RAC Foundation

Driving as an employment qualification

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Foreword

It is just over five years since we last took a look at how many job recruitment specifications explicitly or implicitly required candidates to be able to drive[1]. This last study was pre-COVID and so also before a pretty dramatic increase in our enthusiasm for on-line shopping and home-deliveries. It was therefore high time for an update – this time using a different, far larger, source of data on job vacancies.

Three key things emerge from our analysis:

- Roughly one in five jobs open to recruitment as of October 2023 required applicants to hold at least a full, standard licence for driving a car;
- The ability to drive is important for a range of jobs, not just those one might think of as necessarily being 'driving' jobs – for example engineers, technicians, estate agents and care worker roles feature prominently;
- Unless the advertising employers mention it explicitly, we cannot tell whether the location and/or required shift pattern of roles might mean access to a car is, in practice, a necessity, hence it is likely that our analysis has generated an underestimate as ability/willingness to drive to a place of work may just be taken for granted.

We should also acknowledge that by looking only at recruitment we aren't covering all those jobs that are already filled.

It is clear that the ability to drive is a useful skill for those seeking employment – little wonder that DVSA's figures for 2022-23 show that candidates aged 20 or under accounted for some 45% of all driving tests conducted that year. Beyond the issue of employability there are also opportunities here to think about the role that employers can and should play with respect to issues such as tackling congestion, promoting alternatives to car-driving, and improving road safety.

Policy-makers focusing on the growth of van traffic in recent years need to broaden their view if they are to develop an accurate understanding of our work-related driving habits – what they are, what's causing them to be that way, and what would have to be true if the aim is, in some way, to change them.

Steve Gooding,
Director

[1] https://www.racfoundation.org/research/mobility/driving-as-an-employment-qualification-2018-update

Executive summary

When it comes to getting work, the ability to drive is often a sought-after qualification. Looking at millions of online job adverts in the UK for the same week in October over the eight years from 2016 to 2023, this report found that more than one in six job adverts required applicants to be able to drive. This is 150-200,000 adverts every year. In 2023, of the 1,092,172 advertisements recorded by the vacancy aggregator site Adzuna, 189,608 (17.4%) explicitly or implicitly required those applying to have at least a standard driving licence[2] because the job was for a professional driver, it required driving during the course of work, or a car was needed to reach work (e.g. due to limited accessibility by public transport). Whilst the highest proportion of adverts requiring the ability to drive was seen in 2020 in the midst of the pandemic (120,190 out of 611,702, or 19.6%), the proportion for 2023 was still higher than in any of the four years before the pandemic.

Building on previous research into driving as an employment qualification, in this report the RAC Foundation provides a disaggregated analysis of driving requirements by occupation and a new classification of types of driving requirements using text-search methods applied to almost 7 million job adverts, covering 97% of the occupations classified by ONS (SOC2020). Ten occupations accounted for just under half (45%) of the adverts requiring driving as an employment qualification, while the top 30 occupations accounted for nearly two-thirds (64.5%) of all adverts requiring driving.

The data also reveal that the need to drive in 2023 is, to a greater or lesser degree, a requirement in a wide variety of roles: 100% of delivery operatives, 68% of plumbers, 58% of estate agents and auctioneers, 34% of care workers and home carers. Overall, 99.3% of occupations required driving in at least one job advert.

Jobs as drivers, transport and mobile machine operatives and in skilled trades demand driving the most and are on the rise in their absolute number of adverts. Driving requirements are also very common in caring and social work, business (e.g. quantity and chartered surveyors), sales and marketing industries, as well as in storage (e.g. warehouse operatives), though the absolute number of adverts in some of these occupations has decreased after the first waves of the pandemic. Conversely, leisure, personal services, administrative, secretarial, and teaching occupations have the lowest level of driving requirements. It is important to note, however, that there is remarkable variability in driving requirements within aggregate classes of occupations: for instance, civil engineers are required to be able to drive more than other engineering professionals.

The report sheds new light on both the types of driving requirements needed the most, and on their variation by occupations. While a standard driving licence is required across many different

[2]This is taken to be a full (not provisional) licence for driving a car with a manual gearbox in the United Kingdom.

occupations, most transport and mobile machine operatives require specialised licences, and/or clean, or relatively clean, licences (i.e. few/no points). In addition to their licence, it is often the case that social and care workers, as well as some delivery driver and courier roles, need their own vehicle to drive in the course of work. Other professionals need to be able to drive but will often be provided with a company vehicle, for example business sales executives and development managers, sales and retail assistants, property, housing and estate managers, as well as plumbers and electricians. The adverts indicate that workers who require their own vehicle are likely to be reimbursed for the mileage driven, whilst workers using a company vehicle will be reimbursed for fuel cost (as expected because companies will be responsible for covering the non-fuel costs of the vehicles they provide). When applicants are required to have their own transport, this is usually due to the fact that the advertised job is either in a location with limited public transport access, may involve anti-social hours or may take place over more than one site (e.g. chefs, warehouse operatives and security guards, but also management consultants, business analysts and project managers).

The report is structured in 5 sections subsequent to this Summary. Section 2 briefly reviews existing work on the link between driving and employment, Section 3 describes the new source of data used for this analysis and examines its external validity by comparing it with statistics from the Labour Force Survey. Section 4 examines the link between driving and different occupations at a fairly coarse level of disaggregation, while Section 5 explores data using a more refined level of occupational classification. Section 6 then looks at the composition of driving requirements, classifying occupations according to the need that applicants have for a standard car licence, specialised certificates, and vehicle accessibility either to work as a driver, drive in the course of work, or reach remote work locations. Finally, Section 7 draws together some conclusions and provides possible directions for future research.

1 Introduction

Driving is an integral part of many occupations, yet little is known about its variation across job types and the different requirements involving the use of a vehicle in different forms of employment. Previous research by the RAC Foundation (2016, 2018) examined the role of driving as an employment qualification for young workers (16-24 years old). That work conducted a text analysis of job advertisements listed on UK public platforms for job seekers[3] and found that around 20% (1 in 5) of job listings stated driving or owning a vehicle either as a requirement of the job or as a beneficial factor. Whilst very informative, these estimates were based on a limited subset of jobs and worker demographics and did not address possible variations in intensity of job requirements across occupations. This report aims to address this gap by analysing a recently established source of information on job vacancies, that is job adverts published online by private platforms and aggregated by the company Adzuna, creating the largest repository of vacancies in the UK. This type of large text-based dataset has become increasingly available over the last decade thanks to improvements in natural language processing (NLP) and machine learning techniques. Following these advances, labour economists and statisticians have started exploiting such resources to provide alternative indexes of vacancy rates, labour market volatility, and the geographical variability of job tasks (e.g. Atalay et al., 2023).

The link between driving and employment in the labour economics literature has been traditionally analysed with a focus on the use of motorised vehicles for commuting: see for instance Monte et al. (2018) on the growing distance driven by commuters, and Gillingham and Munk-Nielsen (2019) on the elasticity of driving-to-work in relation to fuel prices and the availability of public transport. A smaller set of research has examined the role of holding a driving licence and/or owning a vehicle on the employability of young people and on their transition into the labour market (see VTI (2014) for an extensive summary of the work on this topic). Stafford et al. (1999) found that having a driver's licence doubled young people's chances of leaving unemployment in the UK and led to shorter unemployment spells and higher rates of permanent employment (e.g. Hales et al., 2003). The geographical location of jobs is often referred to as the most important determinant for the need for a driving licence or a vehicle, especially when public transport services do not match employers' time shifts and location requirements (e.g. Tunstall et al. 2012). This is particularly the case for employment agencies providing various types of staff to clients, as access to a vehicle improves short-notice availability (Hales et al., 2000).

[3]The RAC Foundation (2016, with an update in 2018) lodged a Freedom of Information (FOI) request to the Department for Work and Pensions (DWP) and the Education and Skills Funding Agency (ESFA), asking for a snapshot of listed jobs on *Universal Jobmatch* (later *Find a Job*) and *Find an Apprenticeship*. Job listings in the two databases, containing respectively around 180,000 and 20,000 records, were classified according to the explicit requirement of a standard driving licence or own form of transport.

Beyond the traditional analysis of commuting patterns, very little research has examined the role of driving in the course of work. Hasluck (2011) argued that a higher proportion of lower-skilled jobs require driving on the job, increasing the importance of being able to drive for young people, who typically apply more commonly for to these types of employment. Using data from the UK Household Longitudinal Survey (UKHLS), Berrington and Mikolai (2014)[4] found that 5% of employed young men and 1% of employed young women indicated that their workplace was "business premises, van or stall, or customers' premises", while an additional 6% of employed men and 2% of employed women reported that their workplace was "driving or travelling around". Green (2005) further identified the possible importance of holding a "clean" driving licence, that is a one that has incurred no penalty points/endorsements for driving offences.

Some recent studies have focused on the potential impact of autonomous vehicles on the future of driving professions. While there have been concerns about future job losses in these industries, some authors argue that these occupations are less subject to obsolescence than is commonly thought (Gittleman and Monaco, 2020). Firstly, most job demands in the sales, transport and logistics industries concern short-haul (last mile) trucking, whilst long-haul routes are most likely to be subject to automation. Secondly, the majority of driving jobs entail a variety of tasks beyond driving itself (e.g. freight handling, safety, equipment operation, administrative tasks and customer service).

From a policy perspective, recognising the positive contribution of driving skills to employability, several countries have implemented "transport to employment" or "wheels to work" initiatives to increase the accessibility of driving, including free driving lessons to youth in disadvantaged areas (see Wright et al.(2009) with regard to the UK, and Froy and Pyne (2011) for France). While the results of these measures appear mixed, our understanding of the issue can only improve with access to more detailed information on the scale of the phenomenon and on its variability across occupations. This is particularly the case in a context where public debates are increasingly polarised between the issues of mobility, sustainability and the equitable distribution of the economic impacts of transport decarbonisation.

The RAC Foundation is not aware of existing studies that provide a categorisation of differing driving requirements across different occupations in the UK, particularly with respect to the distinctions between driving as a profession, driving in the course of work, and driving to work. Building on previous analyses of driving as an employment qualification (RAC Foundation (2016 and 2018); Berrington and Mikolai (2014)), this report aims to fill this gap, exploiting a very large database of online adverts that provides a better representation of the full range of job vacancies in the UK.

[4]This report was commissioned by the RAC Foundation.

2 Data description

Adzuna is the largest aggregator of online job adverts in the UK, sourcing postings from most private job platforms[5]. Several institutional agencies employ these records to provide alternative statistical measures of job vacancies, job volatility, and on the evolution of the labour market (see for instance IFS, 2021; ONS, 2023). Job adverts are collected weekly, with the Adzuna database containing over 1 million postings at any given time. Adzuna employs a system of job identifiers to avoid double counting, but the length of time during which adverts remain available on the advertising platforms may vary by job type and seasonality, possibly resulting in temporal variations in the proportion of adverts for each of the various occupational classifications covered.Furthermore, because Adzuna collects its records from multiple platforms, it is possible that a job advert that disappeared from a platform may reappear on a different one, or that very similar adverts may appear simultaneously on different platforms, thus resulting in possible duplicates in the Adzuna database. Despite these limitations, the size of the database represents a very valuable source of information when investigating driving requirements[6].

This report uses around 8.7 million online job adverts over a period of 7 years, between 2016 (the first year of observation for the UK) and 2023. The adverts analysed are those appearing in the first week of October of each year, a period chosen to avoid summer and winter spikes in seasonal jobs, as well to exclude reductions in the number of advertised posts during holiday periods (see Appendix A.2).

[5]Clients include Total Jobs, Reed, LinkedIn and CV Libraries, but notably exclude Indeed and Public Employment Services.

[6]See Appendix A.1 for further details on the structure and characteristics of the database.

3 Distribution of occupation classes

The online adverts collected by Adzuna are initially coded with a proprietary job classification and then subsequently using the Office for National Statistics' Standard Occupational Classification (SOC) 2020[7] (see Appendix A.3 for details on this procedure). Figure 1 shows the changes in the number of job adverts collected each year, as well as the proportion of postings for which it was possible to allocate a SOC2020 mapping.

The number of job adverts gradually decreases between 2016 (the start of the database) and 2019. This may potentially reflect the impact of the Brexit referendum on the UK job market (see for instance Papyrakis et al. (2023)). The subsequent period was characterised by severe turbulence due to the onset of the COVID-19 crisis, with 2020 seeing an historic dip in the job market at the height of the pandemic, followed by an 'overshoot' in postings in 2021 where the number of adverts was higher than any of the previously recorded years. Over the last two years of the dataset, 2022 and 2023, the number of adverts has levelled out at the pre-pandemic levels for 2018 and 2019 (see Appendix A.2), however the number of SOC matched adverts is now much lower than it was previously.

Figure 2 shows that, except for 2020, between 215,341 and 290,042 adverts every year are not able to be given a matching SOC classification. The proportion of unclassified adverts varies from year to year between 20 and 24%, with a slight increase after 2020. This is probably due to an increase in jobs in the "gig economy" or remote jobs postings that are difficult to classify into standard occupations, as explained in Appendix A.3. This report focuses on coded occupations in order to facilitate direct comparability with other official statistical sources.

[7] ONS (2023). "Online job adverts estimates". https://www.ons.gov.uk/economy/economicoutputandproductivity/output/datasets/onlinejobadvertestimates.

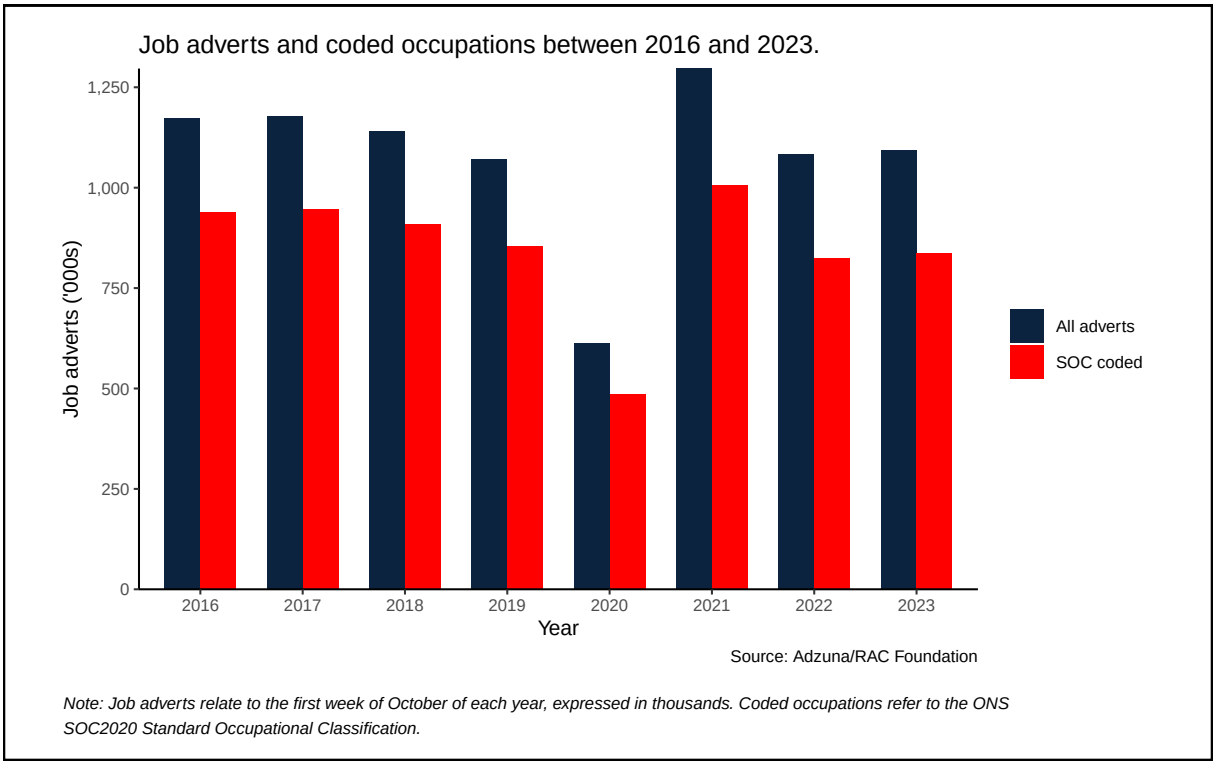


Figure 1: *Annual variation in job adverts with coded occupations.*

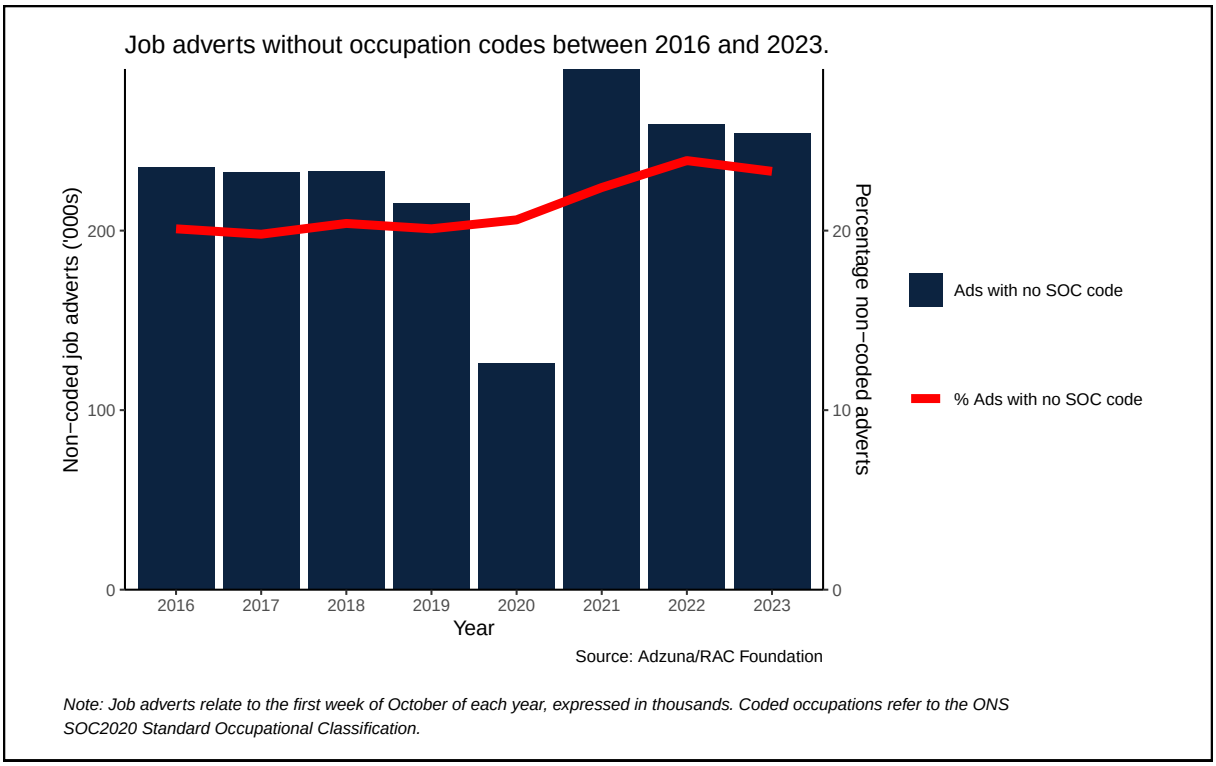


Figure 2: *Annual variation in number and percentage of job adverts without occupation codes.*

The SOC2020 classification used by Adzuna is the 4-digit code, the most precise level of classification which allows for a detailed analysis for all occupations. However, because this level of disaggregation

consists of 412 sub-classes ("Units"), this report will mainly focuses on their 2-digit aggregation ("Sub-major"), resulting in a more manageable 26 categories[8]. For ease of description, the 2-digit occupation code number is generally given alongside the occupational text label.

Figure 3 and Table 1 illustrate these 26 sub-major/2-digit categories and the number of matched adverts from the Adzuna dataset over the period of analysis[9]. Figure 4 shows the distribution of adverts at the 4-digit level (still grouped by 2-digit classification).

