weekly and 8% crowd working monthly). Austria remains the outlier, at the top end of the range in both cases (at 9% and 13% respectively). Further investigation is required to establish why this might be the case.⁹¹

⁹¹ At the time of writing we are planning to carry out a supplementary survey using offline methods in order to determine whether this might be a feature that is specific to the online population of Austria, which might have a higher propensity to engage in income-seeking behaviour when online, as compared with the other European countries in the survey.

Figure 6. People doing crowd work, by country and frequency



Source: Hertfordshire Business School Crowd Work Survey, 2016

Base: 2238 respondents in the UK, 2146 respondents in Sweden, 2180 Respondents in Germany, 1969 respondents in Austria and 2126 respondents in the Netherlands (weighted).

What is clear, however, is that national differences in crowd work practices cannot be attributed to national differences in welfare state models⁹² or 'varieties of capitalism'.⁹³ While the UK has a benefit system that is generally considered considerably less generous than those of the other countries sampled, levels of both weekly and monthly crowd work (at 5% and 6% respectively) are the same as those in Sweden and the Netherlands, despite differences in entitlement to benefits and benefit levels. The UK and Sweden are two countries that exhibit, perhaps, the most extreme contrast in our sample, between 'liberal' and 'social democratic' welfare regimes, while the more hybrid Netherlands regime is generally categorised as a combination of the 'corporatist' and 'social democratic' models. As noted below, the higher frequency of crowd work in 'corporatist' Germany and Austria does not translate into a higher proportion of the sample earning the majority of its income from crowd work.

Gender of crowd workers

The crowd workforce among our respondents is surprisingly evenly divided by gender, albeit with some national variations. Looking at those who have ever gained an income from crowd work,

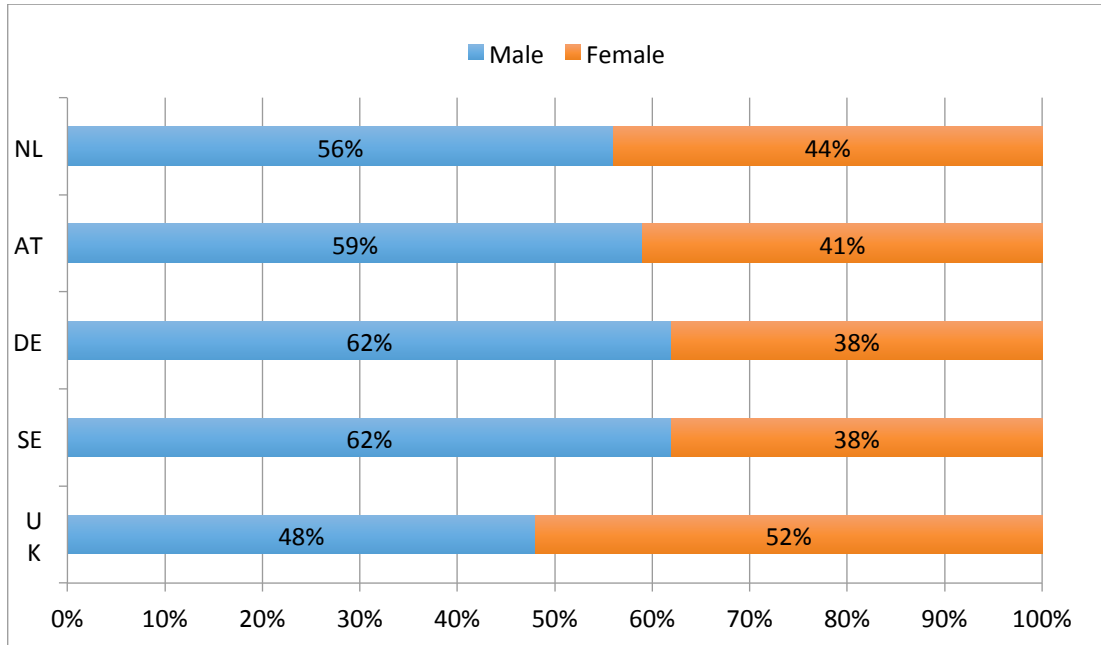
⁹² Esping-Andersen G. (1990), *Three Worlds of Welfare Capitalism*, London: Polity Press.

⁹³ Hall P.A. & Soskice D. (2001), *Varieties of Capitalism: the Institutional Foundation of Comparative Advantage*, Oxford: Oxford University Press,



women form a majority in the UK (at 52%), with men forming the majority in other countries (at 56% in the Netherlands, rising to 59% in Austria and 62% in Germany and Sweden).

Figure 7. Any crowd work, by gender (%)



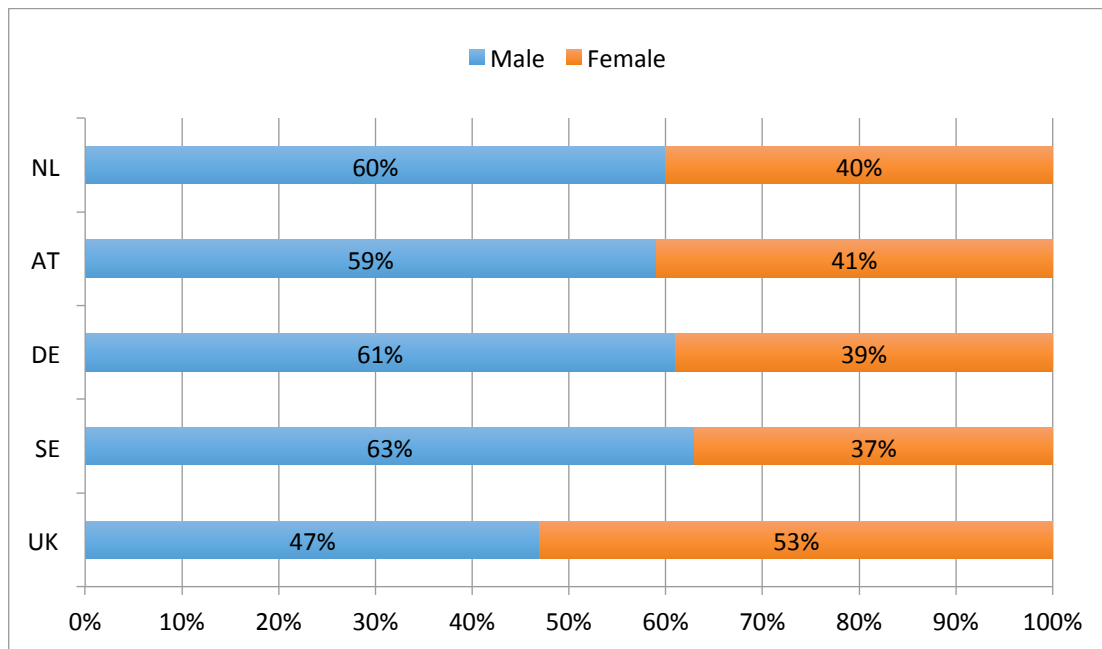
Source: Hertfordshire Business School Crowd Work Survey, 2016

Base: 207 respondents in the UK, 198 respondents in Sweden, 252 Respondents in Germany, 359 respondents in Austria and 187 respondents in the Netherlands stating that they had ever carried out crowd work (weighted).

Focussing in on those who crowd work at least weekly produces a similar profile, with a 47%/53% split between men and women in the UK, while men form the majority, at 59% of the frequent crowd workforce in Austria, rising to 60% in the Netherlands, 61% in Germany and 63% in Sweden. The similarities between countries are too great to suggest that gender participation in crowd work might be related to structural patterns linked to different institutional contexts.



Figure 8. Weekly crowd work, by gender (%)



Source: Hertfordshire Business School Crowd Work Survey, 2016

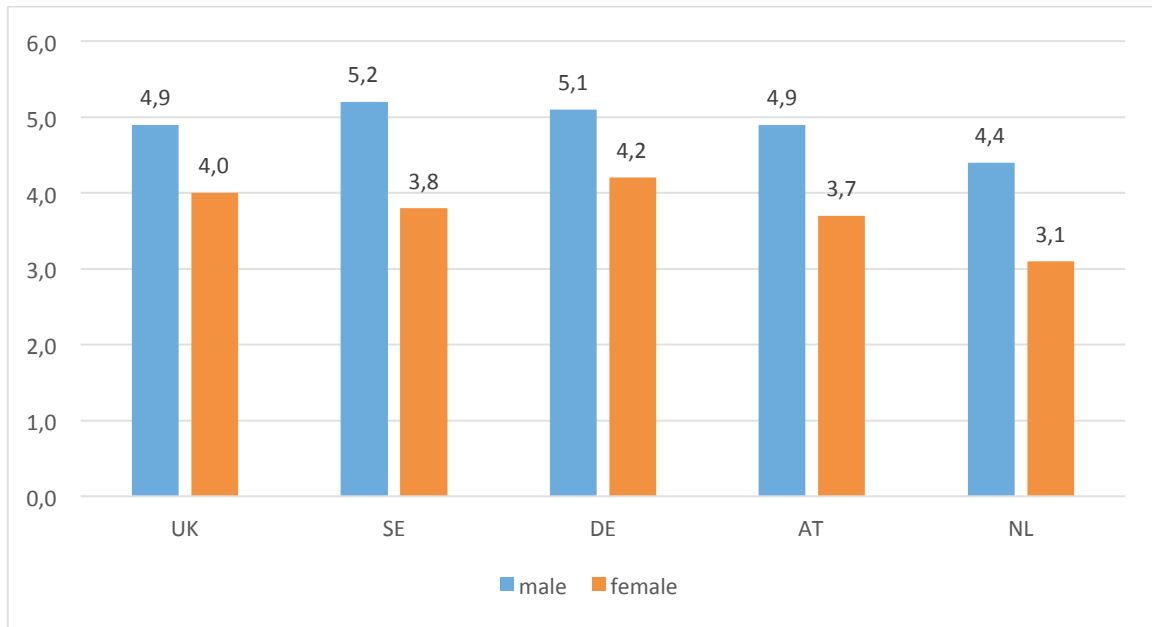
Base: 104 respondents in the UK, 104 respondents in Sweden, 135 Respondents in Germany, 186 respondents in Austria and 104 respondents in the Netherlands stating that they carried out crowd work at least weekly (weighted).

It might be expected that, as with many labour market statistics, an apparent similarity between men and women might conceal a degree of gender segregation in terms of the types of work actually done. Such segregation patterns were surprisingly difficult to detect because of the high propensity of crowd workers to code multiple categories of work when asked what kind of work they do. While perhaps indicating a certain desperation among crowd workers, many of whom seem prepared to offer their services to do almost anything, this makes it hard to establish a 'core' activity for any given worker.

There were noticeable gender differences in the pattern of multi-coding. Given a list of eight possible types of crowd work, respondents who had already indicated that they had gained an income from crowd work were asked to state which types they had done. As Figure 9 demonstrates, men, on average, named more types of work than women, with an average of 4.4 to 5.2 types in all countries, while women named no more than four everywhere except Germany (where the average for women was 4.2).



Figure 9. Average number of types of work done: any crowd work, by gender and country



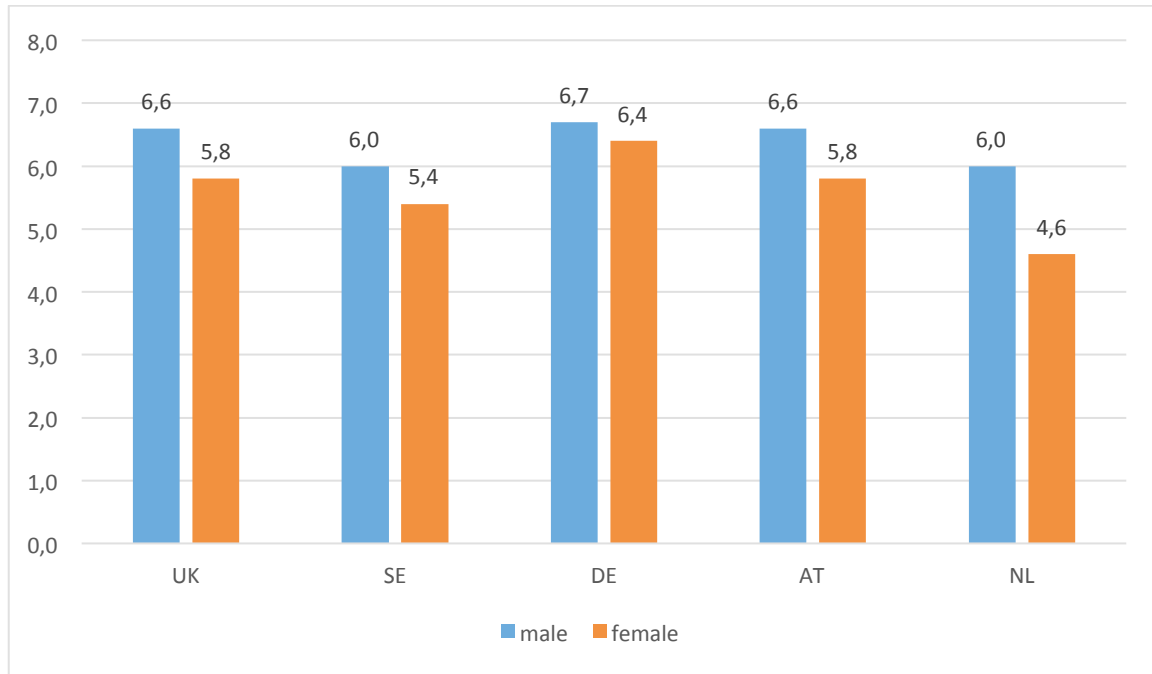
Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 231 respondents in the UK, 234 respondents in Sweden, 295 Respondents in Germany, 407 respondents in Austria and 238 respondents in the Netherlands stating that they had ever carried out crowd work (weighted).

Interestingly enough, this disparity between men and women was reduced (except in the Netherlands and, to a lesser extent, the UK) when respondents carrying out crowd work at least weekly were investigated, as can be seen from Figure 10. There was a general tendency for weekly crowd workers to cite even more types than the occasional crowd workers. This may indicate that those seeking to make a living from crowd work must be prepared to offer as many services as possible and may, indeed, be an indicator of desperation.



Figure 10. Average number of types of work done: weekly crowd workers, by gender and country

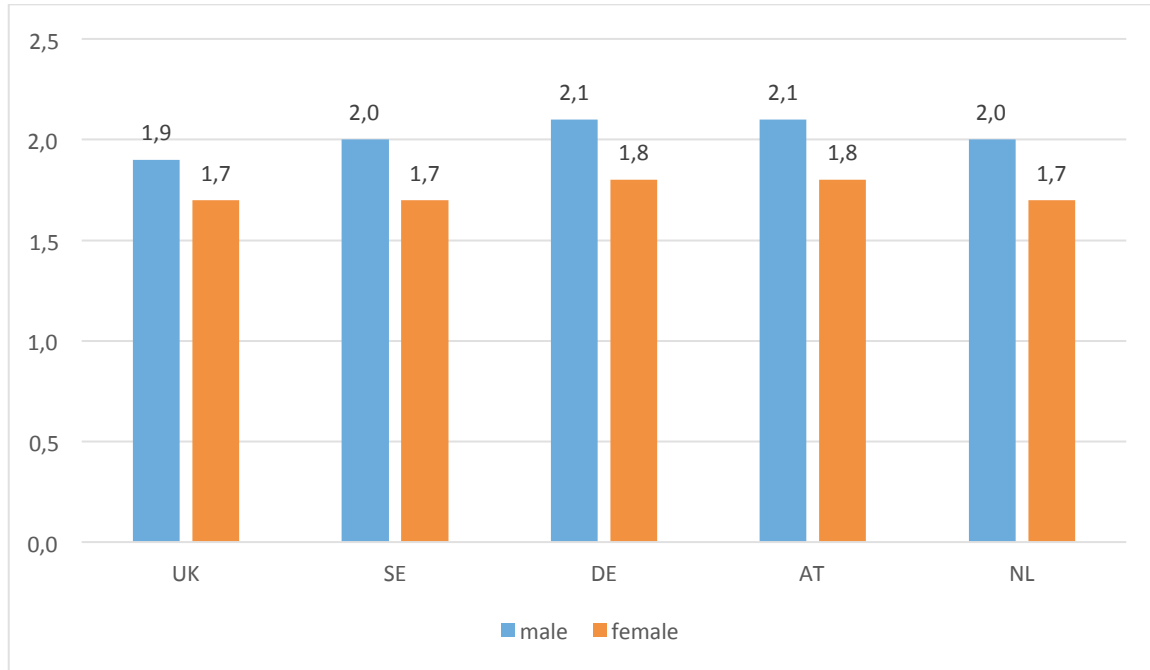


Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 101 respondents in the UK, 103 respondents in Sweden, 131 Respondents in Germany, 177 respondents in Austria and 101 respondents in the Netherlands stating that they had ever carried out crowd work (weighted).

Another indicator of gender difference can be derived from the information about the types of work sought online (which includes those who had looked for crowd work without finding any). Here, respondents were given three broad categories of work to check: work that could be carried out from their own homes; work that was carried out outside the home; and driving work. Once again, there was a strong tendency to cite more than one type of work, with men somewhat more likely to do so than women, as can be seen from Figure 11.

Figure 11. Average number of types of work sought: any seeking crowd work, by gender and country



Source: Hertfordshire Business School Crowd Work Survey, 2016.

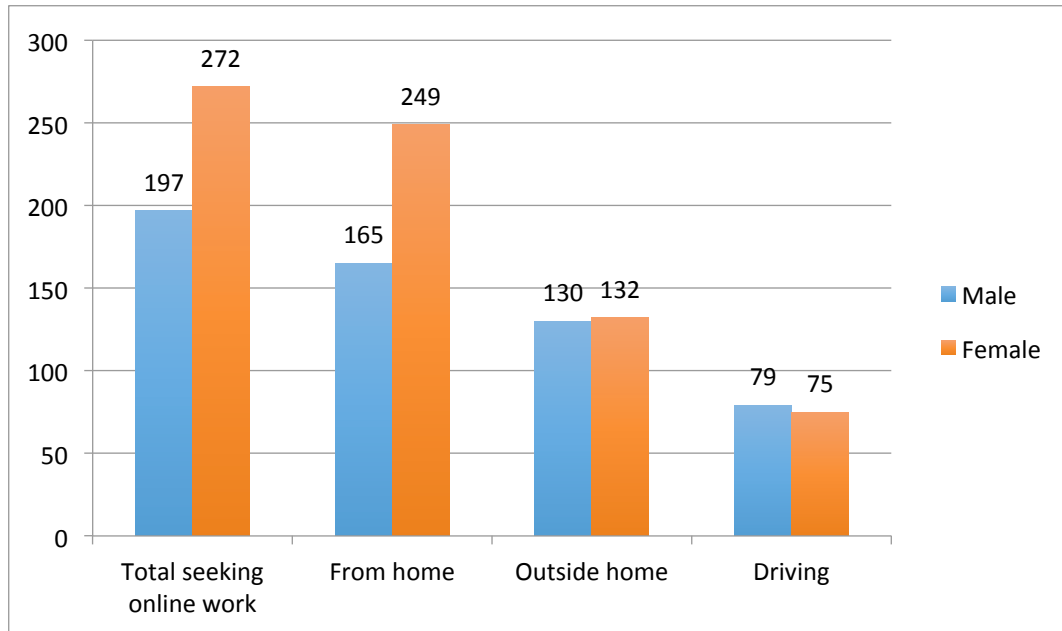
Base: 444 respondents in the UK, 468 respondents in Sweden, 458 Respondents in Germany, 663 respondents in Austria and 354 respondents in the Netherlands stating that they had ever searched for crowd work (weighted).