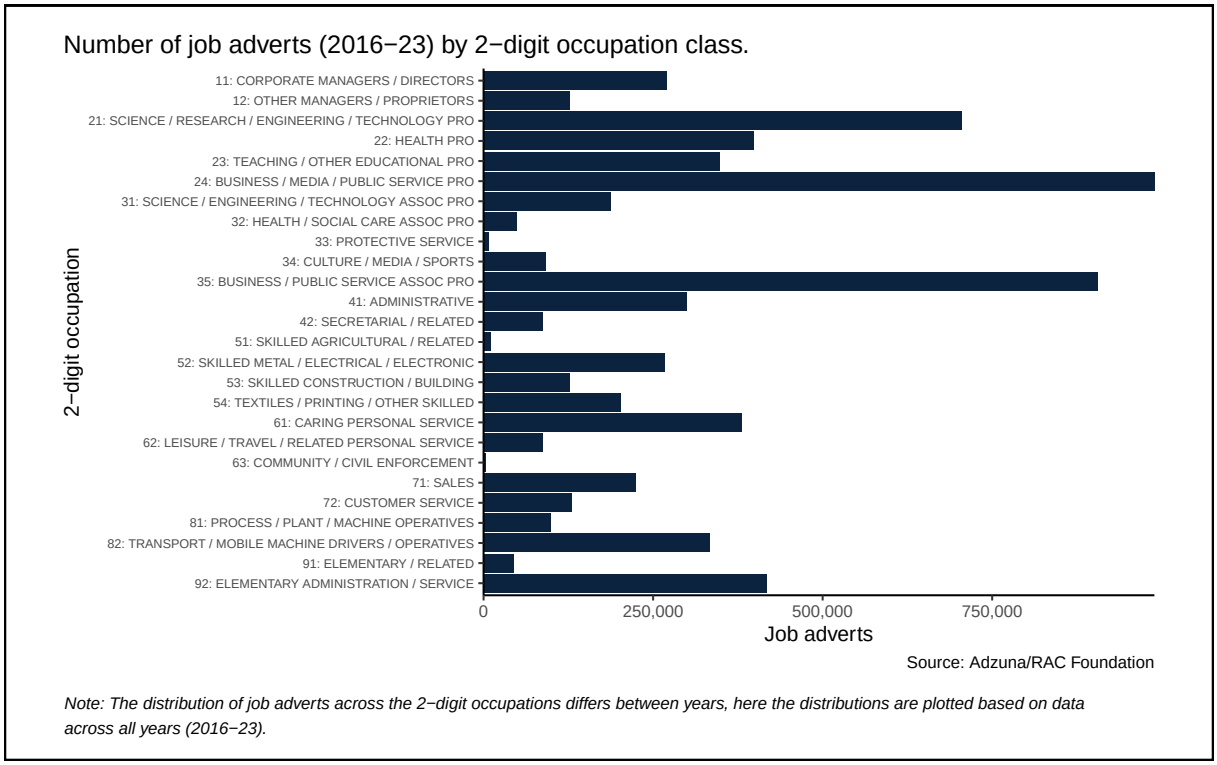


Figure 3: *Number of job adverts by 2-digit occupation class.*

[8]The highest aggregation level is composed of 9 classes: 1. Managers, Directors and Senior Officials, 2. Professional Occupations, 3. Associate Professional Occupations, 4. Administrative and Secretarial Occupations, 5. Skilled Trades Occupations, 6. Caring, Leisure and Other Service Occupations, 7. Sales and Customer Service Occupations, 8. Process, Plant and Machine Operatives, 9. Elementary Occupations.

[9]Of the 412 SOC 4-digit (unit) occupations, the Adzuna dataset contains 398 (97%). The absent occupations are: "1112. Elected officers and representatives", "1140. Directors in logistics, warehousing and transport", "1212. Managers and proprietors in forestry, fishing and related services", "1233. Early education and childcare services proprietors", "2435. Professional/Chartered company secretaries", "5433. Fishmongers and poultry dressers", "6214. Rail travel assistants", "6250. Bed and breakfast and guest house owners and proprietors", "6311. Police community support officers", "8153. Rail construction and maintenance operatives", "9111. Farm workers", "9233. Exam invigilators", "9241. Shelf fillers", "9249. Elementary sales occupations NEC" ('NEC' stands for 'not elsewhere classified').

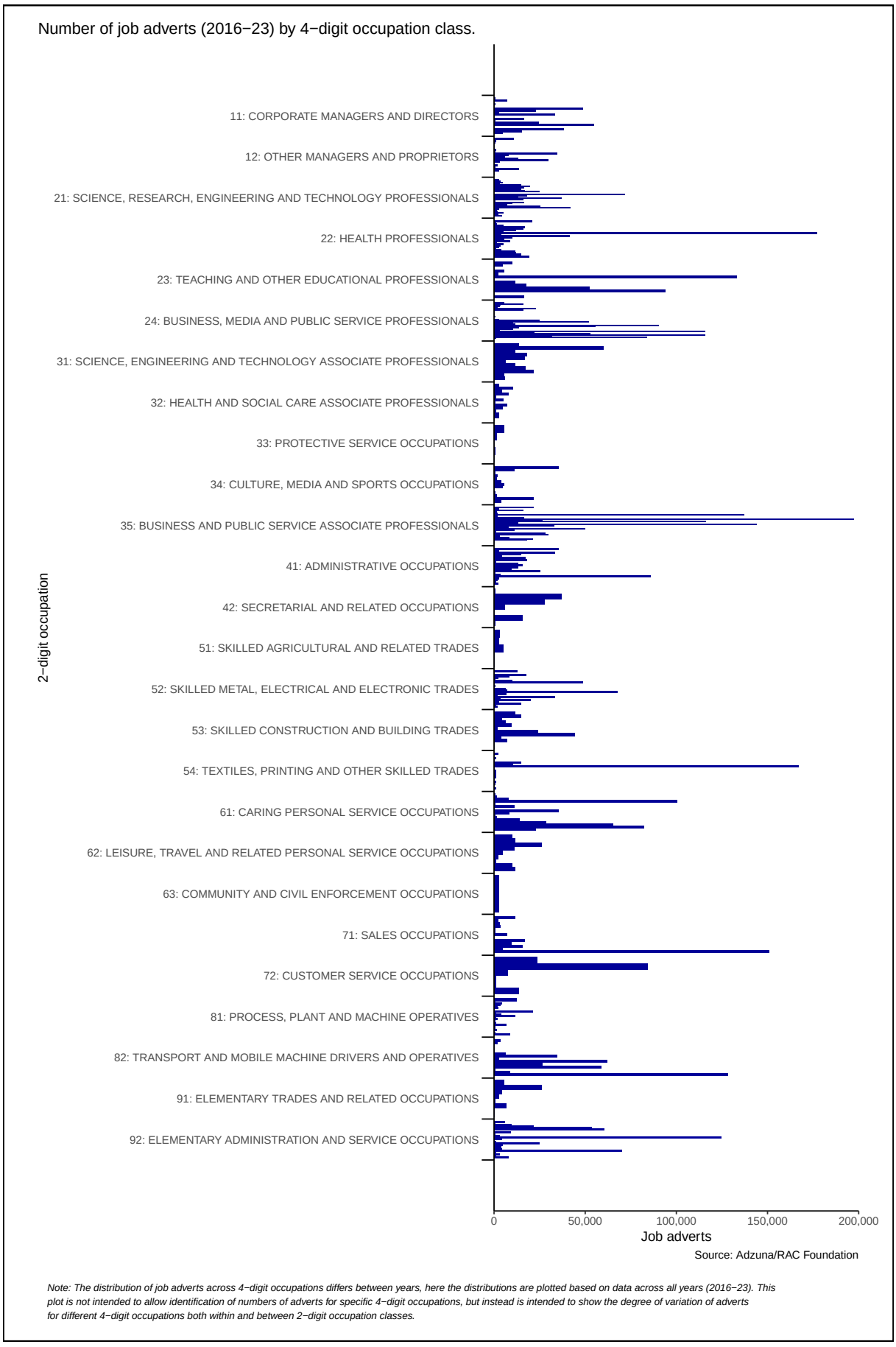


Figure 4: *Number of job adverts by 4-digit occupation class.*

Table 1: *Occupational distribution between 2016 and 2023.*

Occupations (2-digit)	Job Adverts	Percentage
11: CORPORATE MANAGERS AND DIRECTORS	270,729	4.0
12: OTHER MANAGERS AND PROPRIETORS	127,462	1.9
21: SCIENCE, RESEARCH, ENGINEERING AND TECHNOLOGY PROFESSIONALS	705,044	10.4
22: HEALTH PROFESSIONALS	399,115	5.9
23: TEACHING AND OTHER EDUCATIONAL PROFESSIONALS	347,783	5.1
24: BUSINESS, MEDIA AND PUBLIC SERVICE PROFESSIONALS	989,250	14.5
31: SCIENCE, ENGINEERING AND TECHNOLOGY ASSOCIATE PROFESSIONALS	187,536	2.8
32: HEALTH AND SOCIAL CARE ASSOCIATE PROFESSIONALS	49,849	0.7
33: PROTECTIVE SERVICE OCCUPATIONS	7,802	0.1
34: CULTURE, MEDIA AND SPORTS OCCUPATIONS	91,836	1.4
35: BUSINESS AND PUBLIC SERVICE ASSOCIATE PROFESSIONALS	906,494	13.3
41: ADMINISTRATIVE OCCUPATIONS	300,600	4.4
42: SECRETARIAL AND RELATED OCCUPATIONS	87,205	1.3
51: SKILLED AGRICULTURAL AND RELATED TRADES	11,437	0.2
52: SKILLED METAL, ELECTRICAL AND ELECTRONIC TRADES	267,671	3.9
53: SKILLED CONSTRUCTION AND BUILDING TRADES	127,221	1.9
54: TEXTILES, PRINTING AND OTHER SKILLED TRADES	201,998	3.0
61: CARING PERSONAL SERVICE OCCUPATIONS	380,513	5.6
62: LEISURE, TRAVEL AND RELATED PERSONAL SERVICE OCCUPATIONS	87,458	1.3
63: COMMUNITY AND CIVIL ENFORCEMENT OCCUPATIONS	2,817	0.0
71: SALES OCCUPATIONS	224,998	3.3
72: CUSTOMER SERVICE OCCUPATIONS	130,848	1.9
81: PROCESS, PLANT AND MACHINE OPERATIVES	98,714	1.5
82: TRANSPORT AND MOBILE MACHINE DRIVERS AND OPERATIVES	333,817	4.9
91: ELEMENTARY TRADES AND RELATED OCCUPATIONS	45,216	0.7
92: ELEMENTARY ADMINISTRATION AND SERVICE OCCUPATIONS	417,427	6.1

Note: Job adverts relate to the first week of October of each year. Occupations refer to the ONS SOC2020 (2-digit) Standard Occupational Classification. Percentage figures are based on the total number of adverts with SOC codes. Source: Adzuna/RAC Foundation.

3.1 External validity of the online vacancies dataset

Because online job adverts may be skewed towards specific categories of jobs, a sense check was undertaken comparing Adzuna's occupation distribution to the one observed in the UK quarterly Labour Force Survey (LFS)[10]. This comparison has a number of constraints. Firstly, because the SOC2020 classification became operative in 2021, the LFS reports classifications using SOC2010 up

[10] https://beta.ukdataservice.ac.uk/datacatalogue/series/series?id=2000026#!/access-data

until 2020 and then uses SOC2020 for the years 2021, 2022 and 2023, providing both classifications for individuals entering the survey after 2020. The Adzuna database, however, was coded directly applying the new classification (SOC2020) to all its records. Hence, only observations after 2020 are directly comparable. Secondly, at the time of writing, LFS data for the last two quarters of 2023 were not available, whilst the Adzuna records relate to October 2023.

Also, the strength of the comparison is limited due to the national representativeness of the observations. The LFS provides individual weights for occupations. However, because these weights are built for demographic purposes and not to balance the distribution of occupations, their use could lead to misleading figures. For this reason, it was decided to use unweighted observations, so that the comparison is generally indicative. For this comparison with the LFS data, the SOC2020 4-digit occupational detail of the Adzuna dataset, was aggregated at the 2-digit (sub-major) level (26 occupation categories).

A final issue relates to differences in how job tenure are considered between Adzuna and the LFS. As they relate to job adverts, the Adzuna records refer specifically to vacancies that are yet to be filled, either positions already existing in the firms posting them or to newly created jobs. The LFS, however, relates to individuals who are already employed, hence to the actual *stock* of workers. Workers observed in the sample may have been hired by their current firm years before the date of the survey, reflecting labour market conditions very different from those in which new workers are being hired. To account for this time discrepancy, two sets of comparisons are used. The first version sums all observations across 2021, 2022 and 2023 in the two datasets, before computing the relative proportion of each occupation, and comparing the Adzuna and LFS percentages irrespective of job tenure of the workers in the LFS. The LFS sample in this procedure contains 356,059 workers. The second version of the comparison keeps only LFS workers who have been employed in their current job for less than one year (47,836 observations), so that a worker who appears in the LFS in 2021 will have been hired in 2020 at the earliest.

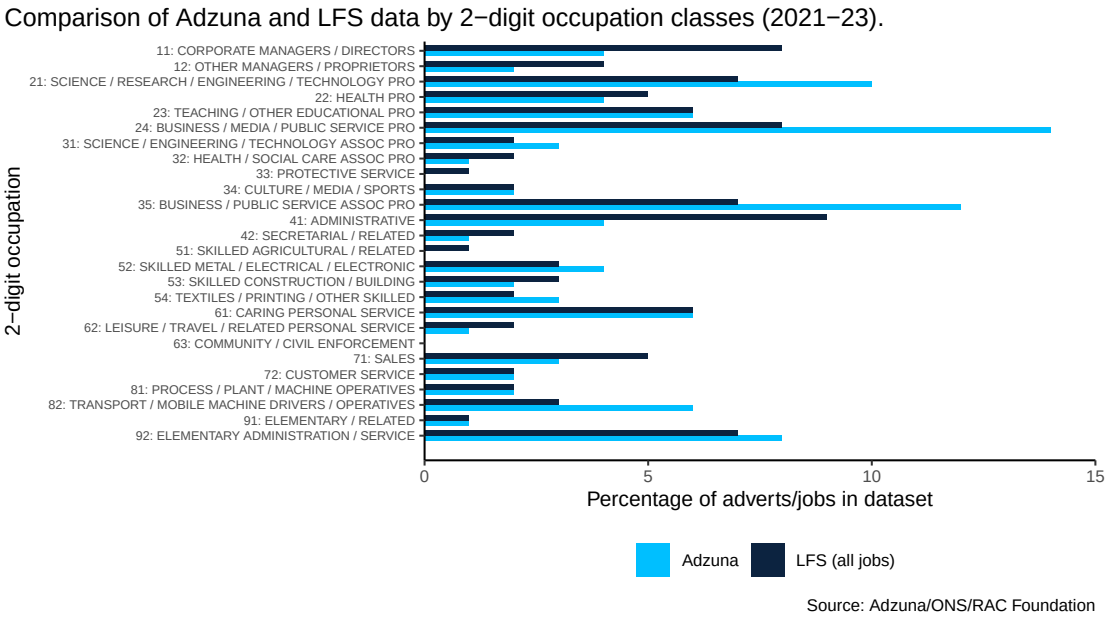
The next five figures present a comparison of the occupational distributions found in the Adzuna database and the LFS. Figure 5 shows the percentage of adverts/jobs in Adzuna and in the LFS respectively across all job tenures. Figure 6 depicts the percentage point difference between the two datasets, obtained by subtracting LFS values from the Adzuna values. In 19 out of 26 available job categories (73%), the proportion of occupations only differ by up to 1.5 percentage points. In three categories (“11. Corporate Managers”, “12. Other Managers”, and “41. Administrative Occupations”), Adzuna *underestimates* LFS proportions by 2 to 4 percentage points. In four categories (“21. Science, Research.”; “24. Business, Media”; “35. Business and Public”; “82. Drivers/MMO (Mobile Machine Operatives)”), Adzuna *overestimates* LFS proportions between 2.4 and 5.2 percentage points.

Figure 7 presents the comparison between occupational proportions in Adzuna and in the LFS, keeping only jobs with a tenure length up to one year. Figure 8 depicts the percentage-point differences between these values. Figure 9 juxtaposes the percentage-point differences between Adzuna and the LFS when all job tenures lengths are considered and when only LFS jobs with tenure up to 1 year are retained. It is noted that Adzuna's overestimation trend does not significantly vary with respect to the two LFS samples.

Concerning Adzuna's underestimation of LFS occupation proportions, however, it can be observed that when job tenure is considered (Figure 7 and Figure 8 compared to Figure 5 and Figure 6) the difference between datasets decreases for most occupations, particularly for manager positions (11 and 12) and health professions (22), where the difference reverses, i.e., becomes an overestimation when tenure is considered. Meanwhile, the underestimation is enhanced for "61. Caring, Personal Service", "71. Sales", and very strongly for "92. Elementary Admin and Service".

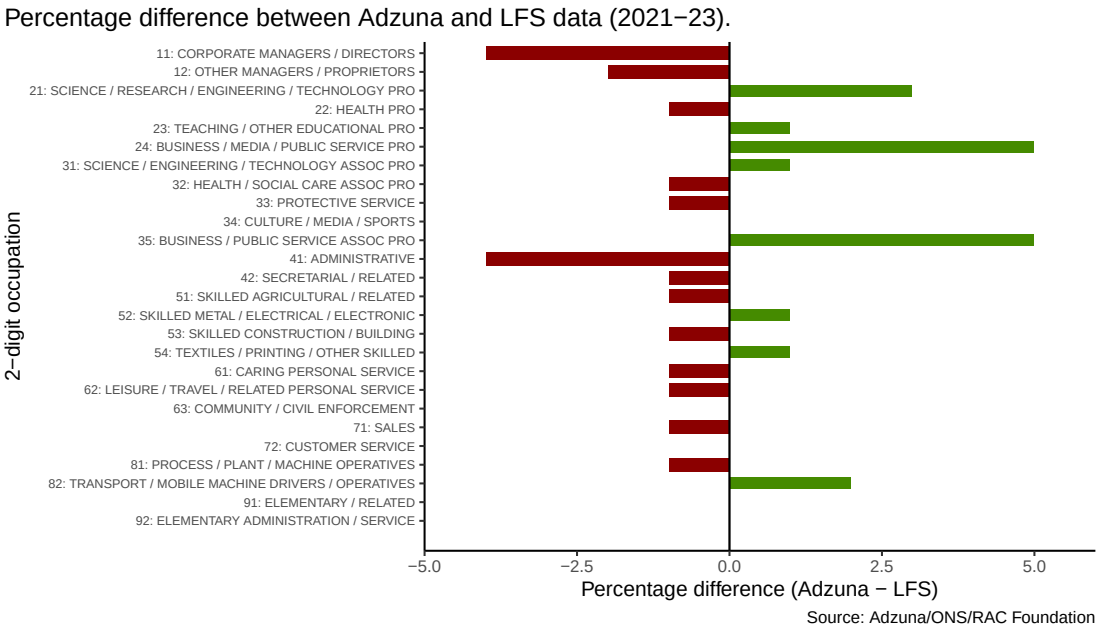
Overall, the comparison in Figure 9 suggests that the number of new jobs reported in the LFS are skewed towards lower skilled professions. That these professions have a lower representation in the Adzuna dataset could be due either to the fact that online platforms are structurally less likely to capture unskilled jobs, or that the types of jobs listed online have become increasingly skewed towards higher skill occupations. It is important to note that the distribution of occupations among new jobs could result from the smaller LFS sample size used (around 14% of the total 356,059 observations).

In general though, the different occupation distributions may result in a possible bias in the number of adverts reported by Adzuna towards those that require driving as an employment qualification. Indeed, an overestimation based on the adverts of skilled jobs, which typically demand less driving, will result in a downward bias in the estimated proportion of jobs requiring driving. Similarly, an underestimation of low skilled jobs will also lead to a possible downward bias. Overall, if the LFS job distribution is representative of the overall universe of vacancies, it is likely that the final figure for driving requirements will constitute a lower bound for its real value. In other words, the true driving requirement is probably higher than the number derived in this work.