Figures 12-16 summarises these results by gender for each country. Here the differences between countries become somewhat more pronounced. In the UK, there is a marked tendency for women to be more actively seeking crowd work in general and, more specifically, to be looking for work they can do from their homes. Elsewhere, men exceed women in all categories in seeking work they can do from home, except in Sweden, where they are slightly outnumbered by women.

What is perhaps the most remarkable feature of these results is not the gender differences but the relative lack of these compared with other evidence on labour market segmentation by gender. In the UK, for example, driving work is strongly male-dominated. In 2016, out of 351,000 transport drivers, only 47,000 were women, of whom 10,000 (out of a total of 232,000) were taxi drivers, of whom 6,000 (out of a total of 184,000) were self-employed. In other words, in the general UK labour force, women form only 13% of all drivers, 4% of taxi drivers and 3% of self-employed taxi drivers.⁹⁴ Yet they form 49% of self-defined would-be drivers in the UK crowd workforce.

⁹⁴ UK Labour Force Survey Data, April-June, 2016. Accessed on September 30, 2016 from: <http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/dataset/s/employmentbyoccupationemp04>.

Figure 12. Type of crowd work sought, by gender: UK (numbers of would-be crowd workers)

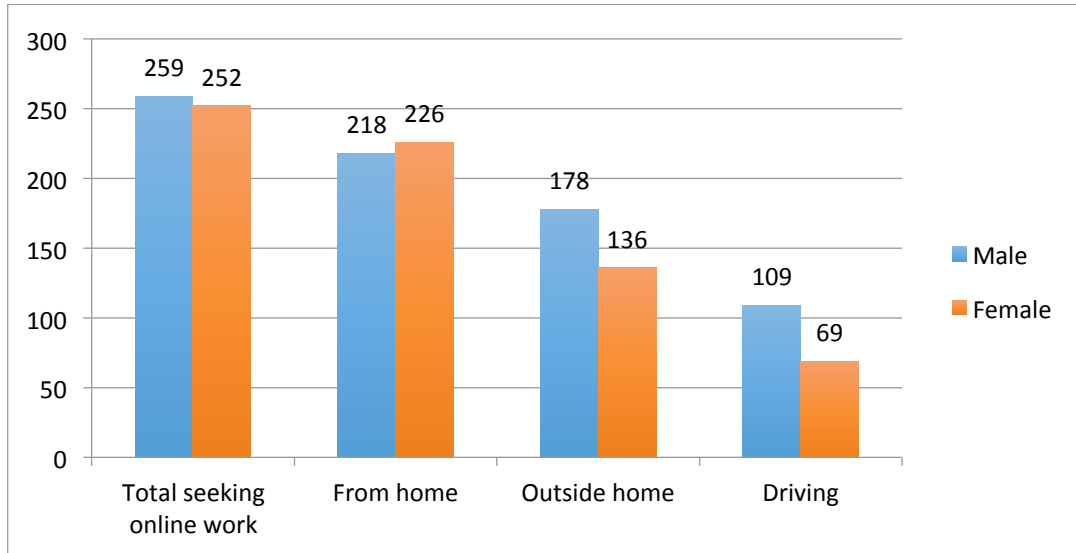


Source: Hertfordshire Business School Crowd Work Survey, 2016.

470 respondents in the UK stating that they had ever searched for crowd work (weighted).

There are several possible explanations for this disparity. It could be that crowd work offers an opportunity for women to enter occupations from which they have traditionally been excluded, perhaps along with other historically excluded groups. Or it could be evidence not so much of achievement as of aspiration. We have already seen the high propensity both of potential crowd workers and actual crowd workers to name several alternative types of work. Could it be that this is a measure of their willingness to earn any kind of an income at all, with offering a range of services being seen as a means of optimising their earning potential: a way of saying, so to speak, 'Please give me work. I'll do anything'? Such hypotheses can only be tested through in-depth qualitative research. On the basis of the results of this pilot survey, they must remain at the level of speculation.

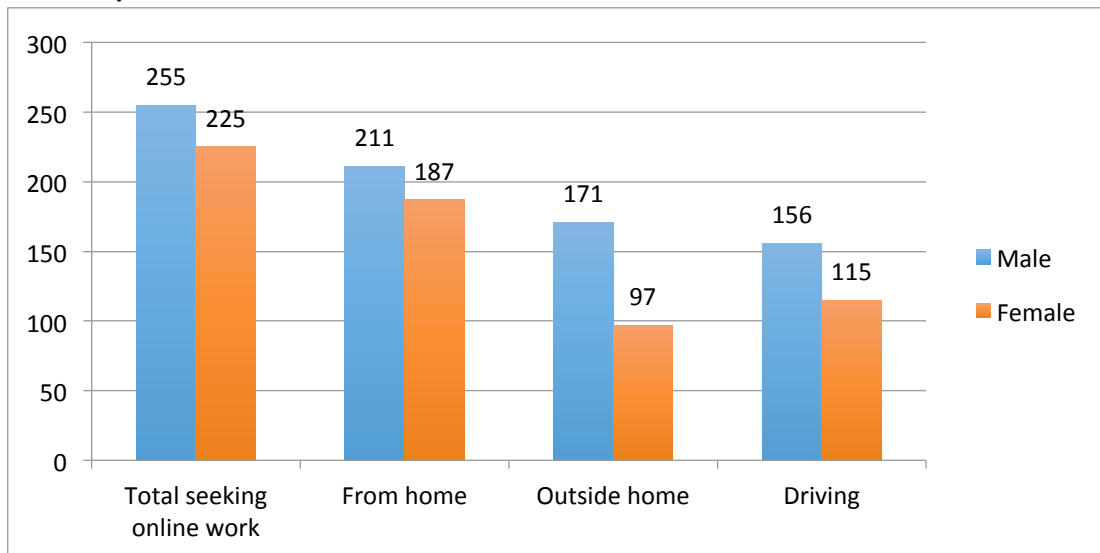
Figure 13. Type of crowd work sought, by gender: Sweden (numbers of would-be crowd workers)



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: Base: 512 respondents in Sweden stating that they had ever searched for crowd work (weighted).

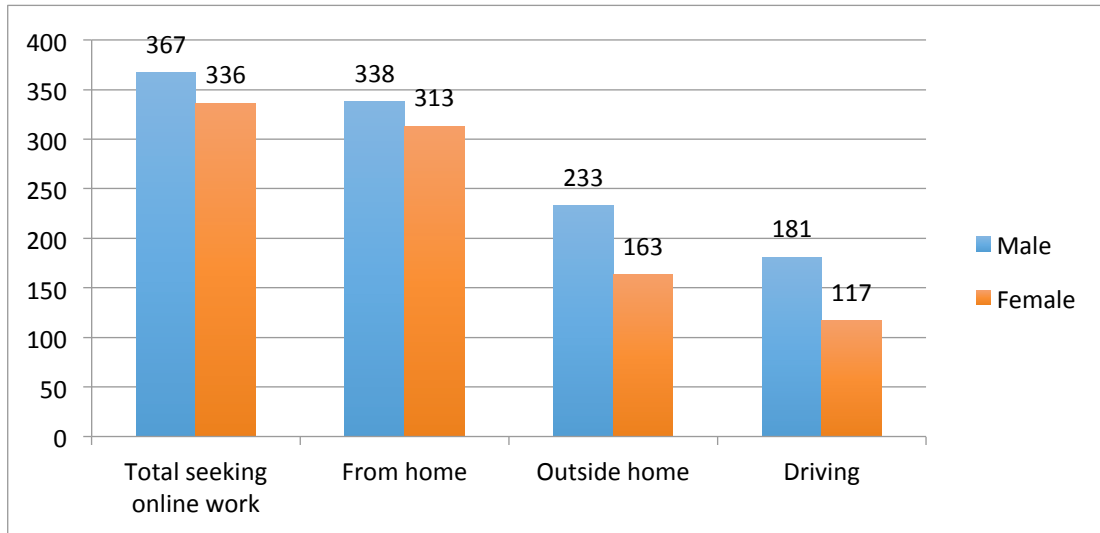
Figure 14. Type of crowd work sought, by gender: Germany (numbers of would-be crowd workers)



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 480 respondents in Germany stating that they had ever searched for crowd work (weighted).

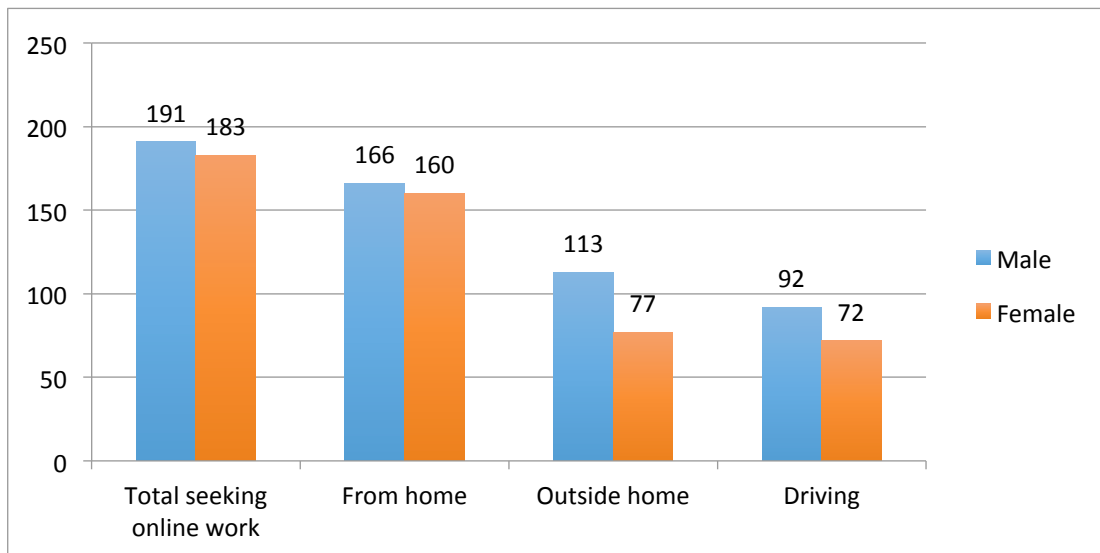
Figure 15. Type of crowd work sought, by gender: Austria (numbers of would-be crowd workers)



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 703 respondents in Austria stating that they had ever searched for crowd work (weighted).

Figure 16. Type of crowd work sought, by gender: Netherlands (numbers of would-be crowd workers)



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 374 respondents in the Netherlands stating that they had ever searched for crowd work (weighted).

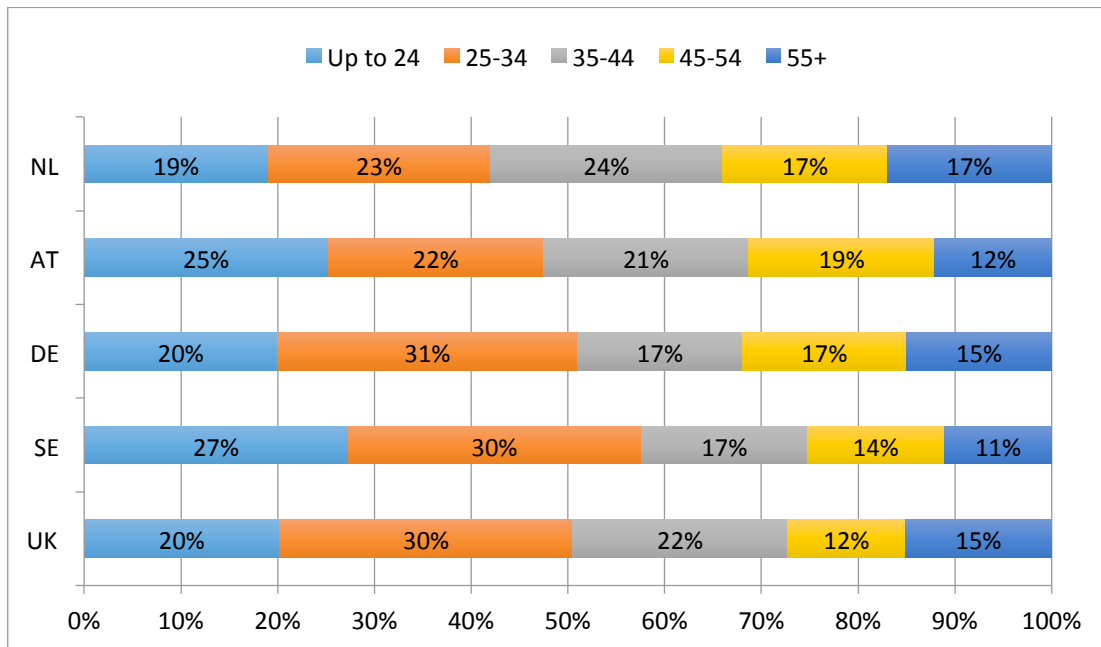
Age of crowd workers

As expected, young people were more likely than their older counterparts to participate in crowd work. Figure 17 shows the breakdown of respondents saying that they had done any crowd work by age, with Figure 18 showing the age breakdown of the total sample for comparison. As can be seen, people under the age of 24 have a higher propensity to say they have done some crowd work in all countries, with a difference ranging from 4 percentage points in the UK to 9 in Sweden (it should be noted that in Austria this category covered only 18-24-year-olds, but 16-24-year-olds in all other



countries). There is a similar pattern in the 25-34 age range, although here, the lowest difference is in Austria, at 2 percentage points, with a high of 14 percentage points in Germany. In the 35-44 age range, the likelihood of being a crowd worker is close to the average in each country, with a fall in the older age ranges (here it should be noted that the upper age limit in the sample varied between 65 and 75 depending on the country). What is perhaps surprising here is the extent to which older age groups are actively participating in a form of work that has only appeared in the last decade, overturning stereotypes that crowd work is a phenomenon only affecting the young.

Figure 17. Age of crowd workers, by country (%)



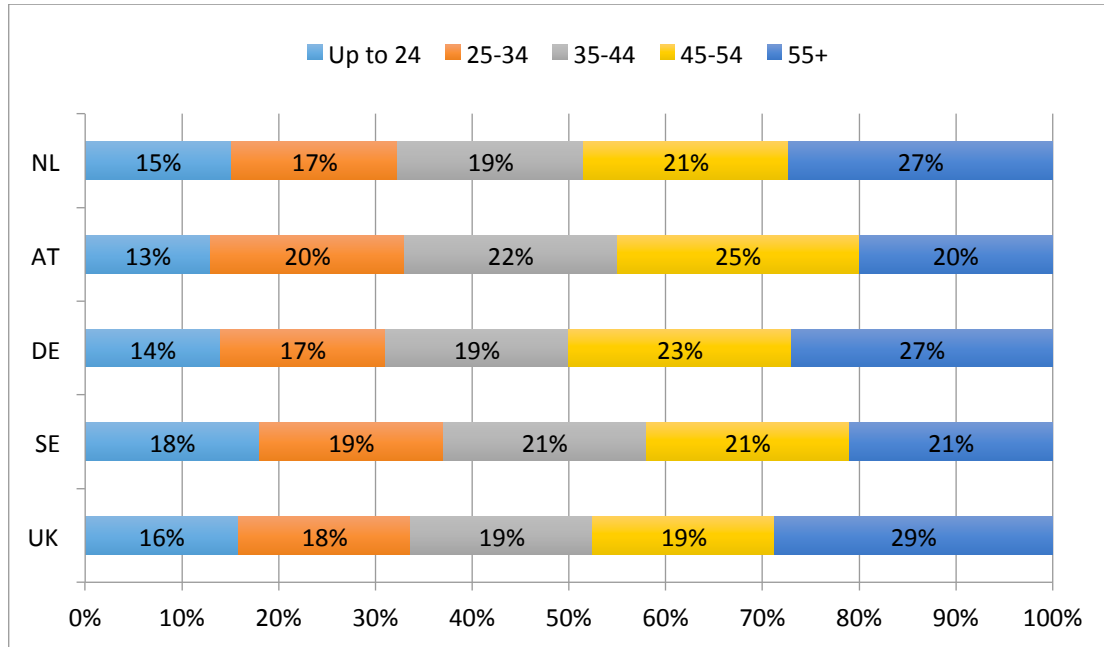
Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 207 respondents in the UK, 198 respondents in Sweden, 252 Respondents in Germany, 359 respondents in Austria and 187 respondents in the Netherlands stating that they had ever carried out crowd work (weighted).

Note: The under-24 age category includes people aged 16-24 in the UK, Sweden, Germany and the Netherlands and 18-24 in Austria. The 55+ age category includes people aged 55-65 in Sweden and Austria, 55-70 in Germany and the Netherlands and 55-75 in the UK



Figure 18. Age of total adult population sampled, by country (%)

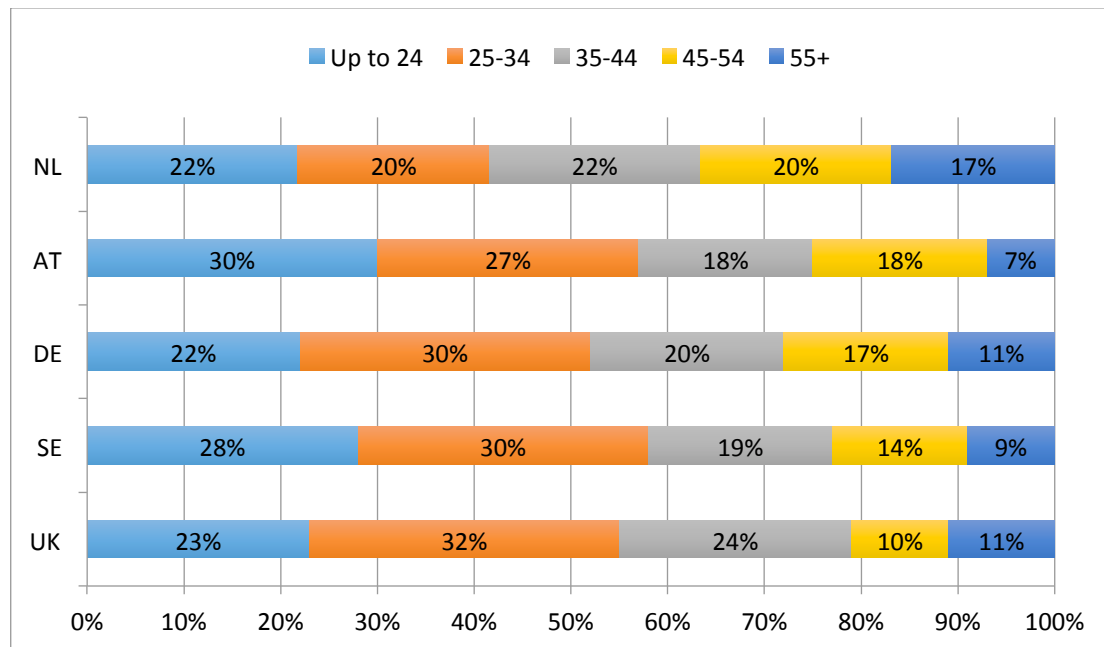


Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 2235 respondents in the UK, 2133 respondents in Sweden, 2170 Respondents in Germany, 1951 respondents in Austria and 2115 respondents in the Netherlands (weighted).