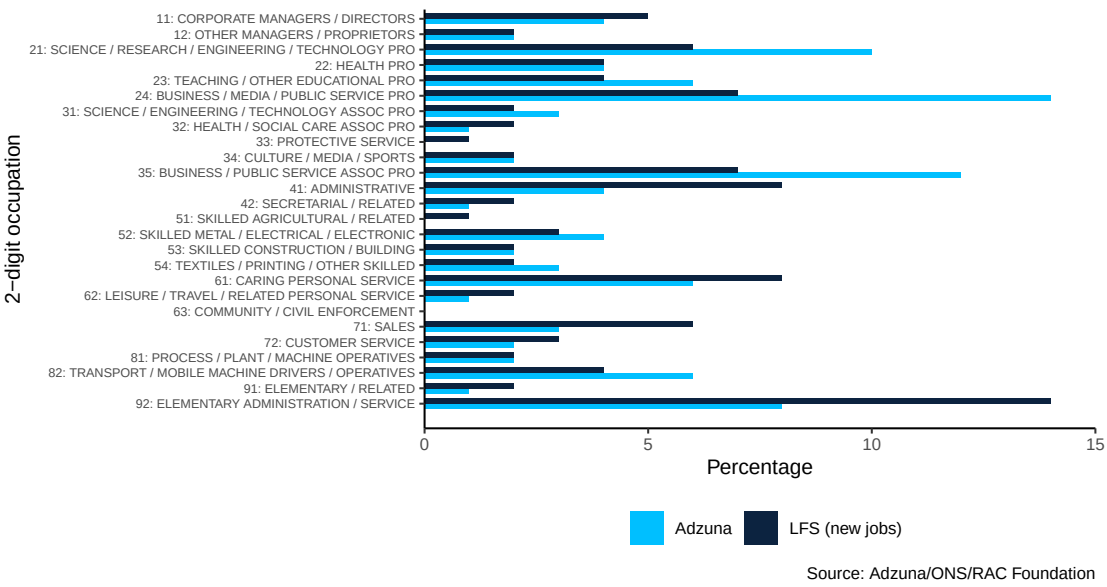
Note: Adzuna job adverts relate to the first week of October of each year; LFS records end in June 2023. Adzuna counts a total of 6,800,840 observations. LFS counts 356,059 observations; percentages include all job tenure lengths. Occupations refer to the ONS SOC2020 (2−digit) Standard Occupational Classification. Where a bar appears absent, this indicates zero or close to zero jobs/adverts in the LFS/Adzuna database for this occupation.

Figure 5: *Comparison of Adzuna and LFS data by 2-digit occupation classes.*



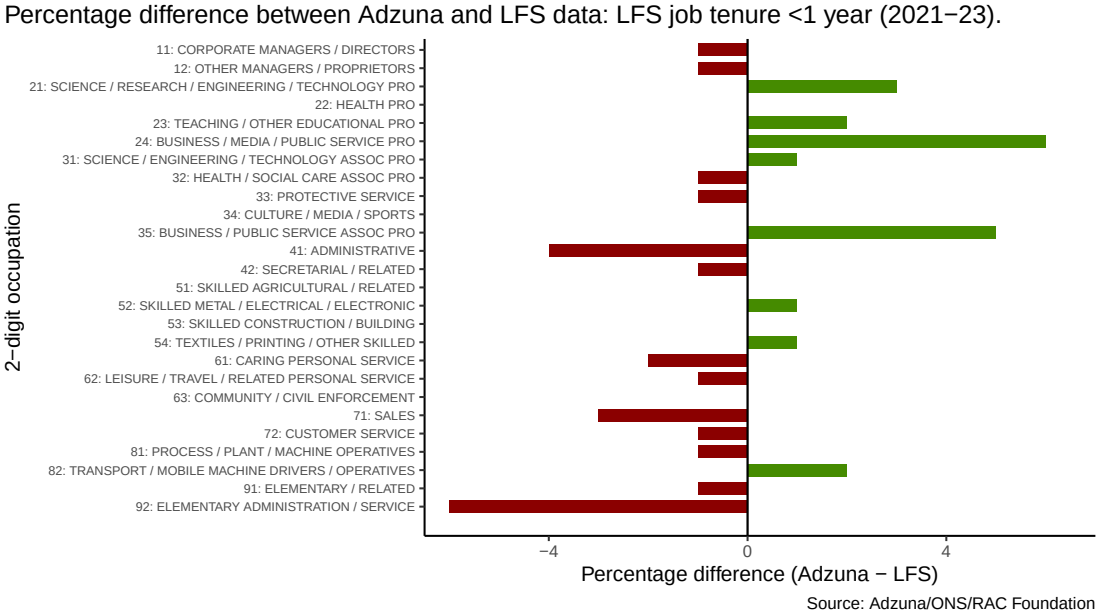
Note: Adzuna job adverts relate to the first week of October of each year; LFS records end in June 2023. Adzuna (N=6,800,840); LFS (N=356,059). Shares include all job tenure lengths. Occupations refer to the ONS SOC2020 (2−digit) Standard Occupational Classification. Where a bar appears absent, this indicates that numbers of jobs/adverts were very similar in both databases.

Figure 6: *Percentage difference between Adzuna and LFS data).*



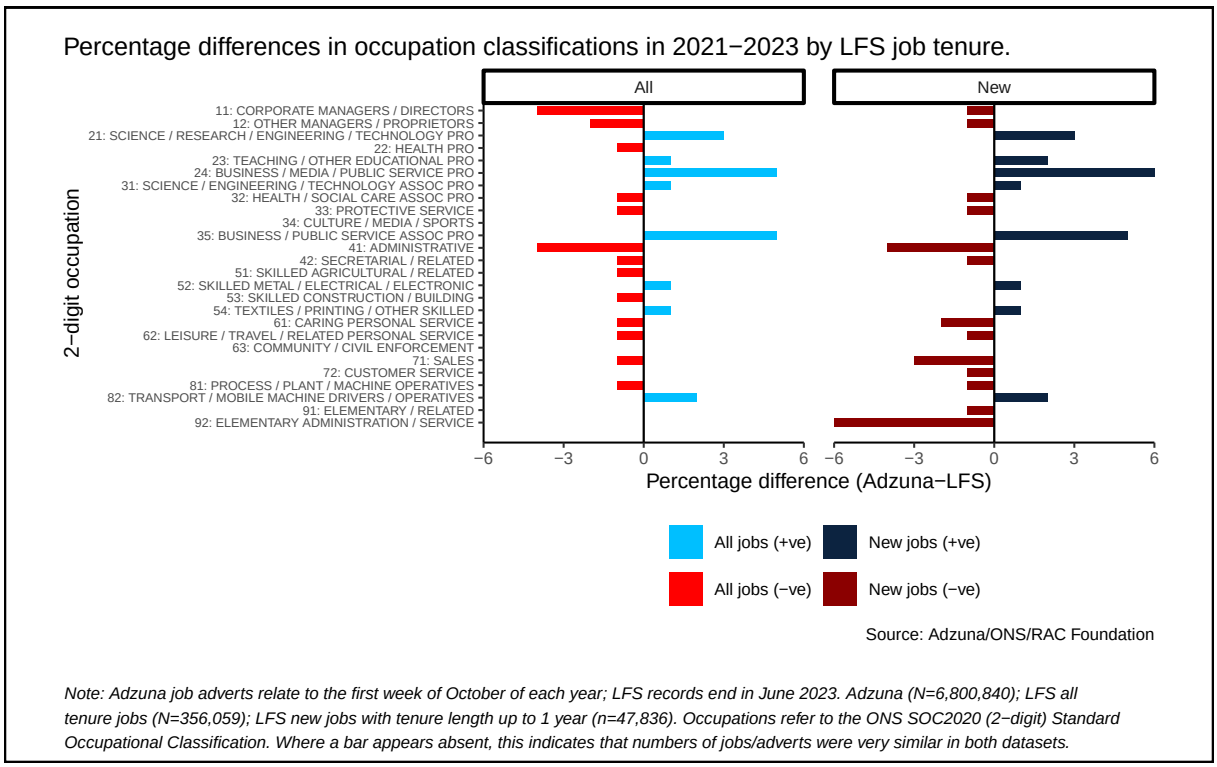
Note: Adzuna job adverts relate to the first week of October of each year; LFS records end in June 2023. Adzuna (N=6,800,840); LFS (N=356,059). Presented data only include job tenure length up to 1 year. Occupations refer to the ONS SOC2020 (2−digit) Standard Occupational Classification. Where a bar appears absent, this indicates zero or close to zero jobs/adverts in the LFS/Adzuna database for this occupation.

Figure 7: *Comparison of Adzuna and LFS data: LFS job tenure <1 year.*



Note: Adzuna job adverts relate to the first week of October of each year; LFS records end in June 2023. Adzuna (N=6,800,840); LFS (N=356,059). Presented data include job tenure length up to 1 year. Occupations refer to the ONS SOC2020 (2−digit) Standard Occupational Classification. Where a bar appears absent, this indicates that numbers of jobs/adverts were very similar in both databases.

Figure 8: *Percentage difference between Adzuna and LFS data: LFS job tenure <1 year.*



Note: Adzuna job adverts relate to the first week of October of each year; LFS records end in June 2023. Adzuna (N=6,800,840); LFS all tenure jobs (N=356,059); LFS new jobs with tenure length up to 1 year (n=47,836). Occupations refer to the ONS SOC2020 (2−digit) Standard Occupational Classification. Where a bar appears absent, this indicates that numbers of jobs/adverts were very similar in both datasets.

Figure 9: *Percentage differences in occupation classifications by LFS job tenure length.*

3.2 Temporal changes in size of occupation classes

During the sample period (2016-23), almost 40% of job adverts analysed in the Adzuna dataset were related to three 'white collar' occupational categories:

- 24: BUSINESS, MEDIA AND PUBLIC SERVICE PROFESSIONALS (14.5%),
- 35: BUSINESS AND PUBLIC SERVICE ASSOCIATE PROFESSIONALS (13.3%), and
- 21: SCIENCE, RESEARCH, ENGINEERING AND TECHNOLOGY PROFESSIONALS (10.4%).

As described in the previous section and illustrated in Figure 9, these occupations appear to be over-represented in the Adzuna dataset. However, this bias appears to be decreasing over time whilst adverts for lower skilled jobs (e.g. "82. Drivers/MMO" and "92. Elementary Occupations") have experienced the opposite trend (see Figure 10).

In general, the distribution of occupations in the job market changes over time, reflecting changes in market demand, technology and exogenous shocks. The period of analysis for this report is characterised by a series of significant events (principally Brexit and the coronavirus pandemic) which makes it hard to anticipate whether identified changes in occupation patterns are likely to be temporary or are more permanent. For instance, Figure 10 shows that the COVID-19 crisis brought a

rise in demand for delivery services (82), accelerating the pre-existing upward trend in these jobs. By 2023, however, this tendency seems to have stabilised.[11]

It should be remembered that the 26 occupation types analysed comprise more detailed categories, and that specific subsets of these may be the main drivers behind aggregated trends. Moreover, as anticipated in Section 2 and detailed in Appendix A.3, because job adverts are collected online, there are possible multiplier effects when an advert is posted repeatedly, referring to different locations or with slightly different wordings. This is evident (see Figure 10) in the case of tutors in "23. Teaching and Other Educational Professionals" which saw the percentage of these occupations increase from 4.1% in 2016 to 13.1% in 2023[12].

Finally, it should be noted that the advantage of using records of adverts for the same period (first week of October) across a number of years is that it removes the risk of the analysis being affected by varying seasonal trends. The comparison with the LFS data detailed in Section 3.2 covered all quarters in order to average out any seasonality. Nonetheless, to achieve higher comparability, it would be useful to compare only LFS values collected in October 2021 and 2022 (October 2023 was unavailable at the time of analysis) with the Adzuna data extracted in the first week of October. However, because restricting the LFS sample to October observations would lead to a much smaller sample size, particularly for new jobs, this procedure could introduce more noise than the issue that it was attempting to minimise.

Overall though, the Adzuna database is judged to be an important new resource in relation to the assessment of labour demand. Whilst it has limitations with regard to the assessment of absolute numbers of job vacancies, the data provides a very rich source of texture to job vacancy statistics. In particular, the ability to analyse the data with respect to SOC codes is hugely valuable. Even though, 20-24% of the data has been unclassifiable by these codes, the remaining 76%+ makes the dataset standout, and, at least with respect to driving requirements, does not appear to be significantly biased. Also, as demonstrated in this report, the extensive text available in the job descriptions opens up a wealth of possibilities for data mining.

[11]There is also a possibility that the number of adverts for Transport and Mobile Machine Operatives (82) in the dataset decreased without a related decline in the demand of these occupations in the economy.

[12]The Adzuna data team is aware of this phenomenon and is developing new techniques to tackle geographical redundancy.

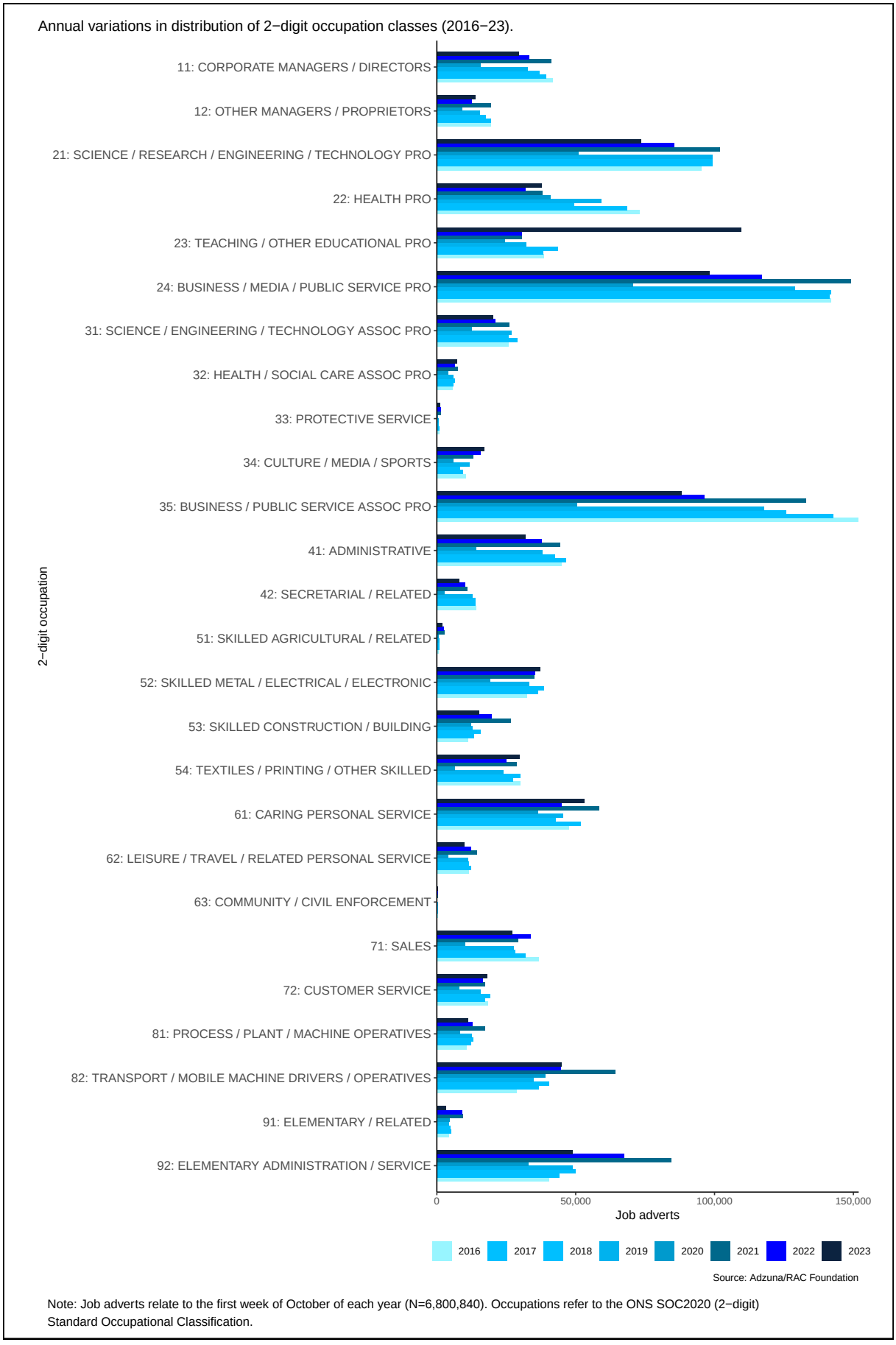


Figure 10: *Annual variations in distribution of 2-digit occupation classes.*

4 Proportions of adverts requiring driving

Each year, at least 150-200,000 job adverts in the UK explicitly or implicitly state driving as a requirement of employment. Figure 11 provides an overview of the changes in the frequency of driving requirements across all job adverts and for those that have been successfully coded by Adzuna according to the SOC2020 ONS classification.

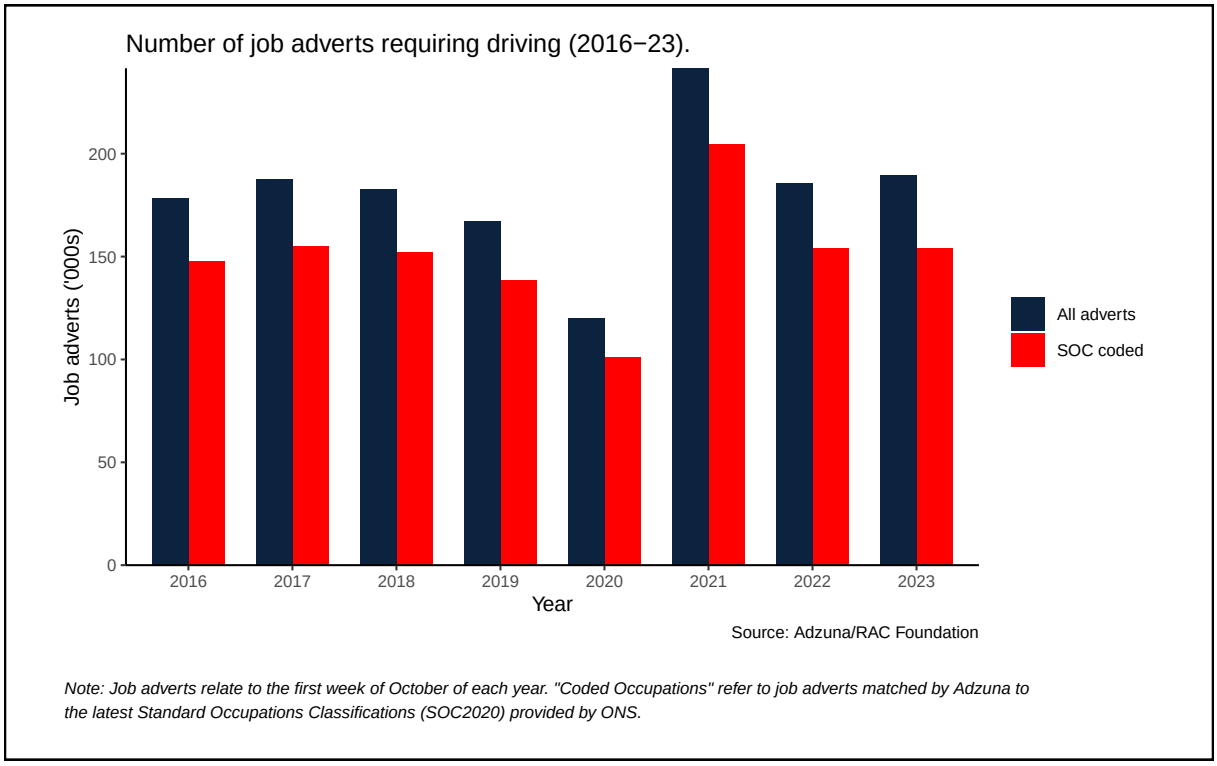


Figure 11: *Number of job adverts requiring driving.*

Figure 12 shows that the percentage of adverts requiring driving has increased between 2016 and 2023 by approximately 2.1 percentage points. As summarised by Table 2, the years since the start of the pandemic have been characterised by a sharp increase in driving requirements, reaching a 20.8% peak in SOC coded occupations in 2020, followed by a later stabilisation. In 2023, 18.4% of SOC-coded jobs required driving, around 1.4 percentage points higher than the overall percentage of adverts requiring driving within all (SOC and non-SOC) adverts recorded between 2016 and 2023.

Table 2: *Number and percentage of adverts requiring driving.*

	A: All adverts in Adzuna Dataset			B: Adverts with SOC codes		
Year	**Driving adverts (all)**	**Total adverts (all)**	**% Driving (all)**	**Driving adverts (SOC)**	**Total adverts (SOC)**	**% Driving (SOC)**
2016	178,535	1,173,630	15.2	147,766	938,083	15.8
2017	187,334	1,178,276	15.9	155,041	945,554	16.4
2018	182,840	1,141,802	16.0	151,902	908,529	16.7
2019	167,323	1,070,039	15.6	138,505	854,698	16.2
2020	120,190	611,702	19.6	100,845	485,410	20.8
2021	241,536	1,296,599	18.6	204,607	1,006,557	20.3
2022	185,792	1,083,525	17.1	154,136	824,045	18.7
2023	189,608	1,092,172	17.4	154,011	837,964	18.4
Total	**1,453,158**	**8,647,745**	**16.8**	**1,206,813**	**6,800,840**	**17.7**

Note: Job adverts relate to the first week of October of each year. "Adverts with SOC codes" refers to job adverts matched by Adzuna to the latest Standard Occupations Classifications (SOC2020) provided by ONS.