Note: The under-24 age category includes people aged 16-24 in the UK, Sweden, Germany and the Netherlands and 18-24 in Austria. The 55+ age category includes people aged 55-65 in Sweden and Austria, 55-70 in Germany and the Netherlands and 55-75 in the UK

Figure 19. Age of weekly crowd workers, by country (%)



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 104 respondents in the UK, 104 respondents in Sweden, 135 Respondents in Germany, 186 respondents in Austria and 104 respondents in the Netherlands stating that they had ever carried out crowd work (weighted).

Note: The under-24 age category includes people aged 16-24 in the UK, Sweden, Germany and the Netherlands and 18-24 in Austria. The 55+ age category includes people aged 55-65 in Sweden and Austria, 55-70 in Germany and the Netherlands and 55-75 in the UK

A closer focus on those who do crowd work more intensively (respondents who reported doing so at least weekly) shows a stronger bias towards the young, as can be seen from Figure 19, which shows that in all the countries surveyed apart from the Netherlands, at 42%, people under the age of 35 made up half or more than half the crowd workforce, ranging from 52% in Germany to 58% in Sweden. Nevertheless, the older generation is by no means absent altogether. In the Netherlands, over a third (36%) of crowd workers were aged 45 or over (compared with 28% in Germany, 25% in Austria, 23% in Sweden and 21% in the UK).

Further qualitative research will be required to explore the motivations behind this pattern. Have older crowd workers adopted this new form of work out of curiosity, boredom, a desire to supplement their income or financial desperation? Or might there be some other explanation for their engagement with online platforms?



Employment status of crowd workers

As noted above, the employment status of crowd workers is a contested issue, with no clear rulings on whether they are regarded, by themselves or others, as employees, freelancers, independent contractors or some other status. When crowd work is carried out in addition to some other form of labour market participation then it is even more difficult to unravel the worker's status, whether in relation to their crowd work or their other employment. In most surveys (including the Ipsos MORI omnibus surveys of which this formed a part), respondents are given a simple choice: between saying that they are an employee (part-time or full-time), self-employed, or unemployed. In recognition that many crowd workers may wish to say yes to more than one of these options, we added extra categories to cover additional economic statuses, allowing respondents to code as many of these as they wished. These options were:

1. I am employed on a temporary contract;
2. I have more than one paid job;
3. I receive an income from a pension or state benefits;
4. I receive an income from rent or other investments;
5. None of these;
6. Prefer not to say.

Because of the many different possible combinations of these statuses, some numbers were too small to be statistically significant. We carried out an analysis of the data to test various hypotheses in relation to the employment status of crowd workers of which two are presented here.

The first of these hypotheses related to whether frequent crowd workers were more likely than infrequent crowd workers or non-crowd workers to state that they were employees. As shown in Table 2, because of the relatively small number of frequent crowd workers the results were not conclusive. In Sweden, although the percentage of crowd workers having employee status is lower amongst frequent crowd workers than infrequent/non-crowd workers, the difference is not statistically significant.

The Netherland and UK both have higher percentages with employee status amongst frequent crowd workers but the differences are not statistically significant (although UK has a low p-value, the fact that we are conducting multiple comparisons means that we must attain a very low p-value in order to confidently claim statistical significance). For Germany, the difference in percentages for frequent and infrequent/non-crowd workers is statistically significant whereas the percentages are virtually identical for Austria.

A comparison of weekly crowd workers with others who have ever found work online is shown in Table 3. In Sweden, although the percentage of crowd workers having employee status is lower amongst frequent crowd workers than infrequent crowd workers, the difference is not statistically significant. Austria, Germany, the Netherland and the UK all have higher percentages with employee status amongst frequent crowd workers but the differences are not statistically significant.

It will be necessary to conduct qualitative research to gain a deeper insight into crowd workers' perceptions of employee status, and whether this status relates to their crowd work or to other aspects of their labour market participation.

Table 2. Are frequent crowd workers more likely than infrequent crowd workers or non-crowd workers to have employee status?

	Have employee status (figures in parentheses are 95% confidence intervals)				
	AT	DE	NL	SE	UK
Infrequent and non-crowd workers	1159 out of 1783 65.0% (62.8%, 67.2%)	1103 out of 2045 54% (51.8%, 56.1%)	1280 out of 2022 63% (61.2%, 65.4%)	1404 out of 2042 69% (66.7%, 70.8%)	1195 out of 2134 56% (53.9%, 58.1%)
Crowd working at least weekly	120 out of 186 64.5% (57.6%, 71.4%)	96 out of 135 71% (63.5%, 78.8%)	73 out of 104 70% (61.4%, 79.0%)	67 out of 104 64% (55.2%, 73.6%)	71 out of 104 68% (59.3%, 77.2%)
p-value for one-sided hypothesis test		<0.001	0.068		0.004
p-value for two-sided hypothesis test	0.895			0.367	

Source: Hertfordshire Business School Crowd Work Survey, 2016

N.B. p-values for one-sided tests presented for one-sided hypotheses being presented with the exception of Austria and Sweden for whom a two-sided hypothesis is more appropriate.

Table 3. Are frequent crowd workers more likely than infrequent crowd workers to have employee status?

	Have employee status (figures in parentheses are 95% confidence intervals)				
	AT	DE	NL	SE	UK
Infrequent crowd workers	110 out of 173 64% (56.4%, 70.8%)	78 out of 117 67% (58.1%, 75.2%)	57 out of 83 69% (58.7%, 78.7%)	69 out of 94 73% (64.5%, 82.3%)	62 out of 103 60% (50.7%, 69.6%)
Crowd working at least weekly	120 out of 186 65% (57.6%, 71.4%)	96 out of 135 71% (63.5%, 78.8%)	73 out of 104 70% (61.4%, 79.0%)	67 out of 104 64% (55.2%, 73.6%)	71 out of 104 68% (59.3%, 77.2%)
p-value for one-sided hypothesis test	0.427	0.224	0.412		0.112
p-value for two-sided hypothesis test				0.170	

Source: Hertfordshire Business School Crowd Work Survey, 2016.

N.B. p-values for one-sided tests presented for one-sided hypotheses being presented with the exception of Austria and Sweden for whom a two-sided hypothesis is more appropriate.

We next turned our attention to whether or not crowd workers stated that they had a full-time job. Once again, it was difficult to gain a definitive picture, as can be seen from Tables 4 and 5.



Table 1. Are frequent crowd workers more likely to say they have a full-time job, compared with infrequent and non-crowd workers?

	Have full-time job (figures in parentheses are 95% confidence intervals)				
	AT	DE	NL	SE	UK
Infrequent and non-crowd workers	860 out of 1783 48% (45.9%, 50.6%)	775 out of 2045 38% (35.8%, 40.0%)	780 out of 2022 39% (36.5%, 40.7%)	1122 out of 2042 55% (52.8%, 57.1%)	917 out of 2134 43% (40.9%, 45.1%)
Crowd working at least weekly	94 out of 186 51% (43.4%, 57.7%)	85 out of 135 63% (54.8%, 71.1%)	52 out of 104 50% (40.4%, 59.6%)	54 out of 104 52% (42.3%, 61.5%)	58 out of 104 56% (46.2%, 65.3%)
p-value for one-sided hypothesis test	0.275	<0.001	0.011		0.005
p-value for two-sided hypothesis test				0.547	

Source: Hertfordshire Business School Crowd Work Survey, 2016

N.B. p-values for one-sided tests presented for one-sided hypotheses being presented with the exception of Sweden for whom a two-sided hypothesis is more appropriate.

In Sweden, although the percentage of crowd workers saying that they have a full-time job is lower amongst frequent crowd workers than infrequent/non-crowd workers, the difference is not statistically significant.

Austria and the Netherlands all have higher percentages saying they have a full-time job amongst frequent crowd workers but the differences are not statistically significant (although the Netherlands has a low p-value, the fact that we are conducting multiple comparisons means that we must attain very low p-values in order to confidently claim statistical significance). For Germany and UK, the difference in percentages for frequent and infrequent/non-crowd workers is statistically significant.

Table 2. Are weekly crowd workers more likely than other crowd workers to have a full-time job?

	Have full-time job (figures in parentheses are 95% confidence intervals)				
	AT	DE	NL	SE	UK
Infrequent crowd workers	91 out of 173 53% (45.2%, 60.0%)	63 out of 117 54% (44.8%, 62.9%)	38 out of 83 46% (35.1%, 56.5%)	57 out of 94 61% (50.8%, 70.5%)	49 out of 103 48% (37.9%, 57.2%)
Crowd working at least weekly	94 out of 186 51% (43.4%, 57.7%)	85 out of 135 63% (54.8%, 71.1%)	52 out of 104 50% (40.4%, 59.6%)	54 out of 104 52% (42.3%, 61.5%)	58 out of 104 56% (46.2%, 65.3%)
p-value for one-sided hypothesis test		0.071	0.283		0.118
p-value for two-sided hypothesis test	0.696			0.215	

Source: Hertfordshire Business School Crowd Work Survey, 2016

N.B. p-values for one-sided tests presented for one-sided hypotheses being presented with the exception of Austria and Sweden for whom a two-sided hypothesis is more appropriate.

In Austria and Sweden, although the percentage of crowd workers saying they have a full-time job is lower amongst frequent crowd workers than infrequent crowd workers, the difference is not statistically significant. Germany, the Netherlands and the UK all have higher percentages with employee status amongst frequent crowd workers but the differences are not statistically significant.

Once again, there is insufficient evidence to draw general conclusions about crowd workers in relation to this variable, uncovering a need for further qualitative research. However we can conclude with some certainty that crowd workers do not represent a distinctive, atypical group of workers with a different profile from the rest of the workforce: the similarities between the three groups (frequent crowd workers, infrequent crowd workers and non-crowd workers) are greater than the differences between them.

Contribution of crowd work to income

Respondents in the survey who reported that they had carried out crowd work were asked to estimate what proportion of their income was derived from this activity. As is common in surveys investigating personal financial information, a relatively high proportion declined to answer this question, either stating that they preferred not to say (5%-10%, depending on the country) or that they did not know, (ranging from 19% in the UK to 38% in the Netherlands). Figure 20 presents the overall responses to this question with these unknown data excluded.

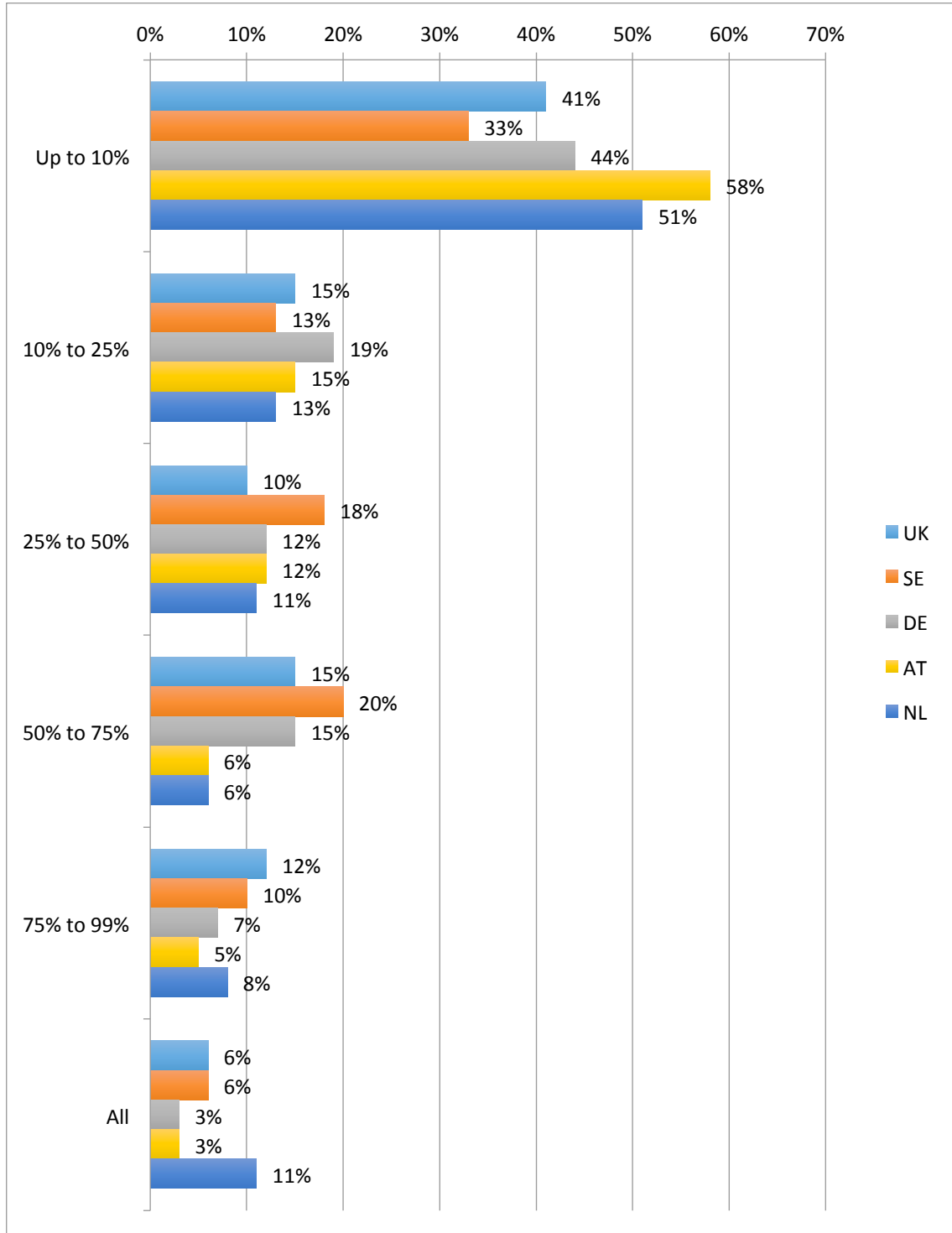
As this shows, for a majority, crowd work represents a small supplement to their main income: with the largest group (ranging from 33% in Sweden to 58% in Austria) estimating that it represents less than 10% of their total income. Nevertheless, there is a small minority (ranging from 3% in Austria and Germany to 11% in the Netherlands) for whom crowd work provides the only source of income. More significantly, crowd work constitutes more than half the income of around a third of crowd workers in the UK and Sweden (33% and 36% respectively), 25% in Germany and the Netherlands and 14% in Austria. The relatively low degree of dependence on crowd work in Austria, and to a



lesser extent in Germany, may reflect the fact that Austria has the highest and Germany the second highest overall level of participation in crowd work, suggesting that these are countries with above-average levels of experimentation or 'dabbling' in crowd work, but serious dependence on it as a main source of income is more or less in line with other countries.

Crowd work thus constitutes more than half of all income for 2.4% of the total sample in Austria, 2.6% in Germany, 1.7% in the Netherlands and 2.8% each in the UK and Sweden – forming the main source of income for an average of 2.5% of the samples across all five countries.

Figure 20. Earnings from crowd work as a proportion of all income, all crowd workers, by country (%)



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 237 respondents in the UK (weighted) with 24% don't know or preferring not to answer excluded, 248 respondents in Sweden (weighted) with 34% don't know or preferring not to answer excluded, 308 respondents in Germany (weighted) with 28% don't know or preferring not to answer excluded, 434 respondents in Austria (weighted) with 31% don't know or



preferring not to answer excluded, 251 respondents in the Netherlands (weighted) with 44% don't know or preferring not to answer excluded.

For people who do frequent crowd work the numbers are smaller and differences are not always statistically significant. We carried out an analysis on the results to investigate the hypothesis that people who crowd work at least weekly are more likely to say that crowd work contributes more than half their income. The results (shown in Table 6) show that for Austria, Germany, the Netherlands and the UK there is sufficient evidence to accept this hypothesis. However, for Sweden this is not the case, with a comparatively large 36% of crowd workers who work less frequently than weekly saying that more than half their income is from this source. This justifies a focus on weekly crowd workers as those most likely to be doing so as their main income-generating activity. However the two categories (weekly crowd working and using crowd work as a main source of income) are by no means synonymous. Not only do many weekly crowd workers have other major sources of income, but there are also many more occasional crowd workers for whom it is more than a supplement, especially in Sweden.

Table 6. Is crowd work more likely to be a main source of income for weekly crowd workers than other crowd workers?