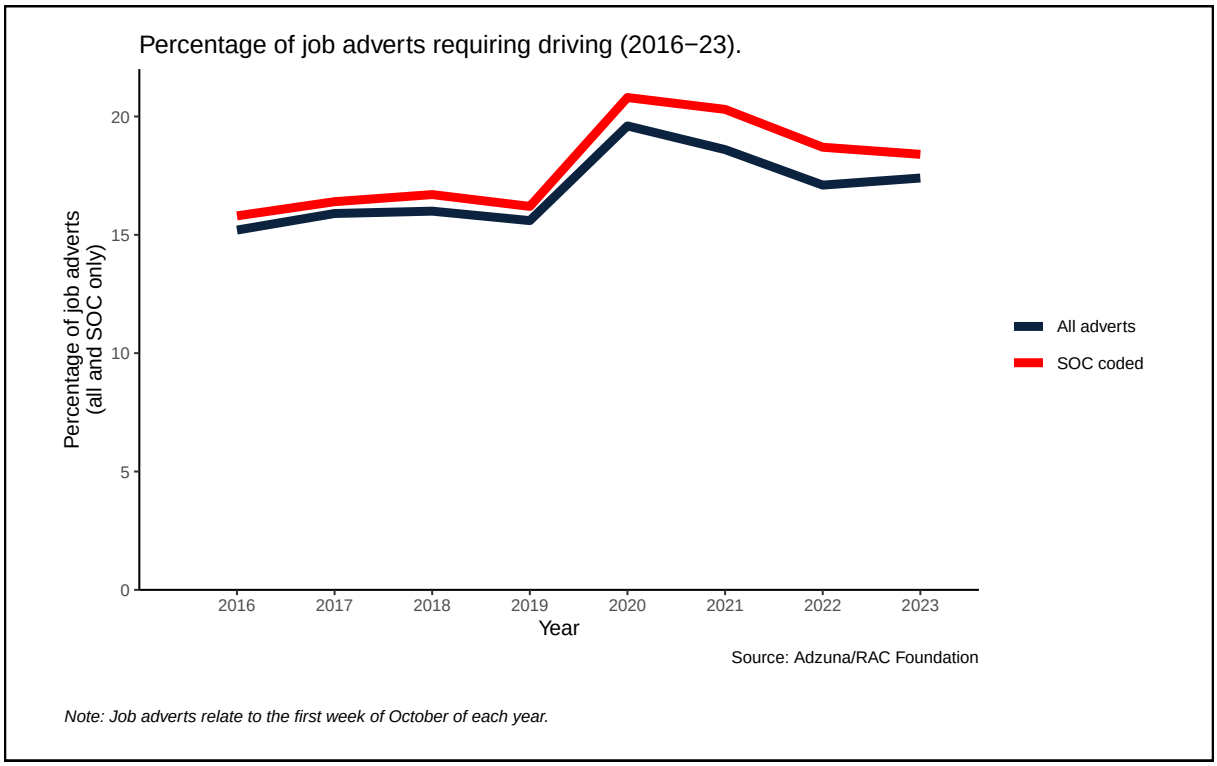


Figure 12: *Percentage of job adverts requiring driving.*

4.1 Intra-occupation driving requirements

The present report focuses on the analysis of the driving requirements of SOC-coded occupations[13]. These are shown in Part B of Table 2 and have an average driving requirement present across all occupations and all years in 17.7% of adverts. Figure 13 presents a disaggregation of the relative proportion of adverts requiring driving within each occupation level at 2-digit SOC level (26 occupations). As might be expected, drivers/mobile machine operatives (Drivers/MMO; 82)[14]

[13]The use of SOC coded occupations allows the comparison with other official sources of information on job vacancies.

[14]The SOC 2-digit (sub-major) class "82. Transport and Mobile Machine Drivers and Operatives")" contains 3 3-digit minor groups: "821: Road Transport Drivers", "822: Mobile Machine Drivers and Operatives", and "823: Other Drivers and Transport Operatives". None of the 9 4-digit job unit classes contained within these categories relate to occupations that *directly* involve driving on roads (e.g."8221: Crane Drivers", "8222: Fork-Lift Truck Drivers", "8223: Agricultural Machinery Drivers", "8229: Mobile Machine Drivers And Operatives", "8231: Train And Tram Drivers", "8232: Marine And Waterways

Similarly, it should be noted that not all jobs based on driving are based in this class (82). Additionally, a worker may be employed in the transport industry whist occupying an administrative role. Jobs/occupations should be interpreted as based on the actual type of work done and not on the basis of the industry /sector in which the worker operates.] require driving skills most often, and the requirement for driving in these occupations has grown by 5.8 percentage points between 2016 and 2023, from 87.1% to 93% in 2023 (N.B. this group also includes aircraft pilots and train drivers as well as drivers of road transport and off-road mobile machinery). Skilled trades (Agriculture, 51; Construction, 53) have experienced a dramatic rise since the cessation of lockdowns (though slower growth was experienced for slower growth for Metal/Electric/Electronic, 52). Less skilled occupations (Process/Plant/Machinery, 81; Elementary Trade, 91), and technical professions (Science Associate Professionals, 31) have also seen significant growth in adverts. Jobs concerning policing (part of Other Managers, 12), Protective Services (33) and Community Enforcement (63) have typically shown relatively high rates of driving requirements but have varied significantly between years.

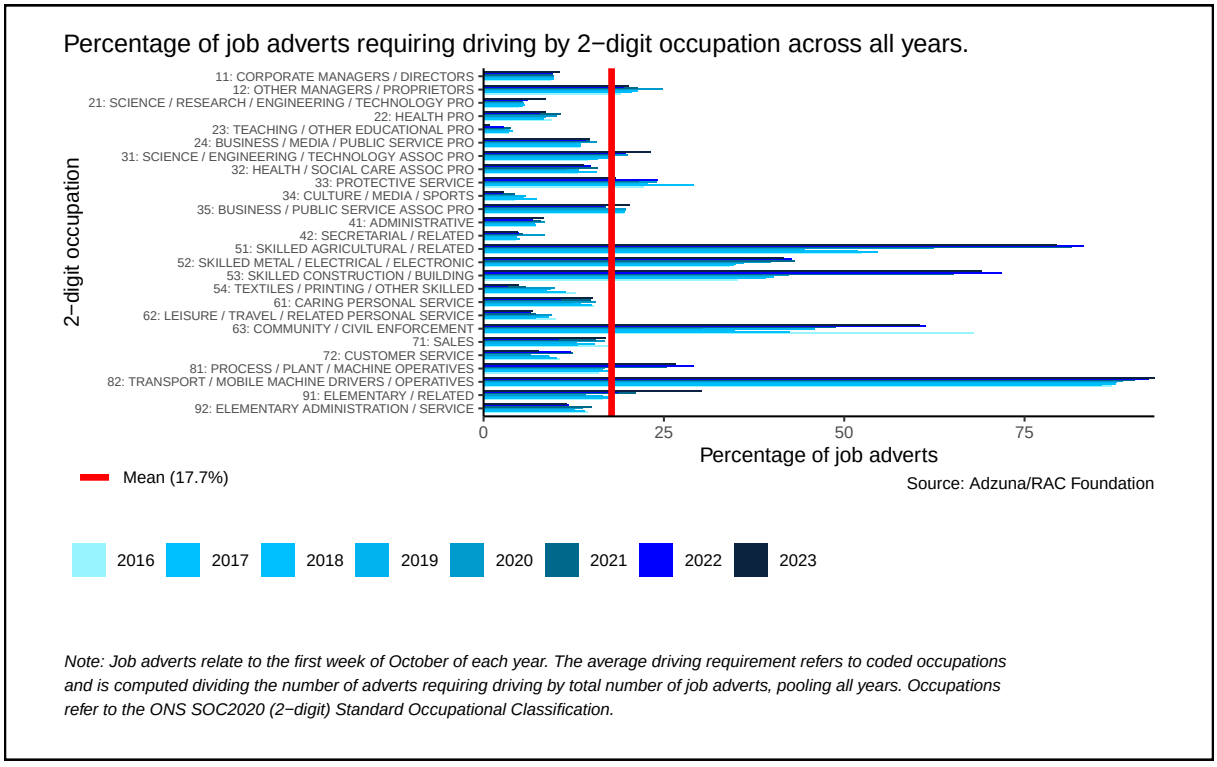


Figure 13: *Percentage of job adverts requiring driving by 2-digit occupation.*

Table 3 shows the 11 occupations that have an average driving requirement across all years (i.e. the percentage of all adverts within the occupation) greater than the overall mean for all adverts over all years and all occupations. Conversely, Table 4 shows the five occupations with the lowest proportions of driving requirements. Occupations may have a low driving requirement when they tend to take

Transport Operatives", "8233: Air Transport Operatives", "8234: Rail Transport Operatives", and "8239: Other Drivers And Transport Operatives").

place at a single, fixed, accessible work location or if occasional travel in the course of work can be satisfied without using a vehicle.

Table 3: *Occupations with above average presence of driving requirements.*

	Mean driving requirement = 16.8%	
Occupations (2-digit)	**Occupation % driving**	**Multiple of mean**
82: TRANSPORT AND MOBILE MACHINE DRIVERS AND OPERATIVES	89.4	5.3
51: SKILLED AGRICULTURAL AND RELATED TRADES	70.8	4.2
53: SKILLED CONSTRUCTION AND BUILDING TRADES	53.4	3.2
63: COMMUNITY AND CIVIL ENFORCEMENT OCCUPATIONS	50.3	3.0
52: SKILLED METAL, ELECTRICAL AND ELECTRONIC TRADES	38.4	2.3
33: PROTECTIVE SERVICE OCCUPATIONS	22.8	1.4
81: PROCESS, PLANT AND MACHINE OPERATIVES	21.0	1.2
12: OTHER MANAGERS AND PROPRIETORS	20.6	1.2
91: ELEMENTARY TRADES AND RELATED OCCUPATIONS	19.0	1.1
35: BUSINESS AND PUBLIC SERVICE ASSOCIATE PROFESSIONALS	18.9	1.1
31: SCIENCE, ENGINEERING AND TECHNOLOGY ASSOCIATE PROFESSIONALS	18.0	1.1

Note: Job adverts relate to the first week of October of each year. The average driving requirement ("Occupation % Driving") refers to coded occupations and is computed dividing the number of adverts requiring driving by total number of job adverts, pooling all years. Occupations refer to the ONS SOC2020 (2-digit) Standard Occupational Classification.

Table 4: *Lowest five occupations by level of driving requirements.*

Occupations (2-digit)	**Occupation % driving**	**Multiple of mean**
41: ADMINISTRATIVE OCCUPATIONS	7.4	0.4
21: SCIENCE, RESEARCH, ENGINEERING AND TECHNOLOGY PROFESSIONALS	5.8	0.3
42: SECRETARIAL AND RELATED OCCUPATIONS	4.9	0.3
34: CULTURE, MEDIA AND SPORTS OCCUPATIONS	4.4	0.3
23: TEACHING AND OTHER EDUCATIONAL PROFESSIONALS	2.7	0.2

Note: Job adverts relate to the first week of October of each year. The average driving requirement ("Occupation % Driving") refers to coded occupations and is computed dividing the number of adverts requiring driving by total number of job adverts, pooling all years. Occupations refer to the ONS SOC2020 (2-digit) Standard Occupational Classification.

As Figure 13 showed, the proportional requirements for driving skills changed between 2016 and 2023. Figure 14 further summarises this process and color-codes the magnitude of change in driving requirements with respect to initial occupation values in 2016. Most occupations either gradually increased or decreased over time (many have experienced an increase in driving requirements subsequent to the first waves of the pandemic in 2020). Few occupations have experienced strong swings. Because colours refer to the change between a year and the initial value in 2016, the

percentage of certain occupational driving requirements may appear to be decreasing overall, even if there has been growth from one particular year to the next[15].

Occupations (2-digit)	2016	2017	2018	2019	2020	2021	2022	2023
11: CORPORATE MANAGERS AND DIRECTORS	9	10	10	10	10	10	10	11
12: OTHER MANAGERS AND PROPRIETORS	19	21	21	20	25	21	19	20
21: SCIENCE, RESEARCH, ENGINEERING AND TECHNOLOGY PROFESSIONALS	5	5	6	6	5	5	6	9
22: HEALTH PROFESSIONALS	9	8	8	9	10	11	8	9
23: TEACHING AND OTHER EDUCATIONAL PROFESSIONALS	4	4	4	4	3	4	3	1
24: BUSINESS, MEDIA AND PUBLIC SERVICE PROFESSIONALS	13	14	13	13	16	15	14	15
31: SCIENCE, ENGINEERING AND TECHNOLOGY ASSOCIATE PROFESSIONALS	14	16	18	18	20	18	20	23
32: HEALTH AND SOCIAL CARE ASSOCIATE PROFESSIONALS	13	16	11	13	12	16	15	14
33: PROTECTIVE SERVICE OCCUPATIONS	22	29	23	21	24	22	24	18
34: CULTURE, MEDIA AND SPORTS OCCUPATIONS	4	7	6	6	4	4	3	3
35: BUSINESS AND PUBLIC SERVICE ASSOCIATE PROFESSIONALS	19	20	19	20	20	17	17	20
41: ADMINISTRATIVE OCCUPATIONS	7	7	7	7	8	8	7	8
42: SECRETARIAL AND RELATED OCCUPATIONS	4	5	5	4	8	5	5	5
51: SKILLED AGRICULTURAL AND RELATED TRADES	52	55	52	45	62	81	83	80
52: SKILLED METAL, ELECTRICAL AND ELECTRONIC TRADES	34	35	35	36	40	43	43	42
53: SKILLED CONSTRUCTION AND BUILDING TRADES	35	39	40	40	42	65	72	69
54: TEXTILES, PRINTING AND OTHER SKILLED TRADES	13	11	9	9	10	6	3	5
61: CARING PERSONAL SERVICE OCCUPATIONS	15	15	14	12	16	15	11	15
62: LEISURE, TRAVEL AND RELATED PERSONAL SERVICE OCCUPATIONS	10	7	9	8	10	7	7	7
63: COMMUNITY AND CIVIL ENFORCEMENT OCCUPATIONS	68	42	35	46	30	49	61	61
71: SALES OCCUPATIONS	17	13	15	13	17	16	10	17
72: CUSTOMER SERVICE OCCUPATIONS	11	10	9	9	6	12	12	8
81: PROCESS, PLANT AND MACHINE OPERATIVES	16	18	17	17	17	25	29	27
82: TRANSPORT AND MOBILE MACHINE DRIVERS AND OPERATIVES	87	86	88	88	89	90	92	93
91: ELEMENTARY TRADES AND RELATED OCCUPATIONS	17	18	18	16	14	21	19	30
92: ELEMENTARY ADMINISTRATION AND SERVICE OCCUPATIONS	14	14	13	12	14	15	12	12

Rate in 2016
%<5
5< % <10
10< % < 20
20< % <40
%>40

% Down from 2016
%<-20
-20< % < -10
-10< % <-5
-5< % <-1
-1< % <0

% Up from 2016
0> % <1
1> % <5
5> % <10
10> % <20
% >20

Note: The first column reports the driving requirement percentage by occupation in 2016 and the scale of green colours classifies them by intensity. Numbers in each column identify the driving requirement percentage by occupation each year, while colours indicate the magnitude of decrease (blue) or increase (red) from the driving percentage of 2016. Occupations refer to the ONS SOC2020 (2-digit) Standard Occupational Classification. For ease of description and analysis, we have kept the 2-digit occupation code preceding a shortened occupation text label. An advert requiring driving, implicitly or explicitly states that applicants must be able to drive as a profession, in the course of work, or to reach work.

Source: Adzuna/RACF

Figure 14: *Variation in percentage of job adverts requiring driving by year (figures) with magnitude of decrease (blue) or increase (red) of the driving requirement since 2016 by occupation (colours).*

[15]For instance, Community Enforcement (63) presents only decreasing values after 2016 because its driving requirement percentage has been consistently lower than its initial percentage (68%), even if certain years recorded higher percentages than previous ones (e.g. 49% in 2021, following 30% in 2020).

5 Inter-occupation driving requirements

Section 4.1 focused on the requirements to drive *within* any given occupation, that is, how many of its job adverts require applicants to be able to drive. While informative, this measure is not indicative of which job categories post the highest number of adverts overall requiring ability to drive as a condition of employment. Indeed, these categories may not coincide at all with those occupations that are traditionally considered as driving intensive.

Figure 15 shows that the highest number of adverts requiring driving each year (a peak of 58,130 in 2021) were associated with "Driver/MMO occupations" (82). This result is to be expected given the predominance of actual 'driving jobs' within this occupation classification. The high volumes of adverts for skilled trades (52 and 53) that require driving are also unsurprising as they are often likely to involve trips to multiple work locations, carrying technical equipment and materials. Interestingly, the category of "Business Professionals and Associates" (35) also shows high levels of driving requirements. Although the internal demand in this category is lower than in other occupations (i.e. a low percentage of job adverts within this category stipulate driving requirements-see Figure 13), the fact that there is a very high volume of adverts for these occupations (see Figure 3) leads to a sizeable demand for driving in categories that are less obviously expected to require it.

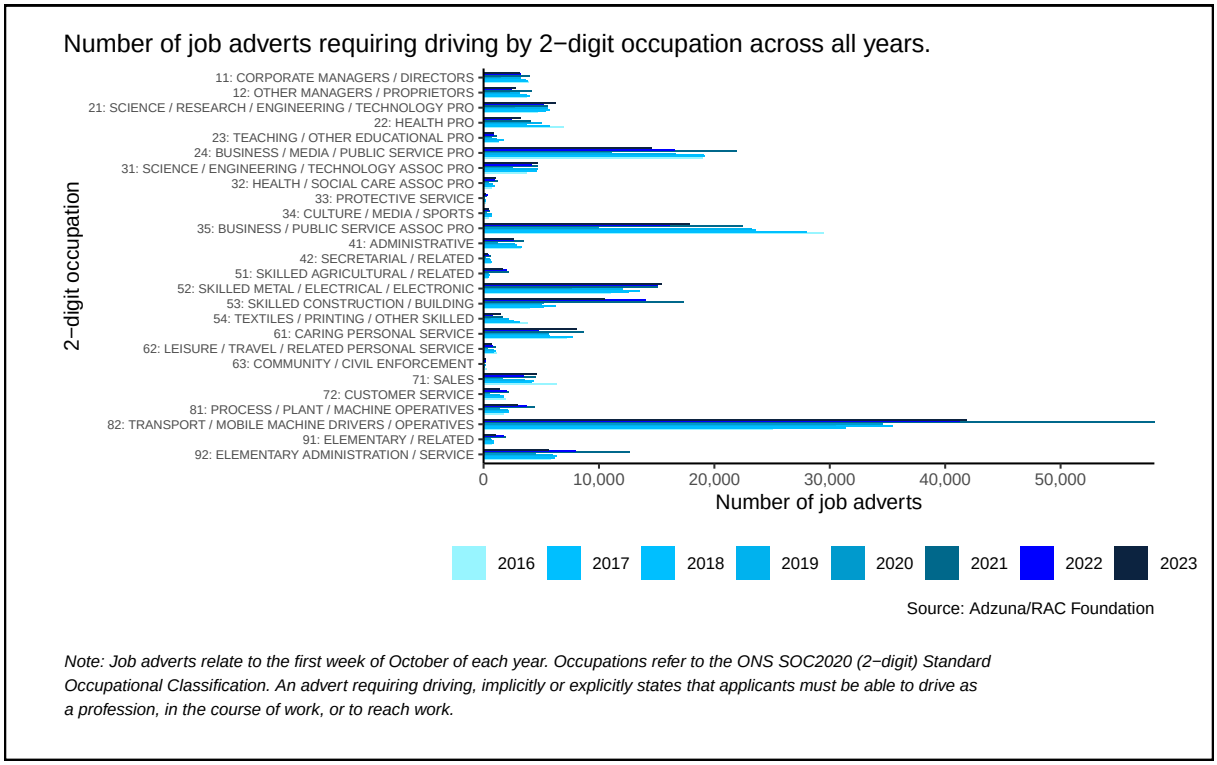


Figure 15: *Number of job adverts requiring driving by 2-digit occupation across all years.*

Figure 16 shows that, in percentage terms, adverts relating to the Driver/MMO (82) classification have grown to represent more than a quarter of adverts requiring driving in recent years. Business Professions (35) experienced a decreasing trend, but adverts requiring driving for these occupations still represent 9.4% of adverts requiring driving in 2023. The proportion of adverts requiring driving within skilled trades in Metal/Electric/Electronics (52) and Construction (53) significantly increased after the first waves of the pandemic. Table 5 and Table 6 respectively show the top and bottom five occupations as ranked by the number of adverts (across all years) requiring driving for that occupation classification as a percentage of all adverts (across all years) in which driving was an employment qualification. The top five occupation classes cover 64.5% of all adverts requiring driving, while the bottom five only cover 1.5%. Figure 17 visually summarises the relative weight of the 26 two-digit occupation classes in terms of driving requirement across all adverts and years.

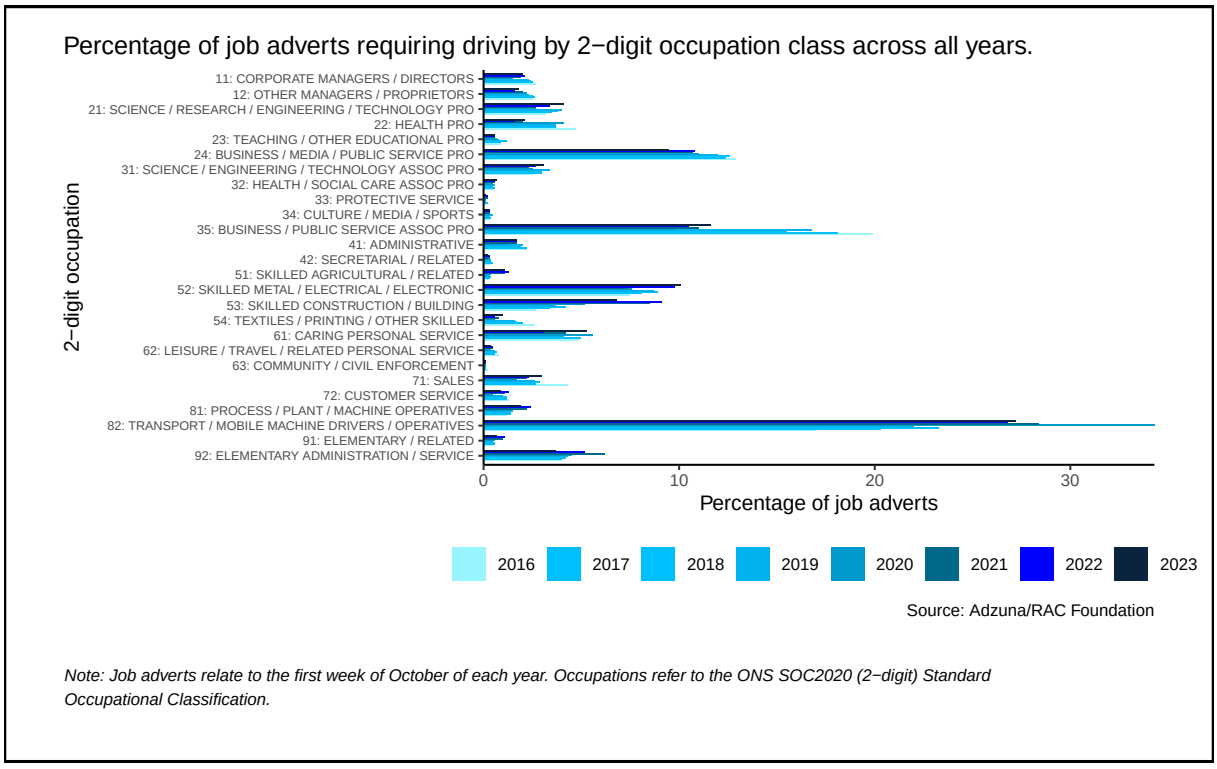


Figure 16: *Percentage of job adverts requiring driving by 2-digit occupation class across all years.*

Table 5: *Five occupation classes with highest levels of driving requirements.*

Occupations (2-digit)	Rank	Ads with driving requirement	Percent of ALL driving ads	Cumulative %
82: TRANSPORT AND MOBILE MACHINE DRIVERS AND OPERATIVES	1	298,322	24.7	24.7
35: BUSINESS AND PUBLIC SERVICE ASSOCIATE PROFESSIONALS	2	170,914	14.2	38.9
24: BUSINESS, MEDIA AND PUBLIC SERVICE PROFESSIONALS	3	138,188	11.5	50.4
52: SKILLED METAL, ELECTRICAL AND ELECTRONIC TRADES	4	102,673	8.5	58.9
53: SKILLED CONSTRUCTION AND BUILDING TRADES	5	67,896	5.6	64.5

Note: In order to calculate the ranking, the percentage of adverts requiring driving by occupation is computed by dividing the total number of adverts requiring driving in an occupation by the total number of adverts in that occupation pooled across the sample years (2016-2023). Job adverts relate to the first week of October of each year. Occupations refer to the ONS SOC2020 (2-digit) Standard Occupational Classification.

Table 6: *Five occupation classes with lowest levels of driving requirements.*

Occupations (2-digit)	Rank	Ads with driving requirement	Percent of ALL driving ads	Cumulative Perc
62: LEISURE, TRAVEL AND RELATED PERSONAL SERVICE OCCUPATIONS	22	6,922	0.6	0.6
42: SECRETARIAL AND RELATED OCCUPATIONS	23	4,286	0.4	1.0
34: CULTURE, MEDIA AND SPORTS OCCUPATIONS	24	4,028	0.3	1.3
33: PROTECTIVE SERVICE OCCUPATIONS	25	1,775	0.1	1.4
63: COMMUNITY AND CIVIL ENFORCEMENT OCCUPATIONS	26	1,417	0.1	1.5

Note: In order to calculate the ranking, the percentage of adverts requiring driving by occupation is computed dividing the total number of adverts requiring driving in an occupation by the total number of adverts in that occupation pooled across the sample years (2016-2023). Job adverts relate to the first week of October of each year. Occupations refer to the ONS SOC2020 (2-digit) Standard Occupational Classification.

Figure 17: *Distribution of adverts requiring driving by occupation class.*

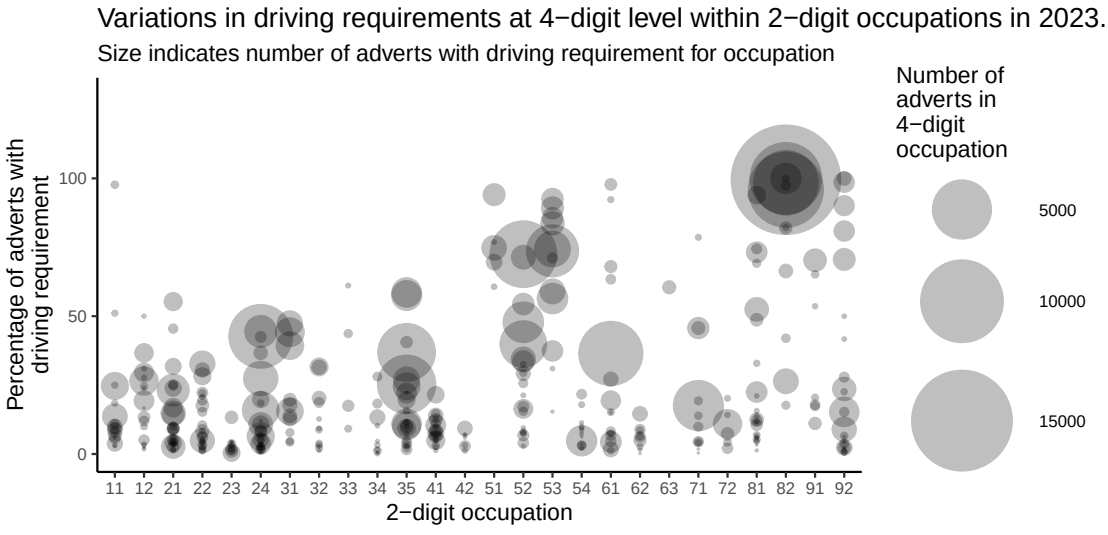
5.1 Inter-occupation driving requirements: from 2-digit to 4-digit disaggregation.

The results so far have been presented for occupations aggregated at the 2-digit level. However, these 26 categories are characterised by strong variability at the lower aggregation levels (4-digit), both in terms of the number of adverts and the appearance of driving requirements. Figure 18 depicts these significant variations in both the number and proportion of adverts with driving requirements for each occupation within the adverts posted in 2023.

Each bubble represents one of the 398 4-digit occupations present in the Adzuna data. These are grouped along the x-axis by their respective overarching 2-digit classifications. The location of each bubble with respect to the y-axis indicates the proportion of adverts within that 4-digit classification that have a driving requirement. The size of each bubble represents the absolute number of adverts in each of the 4-digit categories. In total, the bubbles represent all adverts from 2023 that have a driving requirement (N=189,608).

2-digit occupation classes with a high driving requirement overall (e.g. Drivers/MMO (82)) contain some 4-digit occupation classes with considerably lower 'driving' requirements (e.g. "8222. Fork-lift Truck Driver" which only has a 26.4% driving requirement). Conversely, some occupations with lower overall requirements (e.g. Corporate Managers (11)) may display isolated peaks (e.g. "1161. Officers in Armed Forces" has a 97.7%)[16]. However, some occupation types (e.g. Administrative (41) and Secretarial (42)) are more homogeneous in their scarce requirement of driving skills.

[16]When a 4-digit occupation appears in a small number of adverts in the dataset, driving requirement percentages could be less reliable.



Note: The graph contains 398 observations (bubbles), one for each 4−digit occupation recorded in the Adzuna data. The size of each bubble represents the number of adverts requiring driving in each occupation. The sum of all bubbles corresponds to the number of adverts requiring driving in 2023 (N=189,608). The percentage of adverts requiring driving (y−axis) by occupation is computed dividing the total number of adverts requiring driving in an occupation in 2023 by the total number of adverts in that occupation in 2023.

Figure 18: *Variation in driving requirements (showing number of adverts with driving requirements).*

When considering the total number of adverts by 4-digit occupation like this, it becomes clear that most occupations have relatively low driving requirements. Nevertheless, because a small percentage of a large number can add to a sizeable quantity, a considerable number of adverts requiring driving originate from occupation types that are usually assumed to not involve driving i.e. they are not a 'driving profession'. Figure 19 depicts this phenomenon: the *size* of each bubble represents the *total* number of (SOC coded) adverts in each occupation (with or without driving requirements) so the sum of all bubbles corresponds to the *total* number of adverts in 2023 (N=837,964). The chart illustrates how the 4-digit Drivers/MMO classification (82) with high internal driving requirements actually represents a smaller proportion of adverts than many professional occupations (21, 22, 23, 24)[17].

[17]Note that "2319. Teaching professionals NEC." registered an abnormal number of adverts in 2023 (77,562) and have been excluded from Figure 18, Figure 19 and Figure 20). The Adzuna data team attributes this outlier to adverts related to online teachers and is currently working on a method to reduce duplications.

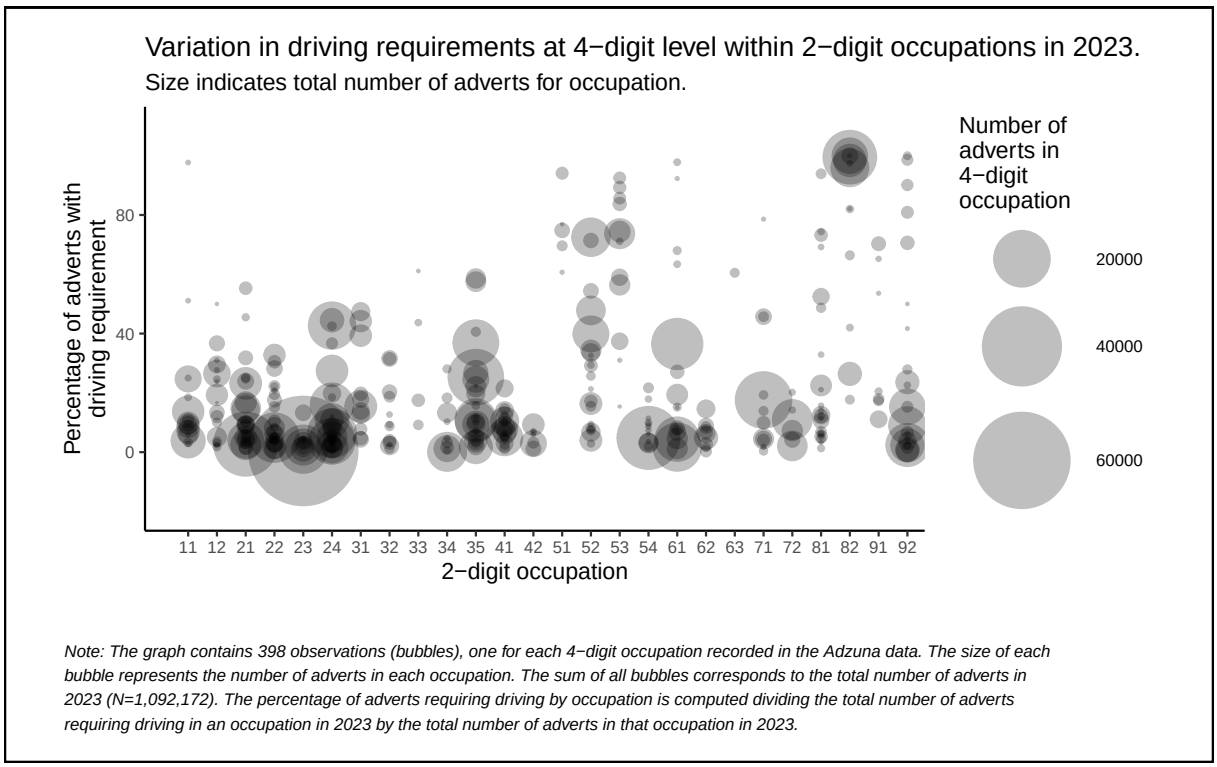
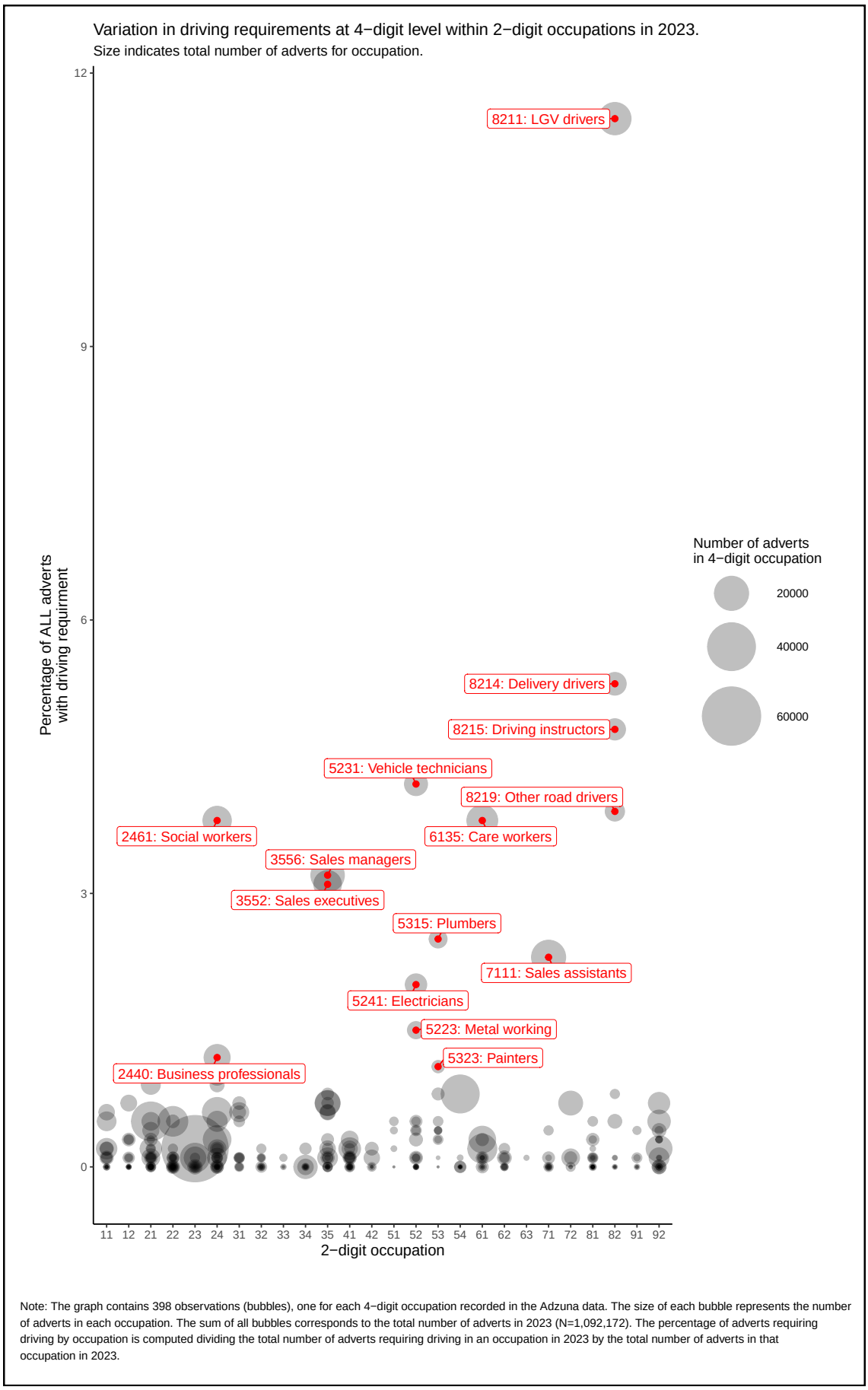


Figure 19: *Variation in driving requirements (showing percentage of adverts with driving requirements).*

Overall, most driving requirements relate to a handful of occupations. At the same time, most occupations require driving in at least a few of their job adverts[18]. Figure 20 illustrates the percentage of adverts requiring driving for each 4-digit occupation over the total number of adverts requiring driving in 2023. The size of each bubble represents the number of adverts in each occupation (with or without driving requirements), whereas the sum of all bubbles corresponds to the total number of adverts in 2023 (N=837,964). Each occupation labelled in red represents more than 1% of all adverts requiring driving. A dozen occupations represent half of all the adverts in which driving is an employment qualification: the three largest three occupation classifications are three driving occupations (82) (8211: LGV drivers, 8214: Delivery drivers and couriers, and 8215: Driving instructors altogether comprise 21.6%), four skilled trades (52 and 53) (5231: Vehicle technicians, 5315: Plumbers, 5241: Electricians and 5223: Metalworkers = 10.2%), two in social work and care work (2461: Social workers and 6135: Care workers = 7.6%), and three sales occupations (3566: Sales accounts and development, 3552: Sales executives, and 7111: Sales assistants = 8.6%).

[18]Out of 398 4-digit occupations recorded by Adzuna, only 16 do not require driving in at least one advert: “1163. Senior officers in fire, ambulance, prison and related services”, “1254. Waste disposal and environmental services managers”, “1258. Directors in consultancy services”, “2317. Teachers of English as a foreign language”, “2471. Librarians”, “2472. Archivists, conservators and curators”, “3211. Dispensing opticians”, “3311. Non-commissioned officers and other ranks”, “3415. Musicians”, “3429. Design occupations NEC”, “5236. Rail and rolling stock builders and repairers”, “5421. Pre-press technicians”, “5441. Glass and ceramics makers, decorators and finishers”, “5443. Florists”, “7121. Collector salespersons and credit agents”, “8232. Marine and waterways transport operatives”.



Note: The graph contains 398 observations (bubbles), one for each 4−digit occupation recorded in the Adzuna data. The size of each bubble represents the number of adverts in each occupation. The sum of all bubbles corresponds to the total number of adverts in 2023 (N=1,092,172). The percentage of adverts requiring driving by occupation is computed dividing the total number of adverts requiring driving in an occupation in 2023 by the total number of adverts in that occupation in 2023.