	Crowd work contributes more than half of income (figures in parentheses are 95% confidence intervals)				
	AT	DE	NL	SE	UK
Infrequent crowd workers	7 out of 124 6% (1.6%, 9.7%)	8 out of 87 9% (3.1%, 15.3%)	4 out of 45 9% (0.6%, 17.2%)	23 out of 64 36% (24.2%, 47.7%)	15 out of 75 20% (10.9%, 29.1%)
Crowd working at least weekly	36 out of 155 23% (16.6%, 29.9%)	44 out of 121 36% (27.8%, 44.9%)	27 out of 73 37% (25.9%, 48.1%)	31 out of 82 38% (27.3%, 48.3%)	40 out of 92 43% (33.3%, 53.6%)
p-value for one-sided hypothesis test	<0.001	<0.001	<0.001	0.408	<0.001

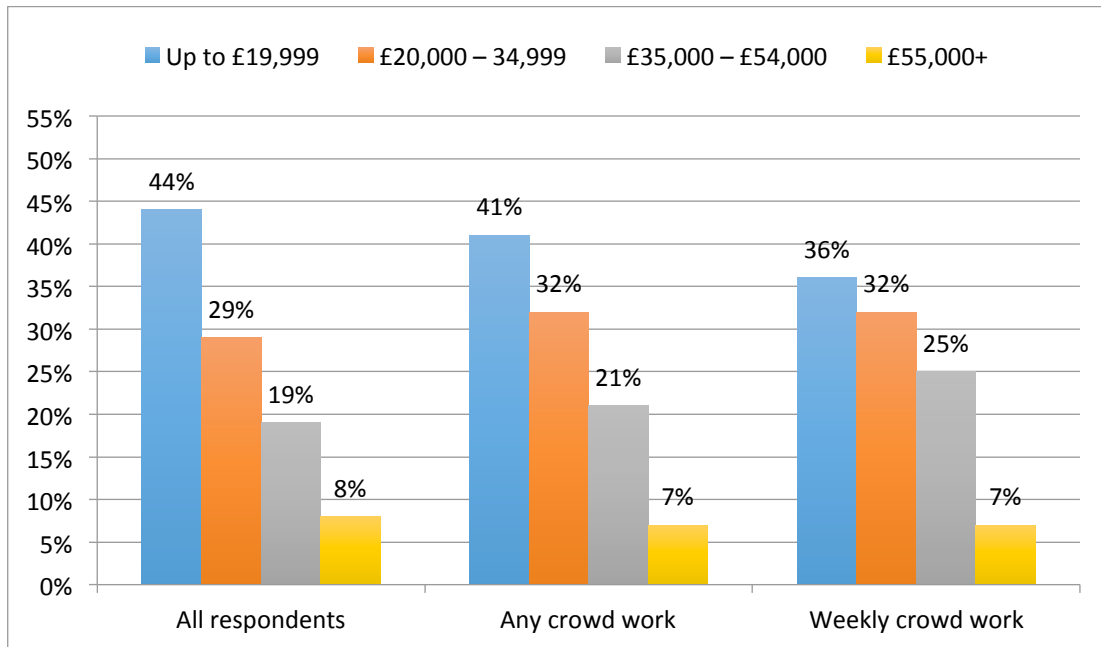
Source: Hertfordshire Business School Crowd Work Survey, 2016.

Personal incomes of crowd workers

Examination of the incomes of crowd workers across the five countries surveyed is complicated by the fact that there are three different currencies among them. This variety makes direct comparisons difficult. Furthermore, market research conventions also vary between the countries, so that income is recorded differently across the countries. Nevertheless, despite these differences, it is possible to identify broad patterns of income distribution among crowd workers in each country, and then to compare those patterns across the countries surveyed. First, this section will present evidence of overall income, and then go on to examine the proportion of earnings that come from crowd work. Figures 21-25 therefore show the personal incomes of crowd workers separately for each country.

As already noted, most crowd workers have other sources of employment besides crowd work. These findings concern the *overall* income of crowd workers in each of the five countries surveyed – that is, not just their income from crowd work.

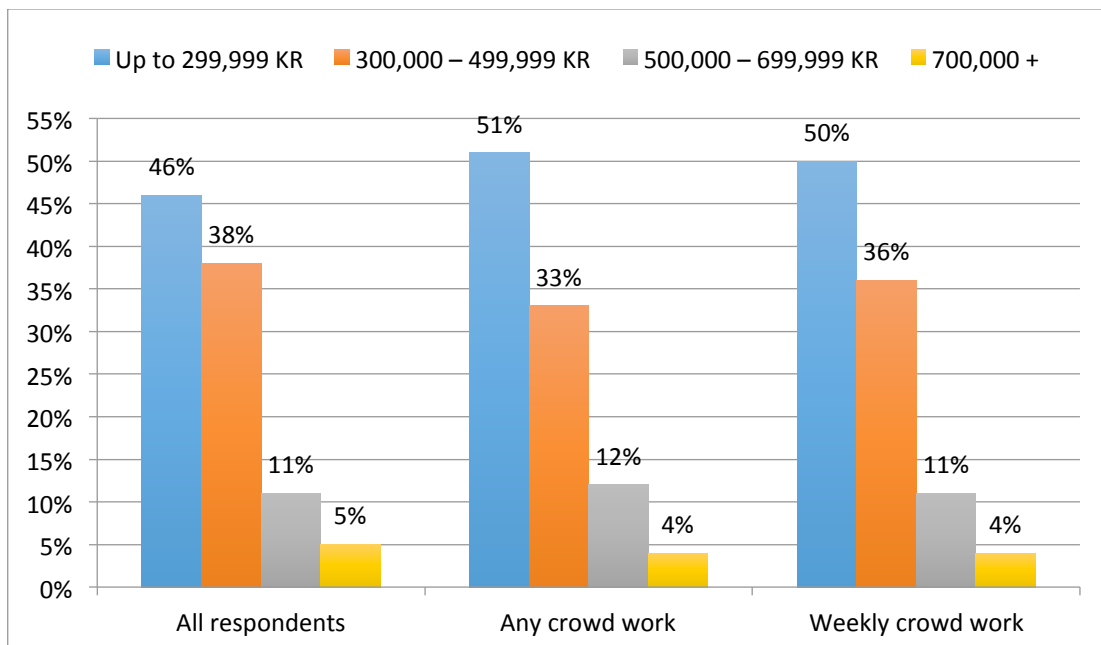
Figure 21. Personal incomes of crowd workers in the UK



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 2238 respondents in the UK (weighted) with 14% preferring not to answer excluded.

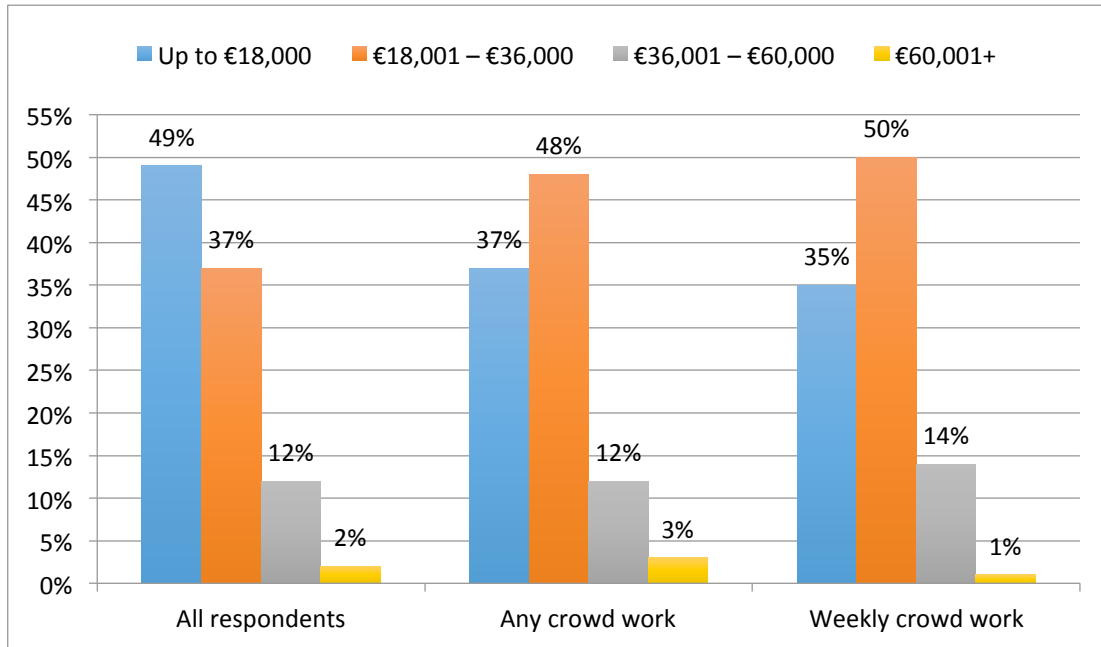
Figure 22. Personal incomes of crowd workers in Sweden



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 2146 respondents in Sweden (weighted) with 14% preferring not to answer excluded.

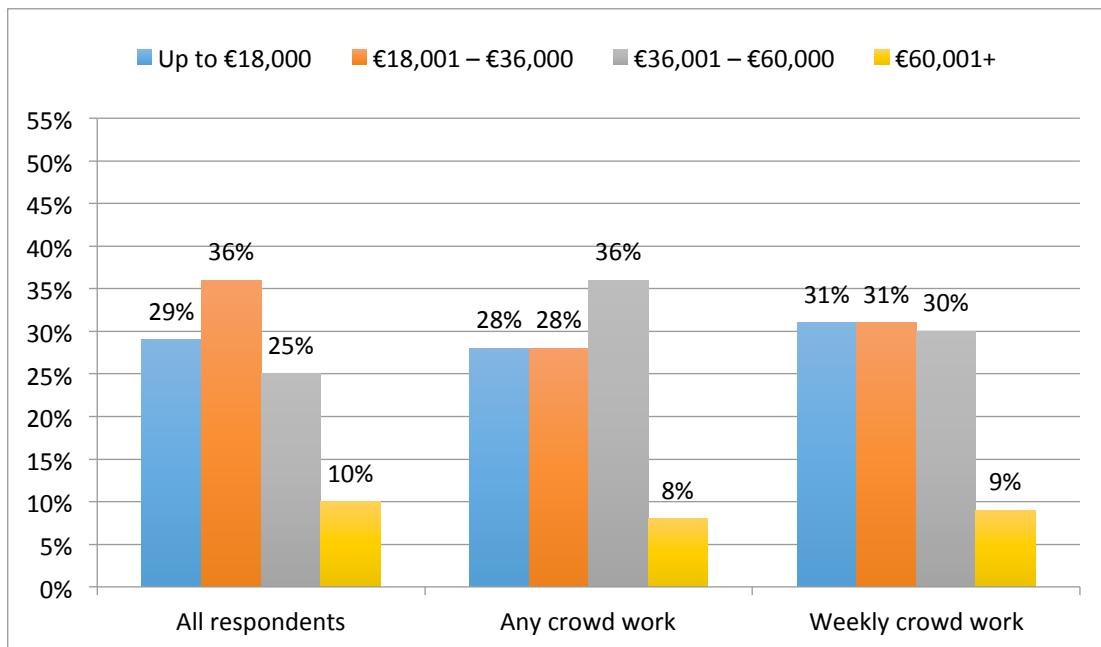
Figure 23. Personal incomes of crowd workers in Germany



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 2180 respondents in Germany (weighted) with 17% preferring not to answer excluded.

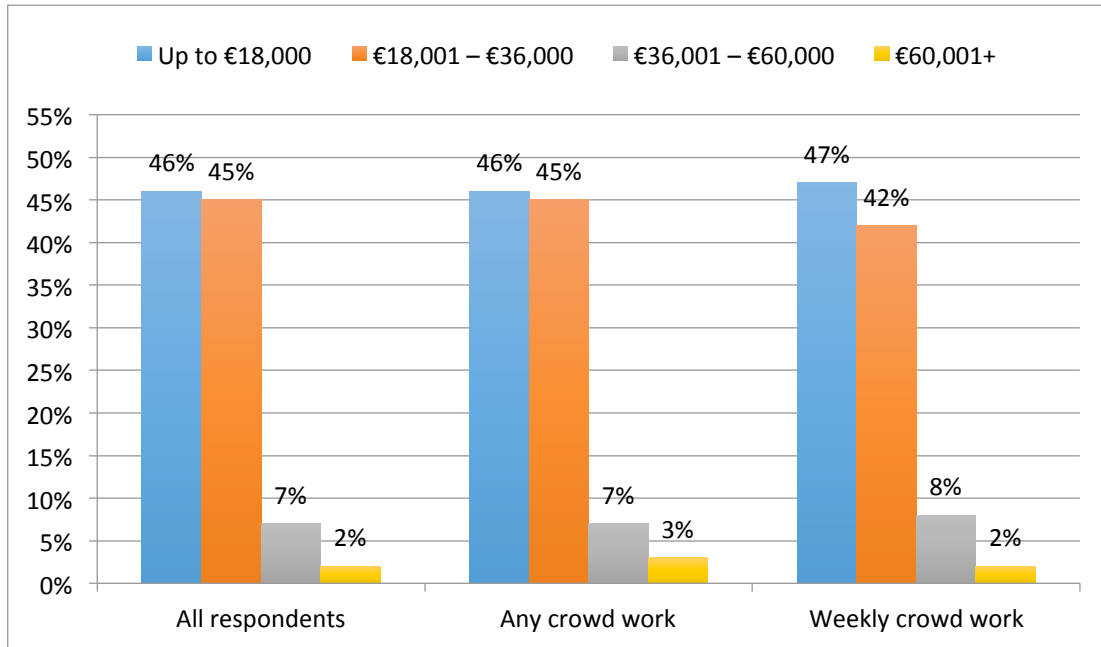
Figure 24. Personal incomes of crowd workers in the Netherlands



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 2126 respondents in the Netherlands (weighted) with 30% preferring not to answer excluded.

Figure 25. Personal incomes of crowd workers in Austria



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 1969 respondents in Austria (weighted) with 18% preferring not to answer excluded.

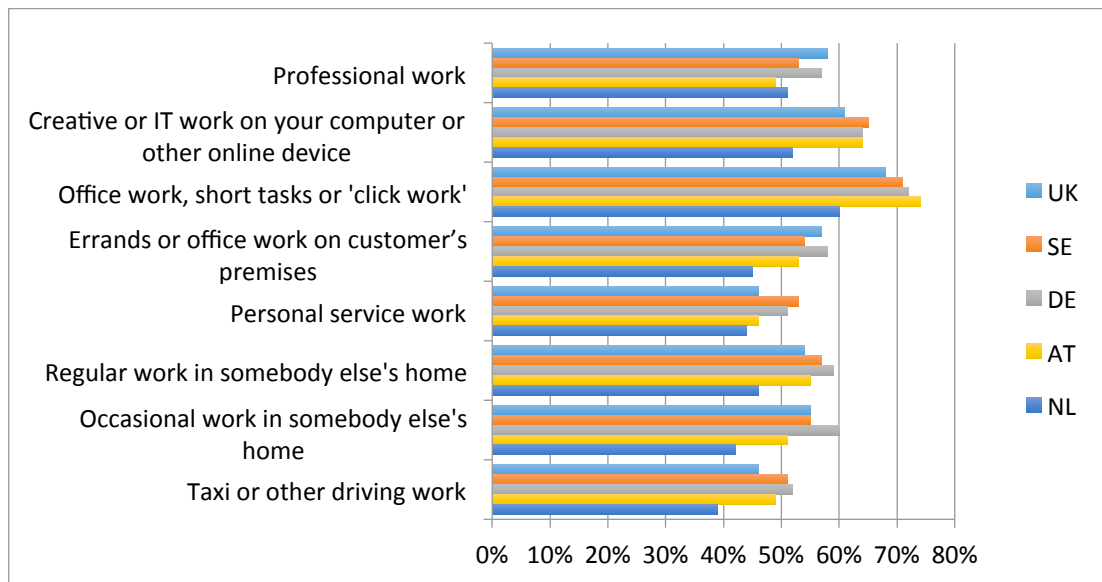
In general, these findings show a pattern whereby crowd workers do not differ dramatically from the general pattern in their respective countries. In Sweden, they are more likely to be in the lowest income band and less likely to be in the highest band than the average. The same is true, to a lesser extent, for the Netherlands and Austria. In the UK and Germany, frequent crowd workers are less likely to be in the lowest income bracket. In the next phase of the research, we will explore to what extent this is related to being the main household breadwinner.

Type of work done

We have already noted the propensity of crowd workers to name a large number of different types of work when asked what kinds of work they have done. This creates major challenges for analysis and indicates a need for in-depth qualitative research to obtain a better picture. The information presented here is therefore indicative, rather than definitive. As can be seen in Figure 26, the overwhelming impression, in all countries, is of a workforce claiming to carry out a wide variety of tasks, both online and offline, in their own homes and in those of others.

Further qualitative research will be required to establish a more detailed picture.

Figure 26. Type of crowd work done, by country



Source: Hertfordshire Business School Crowd Work Survey, 2016.

Base: 235 respondents in the UK, 243 respondents in Sweden, 304 Respondents in Germany, 428 respondents in Austria and 245 respondents in the Netherlands stating that they had ever carried out crowd work (weighted).

Conclusions

Given the confusion about terminology and definitions discussed in the first section of this report, measuring the extent of crowd work is a highly ambitious challenge. Indeed, it presents so many difficulties that it is not surprising that this has been the first serious attempt to do so in Europe.

We can conclude that the series of pilot surveys presented in this report have been successful in establishing some baseline data against which other surveys can be measured. Because they involved only online surveys, the results cannot be generalised with complete confidence to entire populations. Nevertheless they give us, for the first time, an objective picture of crowd work practices within the online population and a representative sample of crowd workers.

The results demonstrate that crowd workers are not sharply distinguished from the rest of the workforce. Participation in crowd work should rather be seen as part of a continuum of income-seeking behaviour using online platforms, embedded in larger patterns of online participation such as selling personal possessions, reselling products and renting out rooms. Crowd workers are much more likely than the general online population also to be searching for regular employment on job search platforms. This suggests that it is, for many, a stop-gap activity, done only until something better comes along.

The majority of crowd workers do so only occasionally. However between 6% and 13% of the online population do so at least monthly and between 5% and 9% at least weekly. Even for these, it is not necessarily the only source of income. There is a small minority (ranging from 3% of crowd workers in Austria and Germany to 11% in the Netherlands) for whom crowd work provides the only source of income. More significantly, crowd work constitutes more than half the income of around a third



of crowd workers in the UK and Sweden (33% and 36% respectively), 25% in Germany and the Netherlands and 14% in Austria. Nevertheless, for the majority, crowd work represents a small supplement to their main income: with the largest group (ranging from 33% in Sweden to 58% in Austria) estimating that it represents less than 10% of their total income. This adds weight to the impression that crowd work is embarked on by people seeking to augment their income from whatever means are available, an impression that is further reinforced by the propensity to engage in multiple types of crowd work, rather than specialise in a single form.

Crowd workers are more likely to be young, but are by no means exclusively so, and are relatively evenly divided between men and women. A striking characteristic of the gender division of labour is that female crowd workers, or would-be crowd workers, tend to step outside the traditional occupational gender roles, offering their services for a wide range of activities, including those generally typed as masculine.

While giving a good general indication of the scale and characteristics of crowd work in these five European countries, and preparing the ground for establishing representativeness in future research, this experimental survey raises a large number of questions requiring further investigation.

First, it suggests a need to carry out comparative research using offline methods in order to make it possible to extrapolate with confidence to the entire population, as well as extending the survey to other regions of Europe and the world.

Second, it raises a large number of questions that can best be addressed by means of in-depth qualitative research. These concern such issues as the motivation for carrying out crowd work, working conditions, employment status, pay, leave, health and safety, working hours, tax, insurance, collective bargaining and quality of working life.

Some of these will be developed in further stages of this project.