Figure 20: *Variation in driving requirements (showing 4-digit occupations with >1% in-occupation requirement).*

Building on Figure 20, Table 7 summarises the top 30 occupations in terms of overall driving requirements at the 4-digit level in 2023[19]. It is notable that the 4-digit occupations demanding driving the most are not always in the top five 2-digit categories shown in Table 5. For example, while a 2-digit category may have an overall low driving requirement, it may contain sub-categories with a higher-than-average driving requirement e.g. adverts for "7111: Sales and retail assistants" requiring driving comprise 1.4% of adverts with driving requirements, ranking 12th out of 398 (the 3rd percentile). Meanwhile, its 2-digit class "71: Sales" ranks 11th out of only 26 occupations (the 53rd percentile) - well beyond the 2-digit top five.

Furthermore, there are cases where a 4-digit sub-category may have a low requirement for driving but, because of the high number of adverts in that profession, it may still end up representing a sizeable proportion of the overall number of adverts requiring driving e.g. within their 4-digit occupation classification, "5434: Chefs" have a low requirement to drive (only 7.3% of adverts for their occupation). However, the fact that they are the 4-digit occupation with the third highest number of adverts in total (after "2319: Teaching professionals NEC" and "2134: Programmers and Software development professionals") means that adverts for chefs who can drive make up a comparatively large proportion of overall job adverts (0.2% making them rank 20th out of 398 (5th percentile). Appendix A.4 reports the 4-digit disaggregation for the top five 2-digit occupational sectors of Table 5.

[19]At 4-digit level, the SOC coding identifies adverts with a high degree of precision. For certain jobs (e.g. "8211. Large goods vehicle drivers"), it would be expected to observe a 100% driving requirement. However, because this report identifies driving requirements through a text-based analysis of job descriptions in adverts, it is possible that the identified driving requirement percentage does not perfectly coincide with its expected level. Consider for instance "8214. Delivery drivers and couriers": its derived driving requirement percentage is 95.9%, where it could have been expected to be 100%. The discrepancy may be due to either of three possible factors: 1) the text search was not fully able to capture the driving requirements in the job adverts; 2) some driver or courier jobs may not require holding a driving licence for cars (e.g. use of moped or bicycle), or no driving requirement was explicitly or implicitly stated (the delivery method used is indifferent to the employer); 3) the SOC code was incorrectly attributed. In the case of "8211. Large goods vehicle drivers", the first reason is more plausible, while in the case of "8214. Delivery drivers and couriers", the second reason is more likely to apply.

Table 7: *Top 30 occupations requiring driving (2023); percentage of all adverts, driving jobs and by occupation (ordered by % of all adverts).*

Occupation (4-digit)	Rank 4d	Rank 2d	% of occupation	% of all driving adverts	% of all adverts	Cumulative % of driving adverts	Cumulative % of all adverts
8211: Large goods vehicle drivers	1	1	99.3	10.5	1.9	10.5	1.9
2461: Social workers	2	3	33.7	6.2	1.1	16.7	3.0
8219: Road transport drivers n.e.c.	3	1	97.9	5.0	0.9	21.7	3.9
8214: Delivery drivers and couriers	4	1	95.6	4.7	0.8	26.4	4.7
3552: Business sales executives	5	2	31.9	3.8	0.7	30.2	5.4
3556: Sales accounts and business development managers	6	2	22.9	3.7	0.7	33.9	6.1
5231: Vehicle technicians, mechanics and electricians	7	4	64.4	3.6	0.6	37.5	6.7
6135: Care workers and home carers	8	7	33.9	2.8	0.5	40.3	7.2
5315: Plumbers and heating and ventilating installers and repairers	9	5	67.5	2.5	0.4	42.8	7.6
8215: Driving instructors	10	1	100.0	2.2	0.4	45.0	8.0
5241: Electricians and electrical fitters	11	4	34.0	1.4	0.2	46.4	8.2
7111: Sales and retail assistants	12	11	11.1	1.4	0.2	47.8	8.4
3555: Estate agents and auctioneers	13	2	58.5	1.3	0.2	49.1	8.6
9252: Warehouse operatives	14	6	12.9	1.3	0.2	50.4	8.8
3571: Human resources and industrial relations officers	15	2	10.6	1.2	0.2	51.6	9.0
5223: Metal working production and maintenance fitters	16	4	41.7	1.2	0.2	52.8	9.2
2237: Other registered nursing professionals	17	9	7.5	1.1	0.2	53.9	9.4
2453: Quantity surveyors	18	3	22.2	1.0	0.2	54.9	9.6
3554: Advertising and marketing associate professionals	19	2	10.3	1.0	0.2	55.9	9.8
5434: Chefs	20	16	7.3	1.0	0.2	56.9	10.0
1251: Property, housing and estate managers	21	12	29.9	0.9	0.2	57.8	10.2
8222: Fork-lift truck drivers	22	1	31.9	0.9	0.2	58.7	10.4
2440: Business and financial project management professionals	23	3	11.3	0.8	0.2	59.5	10.6
5316: Carpenters and joiners	24	5	37.8	0.8	0.1	60.3	10.7
1122: Production managers and directors in construction	25	13	21.9	0.7	0.1	61.0	10.8
2121: Civil engineers	26	8	21.0	0.7	0.1	61.7	10.9
2454: Chartered surveyors	27	3	34.0	0.7	0.1	62.4	11.0
3132: IT user support technicians	28	10	13.3	0.7	0.1	63.1	11.1
7115: Vehicle and parts salespersons and advisers	29	11	51.0	0.7	0.1	63.8	11.2
7219: Customer service occupations n.e.c.	30	17	10.6	0.7	0.1	64.5	11.3

Note: Job adverts relate to the first week of October of 2023. Occupations at the 4-digit level are ranked ("Rank 4d") by the number of adverts requiring driving for that occupation over all adverts requiring driving, reported in the column "% of all adverts". The column "Cumululative % of all adverts" represents the cumulated sum of the 4-digit percentages in "% of all adverts". The column "Rank 2d" represents the ranking of the corresponding 2-digit occupational levels; this ranking is obtained by calculating the number of adverts requiring driving at the 2-digit level across all adverts requiring driving between 2016 and 2023. The percentage in the column "% of occupation" refers to the percentage of job adverts requiring driving within the occupation at the 4-digit level. Occupations refer to the ONS SOC2020 (4-digit) Standard Occupational Classification.

6 Types of driving requirement

The previous sections focused on whether driving was mentioned as an employment requirement in the job adverts, either explicitly or implicitly. This section, further refines this analysis and distinguishes between the different expressions used in job descriptions relating to driving requirements, grouping adverts into one or more classes reflecting four major types of requirement: holding a standard driving licence, working *as* a driver, driving *in* the course of work, or driving *to* work (e.g. because of limited access to public transport) [20].

Table 8 presents a summary of the types of requirements identified through the text search:

- holding a driving *licence* (full or provisional, generally for a car),
- having few *points* on the licence,
- generally being *able to drive*,
- being a professional *general driver* (e.g. driver, chauffeur, drop off parcels),

[20] Appendix B provides a full list of the expressions used to isolate driving requirements in job adverts' title or description.

- having additional qualifications to be a *specialised driver* (e.g. HGV, tank crewman, minibus, ambulance),
- being a *taxi* driver (e.g. private hire, minicab, Uber),
- having access to one's *own vehicle* (especially car or van, standardly known as grey fleet),
- being able to drive a *company vehicle*,
- having access to one's *own transport*,
- being aware that the job requires reaching areas with limited access to *public transport*[21], or remote *locations* (sometimes requiring travel to multiple sites),
- with the possibility of reimbursement for the cost either of *fuel* or of *mileage*.

Table 8 shows that there has been an increase in adverts requiring driving between 2016 and 2023, especially those specifically wanting professional drivers. Within this table, it is important to note that multiple criteria may appear in the same job advert and that the sum of the percentages of adverts containing them is above 100% (e.g. 64.8% of all adverts with a driving requirement in 2023 specify the need for a standard license and 17% specify the provision or use of a company vehicle - these two requirements are not mutually exclusive and whilst some adverts may specify one or the other, some will specify both).

[21] Previous reports by the RAC Foundation (2016, 2018) have included working in night shifts as a possible criterium for the need to be able to drive. In this analysis it is not straightforward to determine whether workers will have access to public transport at the start or end of their shift or during its course. We have therefore decided to exclude this category from the text search.

Table 8: *Relative prevalence of driving requirements by occupation in 2023.*

	2016			2023		
	Adverts	**% of all ads**	**% of driving ads**	**Adverts**	**% of all ads**	**% of driving ads**
Total Adverts	**938,083**	**100.0**	**NA**	**837,964**	**100.0**	**NA**
Driving Required	**147,766**	**15.8**	**100.0**	**154,011**	**18.4**	**100.0**
Licence	69,389	7.4	47.0	99,806	11.9	64.8
Points	15,050	1.6	10.2	11,877	1.4	7.7
Able to Drive	13,586	1.4	9.2	8,664	1.0	5.6
Driver - General	24,069	2.6	16.3	31,857	3.8	20.7
Driver - Specialised	24,282	2.6	16.4	34,838	4.2	22.6
Taxi	228	0.0	0.2	27	0.0	0.0
Own Vehicle	18,640	2.0	12.6	15,806	1.9	10.3
Own Transport	16,168	1.7	10.9	5,525	0.7	3.6
Company Vehicle	30,907	3.3	20.9	26,137	3.1	17.0
Public Transport	2,125	0.2	1.4	1,272	0.2	0.8
Location	6,917	0.7	4.7	6,452	0.8	4.2
Fuel	5,047	0.5	3.4	8,593	1.0	5.6
Mileage	11,464	1.2	7.8	10,490	1.3	6.8

Note: The column "% of all ads" refers to the number of adverts requiring driving by criteria over all adverts (with SOC coding) in the respective year. The column "% of driving ads" refers to the number of adverts requiring driving by criteria over all the adverts (with SOC coding) requiring driving in some form for that respective year. Multiple criteria may apply to a single job advert.

The traditional literature on driving related to work has generally focused on commuting. Because the Adzuna data only provides job descriptions, it is impossible to determine whether workers need to drive to get to work unless it is explicitly mentioned. Nevertheless, effort has been made to infer from the wording of the job vacancy whether different driving requirements correlate with each other, acting as complementary or substitute requirements, and consequently whether they can be grouped in classes on this basis.

Figure 21 depicts the relative frequency of the different driving requirements within each 2-digit occupation in 2023. A standard driving licence is a dominant requirement across most occupations. Some groups of adverts, such as for skilled agricultural jobs (51), have a high proportion that overtly require a licence. Other groups of adverts, such as for Drivers/MMO (82), frequently have specialised driving requirements. Some occupations have other dominant requirements: Textiles/Print workers (54) often require their own transport; Skilled Construction occupations (53) and Protective occupations (33) tend to reimburse the cost of fuel; Caring occupations (61) and Business professions (24) often reimburse the cost of driven mileage; and Sales occupations (71) and Corporate management

(11) often provide a company vehicle. Drivers/MMO occupations (82) prominently require both general drivers and specialised ones.

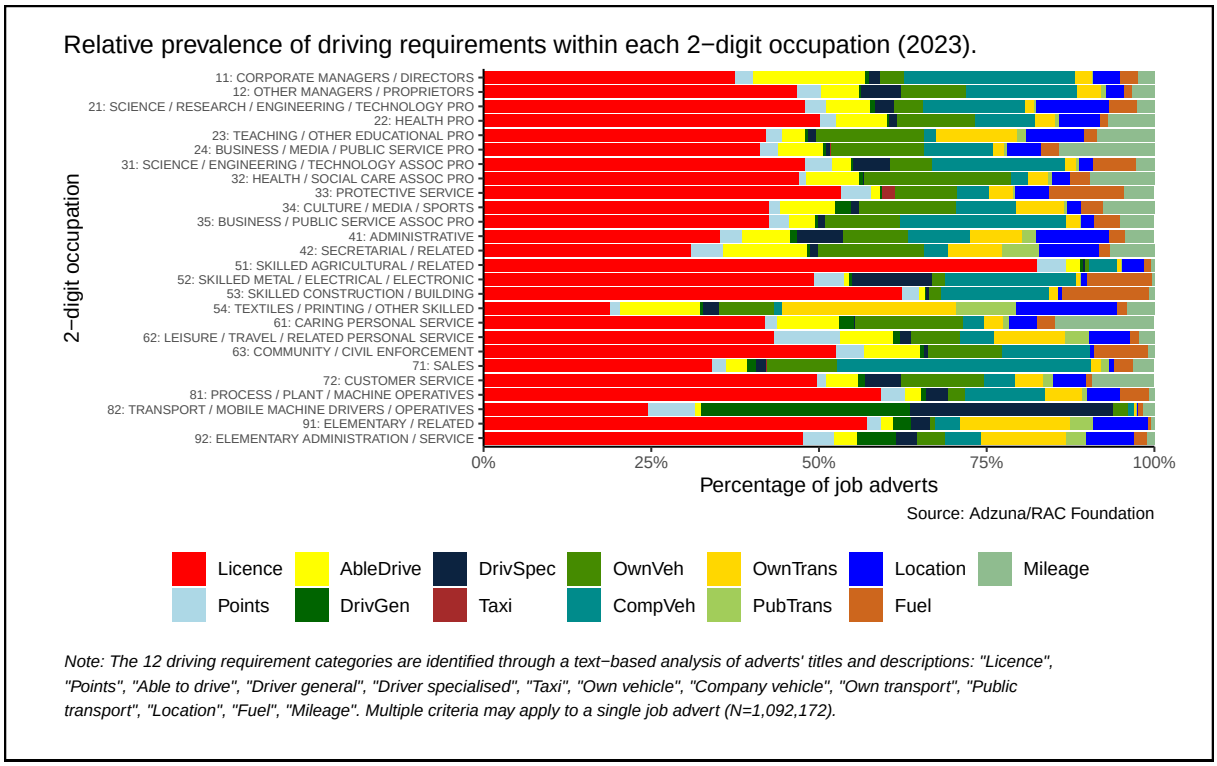


Figure 21: *Relative prevalence of driving requirements within each 2-digit occupation.*

As Figure 21 shows, each of the 12 driving requirements appears across many occupation classes (at least at the 2-digit level shown here). Additionally, adverts in each occupation class have specified many of the driving requirements (though not necessarily in any single advert). Table 9 provides the numbers of adverts mentioning each requirement broken down by the occupation classes. This helps to show how the intended meaning or relevance of each requirement may subtly change between occupations. For instance, looking at "Own Vehicle" and "Own Transport", whilst these might be initially judged to be very similar, for certain occupations there are clear preferences for one over the other (e.g. "61. Caring" shows a split between these of 2,079:368, whilst "92. Elementary Admin/Service" reverses this split with 339:1,033). Both these relationships between the 12 different requirements, and the relationships between the requirements and the occupation classes at the 4-digit level are explored further in the sections below.

Table 9: *Number of adverts by 2-digit occupation class and number of adverts with driving requirements, 2023.*

Occupations (2-digit)	Total Adverts	Licence	Points	AbleDrive	DrivGen	DrivSpec	OwnVeh	CompVeh	OwnTrans	PubTrans	Taxi	Location	Fuel	Mileage
11: CORPORATE MANAGERS AND DIRECTORS	29,580	1,483	102	661	20	68	140	1,007	100	9	0	153	105	98
12: OTHER MANAGERS AND PROPRIETORS	13,827	1,858	147	223	14	234	389	654	142	33	0	105	45	134
21: SCIENCE, RESEARCH, ENGINEERING AND TECHNOLOGY PROFESSIONALS	73,458	3,923	244	538	62	226	352	1,249	111	18	0	891	338	211
22: HEALTH PROFESSIONALS	37,777	2,236	109	337	13	55	520	397	131	33	0	268	55	306
23: TEACHING AND OTHER EDUCATIONAL PROFESSIONALS	109,553	536	29	44	5	15	206	22	153	17	0	110	25	108
24: BUSINESS, MEDIA AND PUBLIC SERVICE PROFESSIONALS	98,246	9,290	601	1,508	77	167	3,145	2,303	371	104	5	1,140	586	3,213
31: SCIENCE, ENGINEERING AND TECHNOLOGY ASSOCIATE PROFESSIONALS	20,254	3,410	276	207	23	386	444	1,405	126	23	0	156	450	196
32: HEALTH AND SOCIAL CARE ASSOCIATE PROFESSIONALS	7,419	724	15	123	8	3	337	39	46	8	0	43	44	148
33: PROTECTIVE SERVICE OCCUPATIONS	1,197	167	14	4	1	0	29	15	11	1	6	16	35	14
34: CULTURE, MEDIA AND SPORTS OCCUPATIONS	17,029	312	12	59	18	8	106	65	53	3	0	15	24	56
35: BUSINESS AND PUBLIC SERVICE ASSOCIATE PROFESSIONALS	88,206	11,445	803	1,018	114	284	2,986	6,634	557	80	2	506	1,050	1,357
41: ADMINISTRATIVE OCCUPATIONS	31,848	1,366	126	278	40	264	373	361	301	78	0	419	97	167
42: SECRETARIAL AND RELATED OCCUPATIONS	8,013	191	30	77	3	7	98	22	50	34	0	55	10	41
51: SKILLED AGRICULTURAL AND RELATED TRADES	2,084	1,624	85	41	8	8	11	83	12	1	0	64	22	9
52: SKILLED METAL, ELECTRICAL AND ELECTRONIC TRADES	37,144	11,582	1,017	197	95	2,803	457	4,588	143	14	0	229	2,238	96
53: SKILLED CONSTRUCTION AND BUILDING TRADES	15,264	9,114	362	139	21	64	257	2,345	189	21	0	81	1,878	126
54: TEXTILES, PRINTING AND OTHER SKILLED TRADES	29,843	397	31	252	11	48	174	23	548	190	0	315	32	85
61: CARING PERSONAL SERVICE OCCUPATIONS	53,260	5,419	218	1,187	286	30	2,079	404	368	100	0	544	349	1,899
62: LEISURE, TRAVEL AND RELATED PERSONAL SERVICE OCCUPATIONS	9,977	430	96	78	11	16	72	51	104	36	0	61	12	23
63: COMMUNITY AND CIVIL ENFORCEMENT OCCUPATIONS	299	176	14	28	2	2	37	44	0	0	0	2	27	3
71: SALES OCCUPATIONS	27,139	2,375	138	226	86	114	726	2,645	94	82	3	51	207	217
72: CUSTOMER SERVICE OCCUPATIONS	18,077	905	25	86	18	100	223	84	75	29	0	88	18	168
81: PROCESS, PLANT AND MACHINE OPERATIVES	11,161	2,400	145	97	32	130	105	485	220	31	0	201	171	33
82: TRANSPORT AND MOBILE MACHINE DRIVERS AND OPERATIVES	45,066	23,837	6,824	960	30,387	29,512	2,191	738	369	48	11	244	622	1,682
91: ELEMENTARY TRADES AND RELATED OCCUPATIONS	3,387	761	29	24	34	38	10	50	218	46	0	108	7	6
92: ELEMENTARY ADMINISTRATION AND SERVICE OCCUPATIONS	48,856	3,845	385	272	468	256	339	424	1,033	233	0	587	146	94
Total	837,964	99,806	11,877	8,664	31,857	34,838	15,806	26,137	5,525	1,272	27	6,452	8,593	10,490

Note: The 12 driving requirements categories are identified through a text-based analysis of adverts' titles and descriptions: "Licence", "Points", "Able to drive", "Driver general", "Driver specialised", "Taxi", "Own vehicle", "Company vehicle", "Own transport", "Public transport", "Location", "Fuel", "Mileage". Multiple criteria may apply to a single job advert.

Figure 22 provides a correlation matrix that makes it possible to observe how often different criteria appear together in those adverts published in 2023. Horizontally, for each driving requirement (*"i"*), the table provides the percentage of cases in which another requirement (*"j"*) is also present in those job adverts where *"i"* was present. For example, for those adverts where there is a general requirement for a "Licence", in 10% of those cases "Points" is mentioned in the same advert, and in 20.4% of those cases "Driver General" is mentioned. Vertically, the table specifies how often a requirement *"i"* is mentioned when all other *"j"* driving requirements are mentioned: "Licence" is mentioned in 83.9% of cases when Points is mentioned, 54% of cases when "Driver General" is mentioned, and so forth.

Figure 22 is intended to facilitate the identification of macro classes of driving requirements[22]. Any correlation above 10% is highlighted in bold other than for the vertical correlations of "Licence", which are always above 10%. This exclusion highlights the fact that, where any of the other requirements is present in an advert, it is very common for the need for a licence to also be specified. For each requirement beyond "Licence", the highest horizontal correlation number is used to identify pairs of complementary driving requirements (appearing jointly in a single advert). A connection between the resulting pairs is further established by observing how often requirements simultaneously appear in different occupation types (see Figure 22), and by interpreting the logical links between requirements. "Fuel" is strongly correlated with "Company vehicle" (especially in the Skilled Trades occupations, 52 and 53), whilst "Mileage" is more correlated with "Own vehicle" (particularly in Caring occupations,

[22]Future work may explore the use of alternative methods including latent class analysis or cluster analysis.

61). “Company vehicle” and “Own vehicle”, however, are very weakly correlated, suggesting that these two requirements are often counterpoints to each other, with adverts referring to one being unlikely to refer to the other. There is also a notable difference apparent in Figure 22 that adverts that specify “Own vehicle” tend to suggest that “Mileage” will be reimbursed, whilst those specifying “Company vehicle” indicate that “Fuel” will be reimbursed[23] . On consideration, this difference is not suprising as employers will cover the costs of Vehicle Excise Duty (VED), insurance servicing etc. on company vehicles but have to compensate owner-drivers for these on top of fuel through mileage rates. However, in the context of this report, what is most important is that for either side of these case-pairs, the applicant is very likely to have to drive in the course of work.

Applying this grouping approach to all driving requirements, it is possible to identify four major macro classes of requirements:

- Licence
- Drivers: including Points, Driver general, Driver specialised, Taxi
- Drive in the course of work: Able to drive, Own vehicle, Company vehicle, Fuel, Mileage
- Drive to work: Own transport, Public transport, Location

Correlation with driving requirement *j*

Driving requirement *i*	Licence	Points	DrivGen	DrivSpec	Taxi	AbleDrive	OwnVeh	CompVeh	Fuel	Mileage	OwnTrans	PubTrans	Location
Licence		**10.0**	**20.4**	**18.9**	0.0	2.9	**11.5**	**13.2**	5.1	5.2	1.4	0.4	1.4
Points	**83.9**		**51.5**	**36.2**	0.0	3.0	**10.1**	**11.7**	4.5	7.2	1.1	0.2	0.6
DrivGen	**64.1**	**19.2**		**59.5**	0.0	3.2	7.1	2.8	2.0	5.6	0.7	0.1	0.6
DrivSpec	**54.0**	**12.3**	**54.4**		0.0	1.1	0.4	1.8	0.6	1.5	0.5	0.1	0.4
Taxi	**25.9**	7.4	**55.6**	0.0		0.0	**11.1**	0.0	0.0	0.0	0.0	0.0	0.0
AbleDrive	**33.7**	4.1	**11.7**	4.3	0.0		**14.0**	5.0	3.4	4.6	2.5	0.8	4.7
OwnVeh	**72.5**	7.6	**14.3**	0.9	0.0	7.7		3.2	3.6	**24.6**	1.3	0.7	3.1
CompVeh	**50.3**	5.3	3.4	2.4	0.0	1.6	2.0		**17.9**	2.1	0.3	0.0	0.4
Fuel	**59.5**	6.2	7.4	2.6	0.0	3.4	6.6	**54.3**		**10.1**	1.1	0.2	0.4
Mileage	**49.3**	8.2	**17.1**	5.1	0.0	3.8	**37.1**	5.3	8.3		3.9	0.4	0.8
OwnTrans	**25.2**	2.5	4.3	3.2	0.0	3.9	3.7	1.3	1.7	7.4		**11.9**	**25.4**
PubTrans	**28.1**	1.4	1.6	1.4	0.0	5.4	8.8	0.6	1.6	3.0	**51.9**		**24.9**
Location	**21.1**	1.1	2.9	1.9	0.0	6.3	7.5	1.5	0.5	1.3	**21.8**	4.9	

Drivers | Drive in the course of work | Drive to work

Note: Horizontally, the table provides for each driving requirement (i) the percentage of cases in which another requirement (j) is equally present in the job advert. Vertically, the table specifies how often a requirement (i) is mentioned when all other (j) driving requirements are mentioned. Correlations between requirements above 10% are highlighted in bold, excluding the vertical correlations of Licence, which are always above 10%. 12 driving requirements categories are identified through a text-based analysis of adverts' titles and descriptions: "Licence", "Points", "Able to drive", "Driver general", "Driver specialised", "Taxi", "Own vehicle", "Company vehicle", "Own transport", "Public transport", "Location", "Fuel", "Mileage". An advert requiring driving, implicitly or explicitly states that applicants must be able to drive as a profession, in the course of work, or to reach work. Multiple criteria may apply to a single job advert (N=837,964).

Figure 22: *Correlation matrix of driving requirements, 2023.*

A new correlation table can be drawn using these macro classes of driving requirements (Table 10)[24]. As anticipated, “Licence” acts as a cross-cutting requirement which is common across all types of occupations, particularly those in which workers are either professional drivers or drive in the course

[23]This is likely to relate to the different way that financial compensation for work-related driving is calculated using either Average Mileage Allowance Payments for own/grey fleet vehicles, and the Advisory Fuel Rate for Company Cars (see Chatterton (2023) for further work by the RAC Foundation on this issue).

[24]Note that text searches are now grouped with “either/or” instructions: e.g. the driving requirement macro class “Drivers” applies if either Points, or Driver General, or Driver Specialised, or Taxi is present in the job advert.

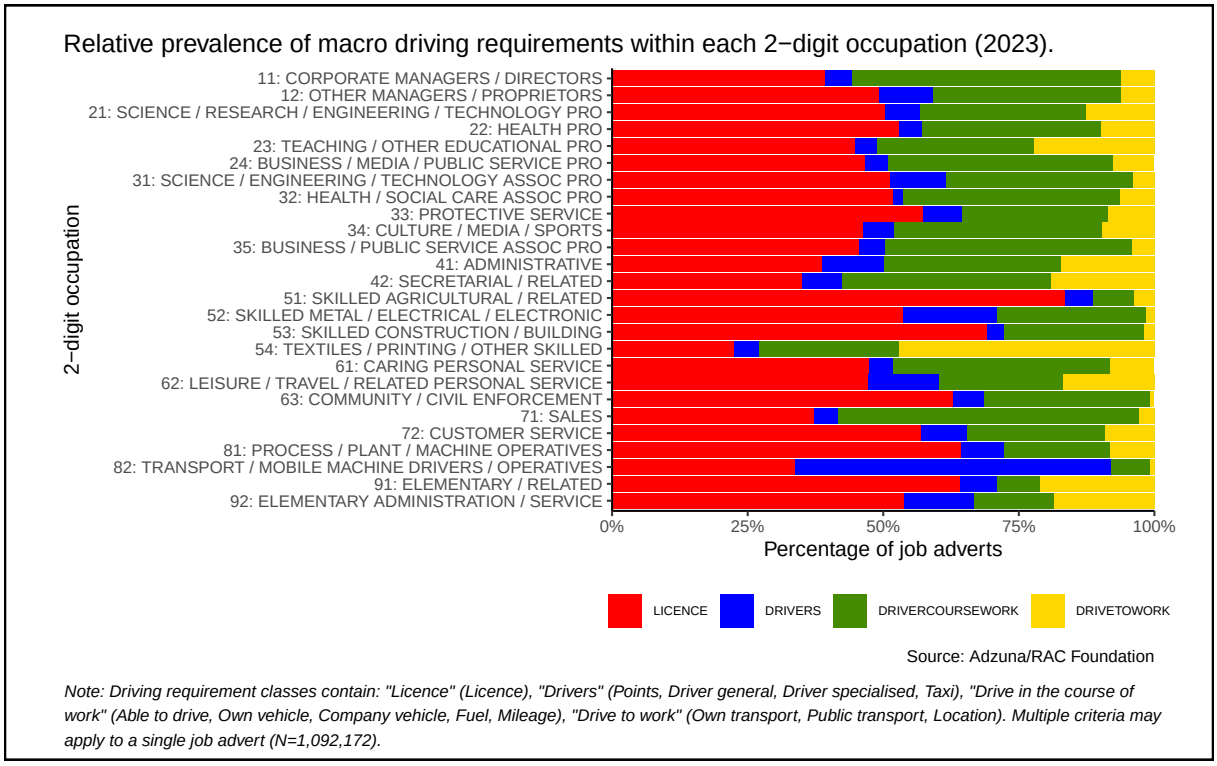
Table 10: *Correlation matrix of driving requirement macro classes, 2023.*

Primary Requirement	Correlation with secondary macro class requirement			
	LICENCE	DRIVERS	DRIVE_COURSE_OF_WORK	DRIVE_TO_WORK
LICENCE		30.8	29.8	2.8
DRIVERS	58.7		14.3	1.1
DRIVE_COURSE_OF_WORK	51.9	13.1		3.3
DRIVE_TO_WORK	25.1	5.2	16.7	

Note: Horizontally, the table provides for each driving requirement class the percentage of cases in which another requirement class is equally present in the job advert. Vertically, the table specifies how often a requirement class is mentioned when all other driving requirements classes are mentioned. Driving requirement classes contain: "Licence" (Licence), "Drivers" (Points, Driver general, Driver specialised, Taxi), "Drive in the course of work" (Able to drive, Own vehicle, Company vehicle, Fuel, Mileage), "Drive to work" (Own transport, Public transport, Location). Multiple criteria may apply to a single job advert (N=1,092,172).

of work. The remaining driving requirement macro classes are still correlated with each other but to a much lesser degree than their individual components in Figure 22. The weaker correlation suggests that whilst these macro classes are internally coherent, specified requirements in one of the classes will generally mean that requirements in the other classes are not present.

Figure 23 gives a visual overview of how the macro classes are distributed across 2-digit SOC codes, whilst Table 11 provides the figures for the percentage distribution of the macro classes alongside the context of actual advert numbers for each of the 2-digit SOC codes. Appendix A.5 further provides the top 15 4-digit occupations for each of the four driving requirement classes (Table 17, Table 18, Table 19 and Table 20).



Note: Driving requirement classes contain: "Licence" (Licence), "Drivers" (Points, Driver general, Driver specialised, Taxi), "Drive in the course of work" (Able to drive, Own vehicle, Company vehicle, Fuel, Mileage), "Drive to work" (Own transport, Public transport, Location). Multiple criteria may apply to a single job advert (N=1,092,172).

Figure 23: *Relative prevalence of macro driving requirements within each 2-digit occupation.*

Table 11: *Percentage of adverts by 2-digit occupation and macro driving requirement category, 2023.*

Occupations (2-digit)	Total adverts (N)	ANY driving requirement (%)	LICENCE (%)	DRIVERS (%)	DRIVE_COURSE_OF_WORK (%)	DRIVE_TO_WORK (%)
11: CORPORATE MANAGERS AND DIRECTORS	29,580	10.6	5.0	0.6	3.6	3.9
12: OTHER MANAGERS AND PROPRIETORS	13,827	20.1	13.4	2.7	6.1	5.7
21: SCIENCE, RESEARCH, ENGINEERING AND TECHNOLOGY PROFESSIONALS	73,458	8.6	5.3	0.7	1.9	2.9
22: HEALTH PROFESSIONALS	37,777	8.6	5.9	0.5	2.8	1.8
23: TEACHING AND OTHER EDUCATIONAL PROFESSIONALS	109,553	0.9	0.5	0.0	0.4	0.1
24: BUSINESS, MEDIA AND PUBLIC SERVICE PROFESSIONALS	98,246	14.8	9.5	0.9	6.7	3.6
31: SCIENCE, ENGINEERING AND TECHNOLOGY ASSOCIATE PROFESSIONALS	20,254	23.2	16.8	3.3	6.5	7.8
32: HEALTH AND SOCIAL CARE ASSOCIATE PROFESSIONALS	7,419	13.9	9.8	0.4	7.6	1.2
33: PROTECTIVE SERVICE OCCUPATIONS	1,197	18.4	14.0	1.8	6.3	2.7
34: CULTURE, MEDIA AND SPORTS OCCUPATIONS	17,029	2.8	1.8	0.2	1.5	0.5
35: BUSINESS AND PUBLIC SERVICE ASSOCIATE PROFESSIONALS	88,206	20.3	13.0	1.3	7.1	8.1
41: ADMINISTRATIVE OCCUPATIONS	31,848	8.3	4.3	1.3	3.5	2.6
42: SECRETARIAL AND RELATED OCCUPATIONS	8,013	4.8	2.4	0.5	3.0	1.3
51: SKILLED AGRICULTURAL AND RELATED TRADES	2,084	79.5	77.9	4.8	3.9	7.0
52: SKILLED METAL, ELECTRICAL AND ELECTRONIC TRADES	37,144	41.7	31.2	10.0	8.1	13.0
53: SKILLED CONSTRUCTION AND BUILDING TRADES	15,264	69.1	59.7	2.8	15.8	15.9
54: TEXTILES, PRINTING AND OTHER SKILLED TRADES	29,843	4.9	1.3	0.3	3.2	1.7
61: CARING PERSONAL SERVICE OCCUPATIONS	53,260	15.2	10.2	0.9	8.6	1.9
62: LEISURE, TRAVEL AND RELATED PERSONAL SERVICE OCCUPATIONS	9,977	6.9	4.3	1.2	2.7	1.4
63: COMMUNITY AND CIVIL ENFORCEMENT OCCUPATIONS	299	60.5	58.9	5.4	24.7	15.4
71: SALES OCCUPATIONS	27,139	17.0	8.8	1.0	4.5	10.2
72: CUSTOMER SERVICE OCCUPATIONS	18,077	7.7	5.0	0.7	2.2	1.0
81: PROCESS, PLANT AND MACHINE OPERATIVES	11,161	26.7	21.5	2.7	5.2	6.3
82: TRANSPORT AND MOBILE MACHINE DRIVERS AND OPERATIVES	45,066	93.0	52.9	91.4	10.7	2.3
91: ELEMENTARY TRADES AND RELATED OCCUPATIONS	3,387	30.3	22.5	2.4	7.7	5.5
92: ELEMENTARY ADMINISTRATION AND SERVICE OCCUPATIONS	48,856	11.6	7.9	1.9	3.5	2.4

7 Conclusion

This report presents an analysis of a new online dataset containing millions of online job adverts with the aim of determining the relevance of driving as an employment qualification in the UK. Overall, driving requirements in job adverts have increased since 2016, when the data were first recorded. This trend reached a peak of 19.6% at the height of the pandemic in 2020.

The analysis reveals that whilst only 30 occupations (out of 398 - as coded at the 4-digit level of ONS Standard Occupation Classification 2020) account for 64.5% of all adverts in which driving is explicitly or implicitly mentioned, only a quarter of these 30 occupations refer specifically to jobs that would be clearly recognised as "driving jobs" (e.g. LGV driver, delivery driver, courier etc.). Skilled trades, as well as social/care work, and sales occupations account for a large proportion of all the driving requirements identified in the adverts. This can be due to either a high driving requirement internal to a specific occupation (e.g. adverts for large vehicle drivers have a near 100% requirement within adverts) or to a high volume of job adverts for an occupation that requires driving less frequently within adverts (e.g. 7111: Sales and retail assistants, where only 11.1% of adverts for the occupation require driving but, overall, the occupation accounts for over 0.2% of all job adverts – leading it to rank 12th out of 398 (3rd percentile) in terms of its contribution to the total number of adverts requiring driving).

Driving requirements may come in many forms and meet different needs for different employers. Most adverts with a driving requirement simply ask for a standard car driving licence, whilst adverts for professional driving jobs often require further specialised driving qualifications, or a (relatively) clean licence, i.e. few points/endorsements. Job applicants might also be required to own/have access to a vehicle or be able to drive one provided by the company, either because work is located over multiple sites or because a site is not accessible by public transport. For these jobs, some employers provide a vehicle and reimburse fuel costs (e.g. skilled construction occupations) whilst others reimburse workers for mileage driven using their own vehicles (e.g. caring occupations).

Many different driving requirements can appear together in a single job advert, and almost all SOC occupation groups had at least one advert mentioning a driving requirement. Overall, it is possible to group driving requirements into four classes: *standard licence*, *drivers*, *driving in the course of work*, and *driving to work*. Whilst *standard licence* acts as a catch all class over all occupation classifications, the other three classes separate out over different occupation types, mostly according to the differing roles that driving plays in them.

This analysis is likely to present a conservative estimation of the importance of driving to employment as it may underestimate the number of adverts requiring driving within in the Adzuna dataset. Despite

efforts to capture all types of expressions related to driving, text searching is inherently limited and can always miss unusual wordings. Also, the text search was designed to minimise false positives, that is wrongly classifying an advert as requiring driving when it doesn't. However, many employers may take for granted that potential applicants will understand the need for a vehicle, especially for jobs located in less accessible areas or entailing variable work destinations and consequently they may not clearly specify a need to drive within adverts. Furthermore, there are potential biases built in to the Adzuna dataset. Online job adverts tend to under-represent lower-skilled occupations and over-represent high-skilled ones. The former tend to have a higher driving requirement, while the latter have a lower one. This will further reinforce the conservative nature of the estimates in this report.

It should be noted that between 20 and 24% of adverts each year could not be coded according to the ONS classification. However, in sensitivity testing, the overall driving requirement across both coded and non-coded occupations was found to be only about one percentage point lower than for coded occupations alone and so it can be taken that, with respect to driving requirements at least, exclusion of these uncoded adverts does not significantly impact on the conclusions. Another limitation of the analysis concerns the mapping between adverts and jobs. It is not always straightforward to determine how many vacancies or positions a single advert refers to (e.g. many adverts are titled "Drivers wanted"). Moreover, the data provider recognises the possible presence of multiple adverts relating to a single job appearing a number of times with slight differences in title or description. Nevertheless, despite these limitations, the dataset used in this report appears to be the most complete in the literature for exploring the relationship between driving and employment and, considering the overall size of the dataset, these effects are judged as unlikely to be significant.

Finally, there are many avenues for the further exploration of this dataset. For example, the significant recent growth in remote and hybrid working patterns may be differentially spread across different classes of occupations, seniority levels and geographical areas leading to adverse distributional impacts. The RAC Foundation aims to include these dimensions in its future work in this area.

Appendix A: Data

A1. Online database characteristics

Adzuna is the largest aggregator of online job adverts in the UK, with an average of one million adverts recorded at any given time. Adverts are updated weekly and may remain in the dataset for a varying number of weeks; an advert that is delisted by the employer may be re-uploaded later, on the same or on a different platform. While Adzuna attempts to minimise double counting, it is possible for the same advert to be stored multiple times if its wording of title or description slightly varies across versions. This phenomenon is more likely to occur in the "gig economy" industries, particularly in work-from-home or remote positions, where advertisers sometimes create a great number of duplicate adverts for different locations around the country (e.g. delivery drivers, taxi apps, home-based tutors). In these cases, the number of adverts may not reflect the actual number of workers that will actually be hired. Furthermore, changes in advertiser behaviour may lead to shifts in recorded vacancies. In 2020, most hosting platforms modified their subscription costings, passing from a pay-per-ad-duration model to a pay-per-click model. This led to companies posting larger volumes of adverts without facing increases in costs. This, rather than changes in the classification methodology or internal category definitions, is considered to be the underlying cause of possible data discrepancies.

A.2. Period of Analysis

We chose the first week of October as reference period in order to avoid trends related to the summer and winter seasons, such as specific spikes in job types (e.g. agricultural labour or retail demand) and holiday slowdowns. Figure 24 depicts the number of job adverts in every weekly snapshot from the start of the dataset in April 2016 to August 2023. As might be expected, the last two weeks of December and the first week of January experience significant drops, as also often happens in the period at the end of August and beginning of September. These are due to people being away on holiday and it being seen as undesirable, or simply impracticable, to put job adverts out at these times. The drop in vacancies in Spring 2020 at the onset of the COVID-19 crisis is particularly remarkable. This was followed by steep but fairly consistent recovery (save for the second lockdown in Winter 2020) leading to a partial overshoot of new job adverts during 2021 and then a gradual stabilisation to 2019 values.

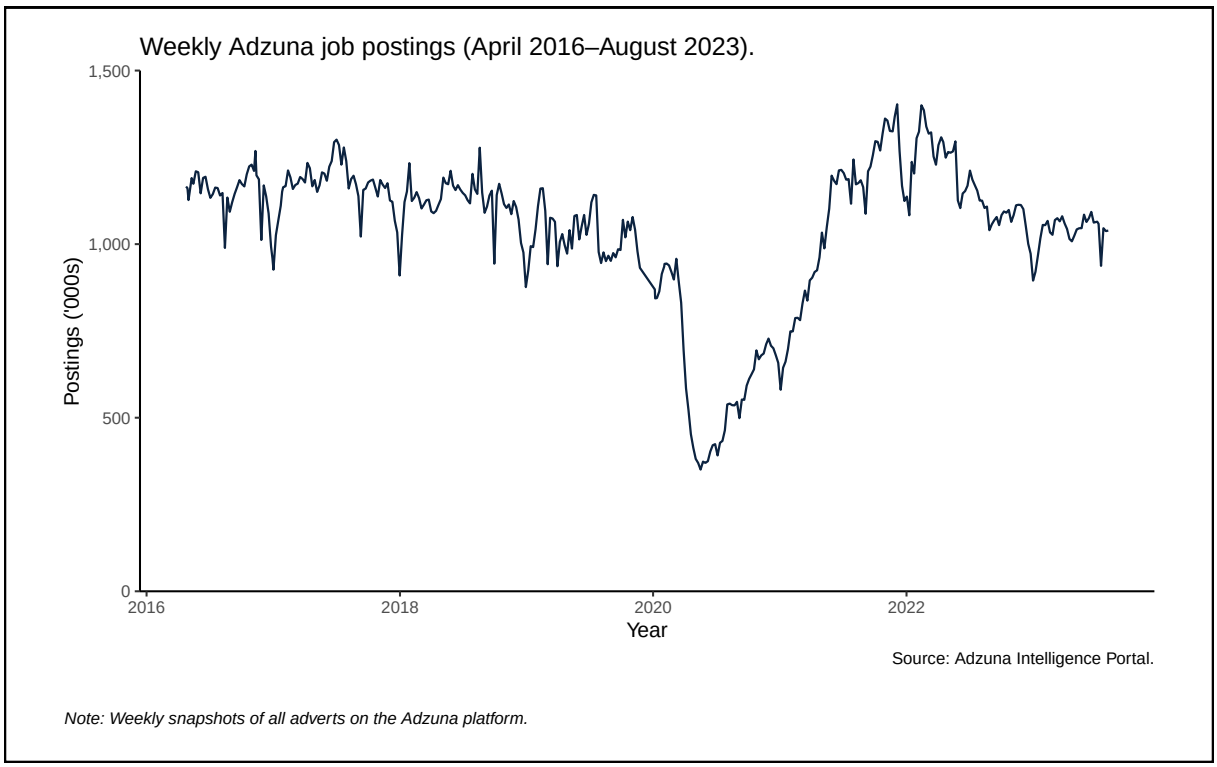


Figure 24: *Weekly Adzuna advert postings over sample period.*

Job postings show a decreasing trend before the end of 2019, which may coincide with the preparation for the exit of the UK from the European Union, at an average rate of about 130 adverts per day, amounting to a decline of 160,000 adverts between 2016 and 2019.

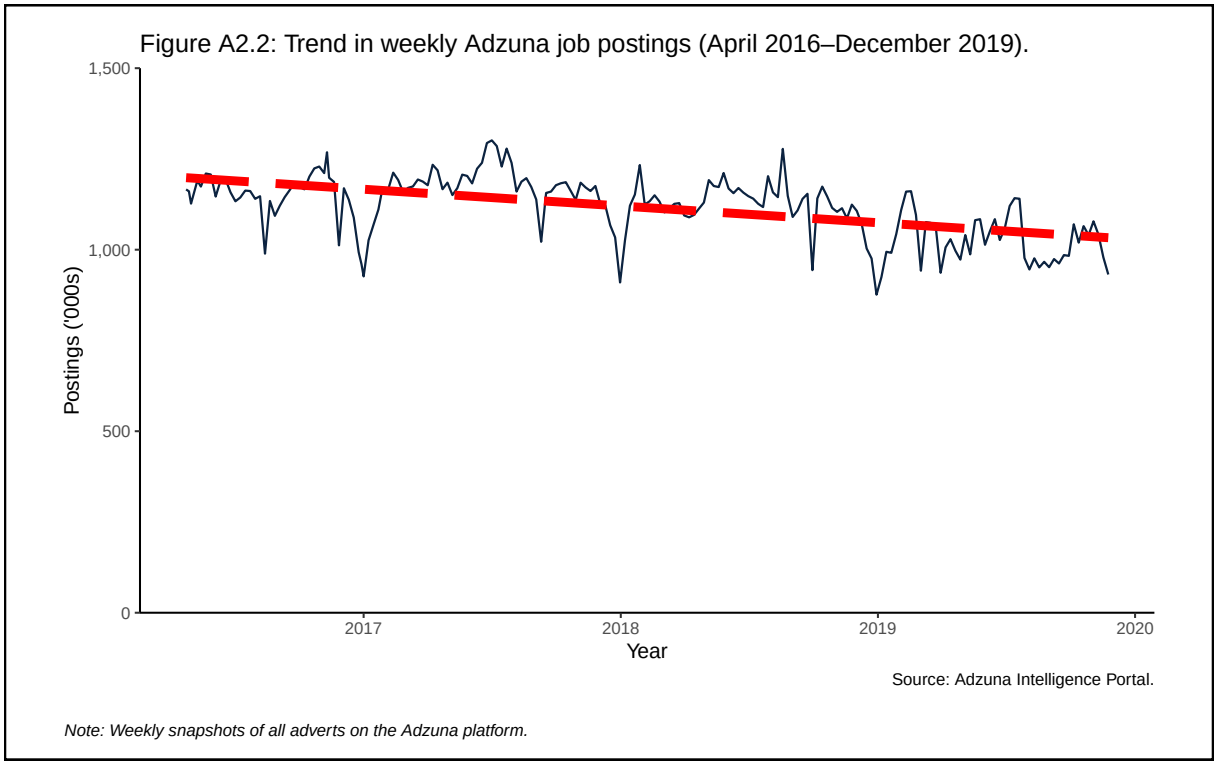


Figure 25: *Pre-pandemic trend weekly Adzuna advert postings.*

To guarantee that different months were equally comparable across years, the monthly change in aggregate postings was analysed by quarter (Figure 26). Because the Adzuna sample only started in April 2016, the first quarter (January, February and March) was excluded because otherwise it would not have been possible to use 2016 data, as they started from the second quarter only. The second and third quarters were discounted from use in the analyses as they were strongly affected in 2020 by the steep dip due to the pandemic, as well as from seasonality patterns more generally. Similarly, the end of the fourth quarter is affected by sharp seasonality swings. As a result, the months of October and November were selected as the best candidates for providing a stable analysis. While November shows less fluctuation, October was chosen in order to capture most of the overshoot after the first UK lockdown, and to avoid the job market preparation for the winter holiday season.

Finally, Figure 27 shows that weekly data follow similar patterns across both months and years. Volatility does not appear to distinctly differ across weeks, except for the last week of December and the first week of January.

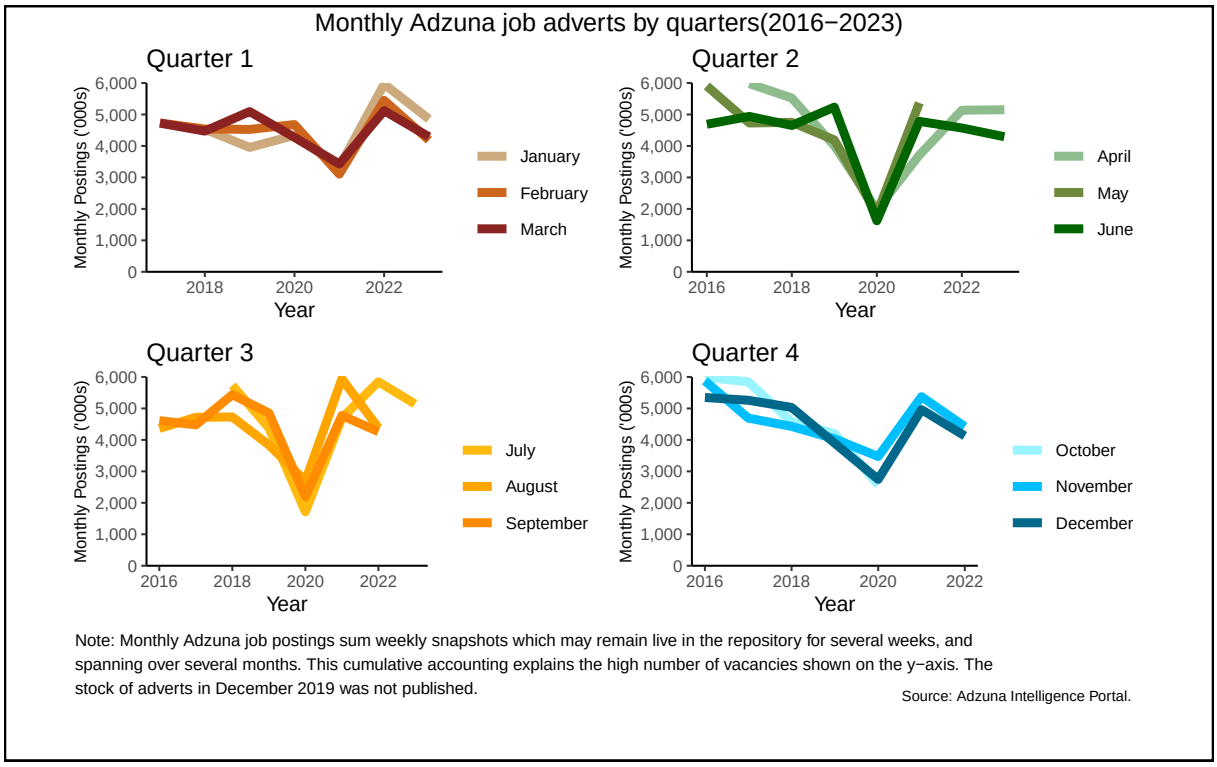


Figure 26: *Monthly Adzuna job adverts by quarters.*

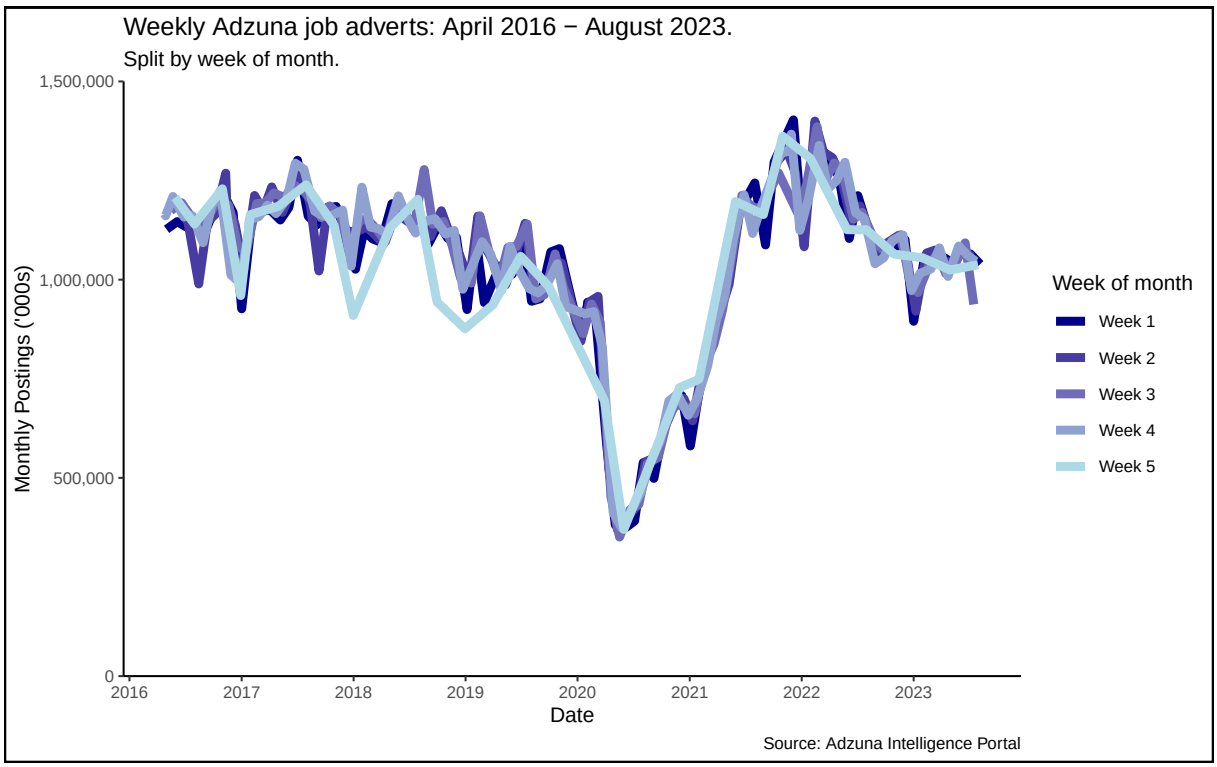


Figure 27: *Weekly Adzuna job adverts.*

A.3 Occupation classifications

Adzuna exploits machine learning techniques to create an internal job classification using job titles and descriptions as input. Every raw job title is then normalised to a proprietary ontology: for instance, an original advert titled "Senior Manager, Global Workforce Analytics" would become "Manager". Once titles have been normalised, Adzuna employs two automated mapping tools (the ONS Standard Occupational Classification (SOC) Hierarchy, and CASCOT – Warwick University's "Computer Assisted Structural COding Tool"), combined with manual review to map job adverts onto the SOC2020 classifications at the 4-digit level (unit group). Due to the contextual variability of certain titles, whether in their raw or normalised form, it is not always possible to assign a specific SOC unit group to a title (e.g. manager) which directly relates to the specific job context or industry to which it belongs (e.g. "1122. Production managers and directors in construction", "1150. Managers and directors in retail and wholesale", or "1211. Managers and proprietors in agriculture and horticulture"). Additionally, because of their nature, some jobs are rarely, or possibly never, advertised (e.g. "1112. Elected officers and representatives").

Furthermore, there is a small percentage of jobs whose titles do not contain relevant information that may allow a full occupation mapping: e.g. adverts like "Make Money Today", "AVON Representatives wanted in Woodley, Berkshire, England – start today" are categorised as "Sales" using job title and description but would not receive a SOC match. Jobs that do not seem to belong to a specific category

or sector are coded within more encompassing labels such as “Graduate Jobs”, “Part-Time Jobs”, “Other/General” or “Unknown”. These broad labels may clash with more specific wording (e.g. Part-Time Jobs in Finance), resulting in classes overlapping, a problem technically known as not-MECE (Mutually Exclusive and Collectively Exhaustive).

Adzuna, which receives job advert feeds from their clients in the recruitment industry, many of which employ their own category names, originally established its own set of categories to closely match the labels found in the advert feeds. The introduction of machine learning for job categorisation has reduced the number of mismatched ads but the issue is not completely solved. To create the training set for its machine learning model, Adzuna excluded ‘Graduate,’ ‘Unknowns,’ ‘Other/General,’ and ‘Part-time’ job listings (with ‘Part-time’ and ‘Graduate’ being classified separately using regular expressions), later identifying and extracting the most pertinent keywords from job advertisements for each category, leading to the development of its proprietary classification model. When the prediction confidence is low (below the 20% threshold), job advertisements are categorised as “Other/General”. While this process has enhanced the organisation and handling of the advertisements received by Adzuna, aligning them with the commonly used categories in the recruitment field, the current attribution still has room for improvement. In terms of SOC classification, at any time, a 20-24% of job adverts do not receive a code match[25]. Consequently, these adverts are not present within this analysis. As described in the main body of the report though, it was found that the proportion of adverts requiring driving across he entire dataset (both classified and unclassified adverts) was less than one percentage point different from the proportion within the SOC classified adverts alone, and so this has not been deemed to be a significant issue.

[25]The lowest value is 19.75% in 2017 and the highest 23.95% in 2022.

A.4 Number and percentages of adverts requiring driving for 'Top Five' 2-digit occupations at 4-digit level in 2023

Table 12: *4-digit occupations within top 2-digit occupation code - 82 (2023)*

2-digit occupation class = 82: TRANSPORT AND MOBILE MACHINE DRIVERS AND OPERATIVES			
Occupations (4-digit)	**Total adverts**	**With driving requirements**	**Percentage requiring driving**
8211: Large goods vehicle drivers	17,854	17,757	99.5
8212: Bus and coach drivers	1,210	1,210	100.0
8213: Taxi and cab drivers and chauffeurs	29	29	100.0
8214: Delivery drivers and couriers	8,509	8,164	95.9
8215: Driving instructors	7,422	7,422	100.0
8219: Road transport drivers n.e.c.	6,072	5,976	98.4
8221: Crane drivers	143	60	42.0
8222: Fork-lift truck drivers	2,947	778	26.4
8229: Mobile machine drivers and operatives n.e.c.	298	198	66.4
8231: Train and tram drivers	77	75	97.4
8232: Marine and waterways transport operatives	6	0	0.0
8233: Air transport operatives	28	23	82.1
8234: Rail transport operatives	178	146	82.0
8239: Other drivers and transport operatives n.e.c.	293	52	17.7

Note: Job adverts relate to the first week of October of 2023. Occupations refer to the ONS SOC2020 (4-digit) Standard Occupational Classification. An advert requiring driving, implicitly or explicitly states that applicants must be able to drive as a profession, in the course of work, or to reach work. Note that the term "Fork-lift" or "FKL" was excluded by the text search because whilstthese adverts often refer to "Fork Lift DRIVER" they typically do not require a standard driving licence. Driving jobs in the category "8222. Fork-lift occupations" have been captured through other keywords capturing explicit or implicit driving requirement for these jobs.

Table 13: *4 digit occupations within top 2-digit occupation code - 35 (2023).*

2-digit occupation class = 35: BUSINESS AND PUBLIC SERVICE ASSOCIATE PROFESSIONALS			
Occupations (4-digit)	**Total adverts**	**With driving requirements**	**Percentage requiring driving**
3511: Aircraft pilots and air traffic controllers	25	3	12.0
3512: Ship and hovercraft officers	9	2	22.2
3520: Legal associate professionals	1,355	26	1.9
3531: Brokers	2,102	464	22.1
3532: Insurance underwriters	1,109	38	3.4
3533: Financial and accounting technicians	261	8	3.1
3534: Financial accounts managers	2,665	100	3.8
3541: Estimators, valuers and assessors	3,740	920	24.6
3542: Importers and exporters	101	10	9.9
3543: Project support officers	1,453	149	10.3
3544: Data analysts	6,369	108	1.7
3549: Business associate professionals n.e.c.	1,212	59	4.9
3551: Buyers and procurement officers	3,814	358	9.4
3552: Business sales executives	12,821	4,728	36.9
3553: Merchandisers	2,057	1,182	57.5
3554: Advertising and marketing associate professionals	10,560	1,151	10.9
3555: Estate agents and auctioneers	1,955	1,145	58.6
3556: Sales accounts and business development managers	19,193	4,862	25.3
3557: Events managers and organisers	1,674	159	9.5
3560: Public services associate professionals	271	31	11.4
3571: Human resources and industrial relations officers	10,002	1,018	10.2
3572: Careers advisers and vocational guidance specialists	191	30	15.7
3573: Information technology trainers	110	8	7.3
3574: Other vocational and industrial trainers	1,655	324	19.6
3581: Inspectors of standards and regulations	318	129	40.6
3582: Health and safety managers and officers	3,184	856	26.9

Table 14: *4 digit occupations within top 2-digit occupation code - 24 (2023).*

2-digit occupation class = 24: BUSINESS, MEDIA AND PUBLIC SERVICE PROFESSIONALS			
Occupations (4-digit)	**Total adverts**	**With driving requirements**	**Percentage requiring driving**
2411: Barristers and judges	151	28	18.5
2412: Solicitors and lawyers	5,799	97	1.7
2419: Legal professionals n.e.c.	2,291	42	1.8
2421: Chartered and certified accountants	12,892	477	3.7
2422: Finance and investment analysts and advisers	5,025	255	5.1
2423: Taxation experts	2,517	41	1.6
2431: Management consultants and business analysts	14,639	943	6.4
2432: Marketing and commercial managers	248	9	3.6
2433: Actuaries, economists and statisticians	1,340	36	2.7
2434: Business and related research professionals	1,582	44	2.8
2439: Business, research and administrative professionals n.e.c.	6,608	705	10.7
2440: Business and financial project management professionals	11,393	1,820	16.0
2451: Architects	1,361	113	8.3
2452: Chartered architectural technologists, planning officers and consultants	1,538	304	19.8
2453: Quantity surveyors	5,794	1,587	27.4
2454: Chartered surveyors	3,025	1,346	44.5
2455: Construction project managers and related professionals	521	191	36.7
2461: Social workers	13,682	5,837	42.7
2462: Probation officers	179	1	0.6
2463: Clergy	55	2	3.6
2464: Youth work professionals	25	3	12.0
2469: Welfare professionals n.e.c.	34	1	2.9
2471: Librarians	50	0	0.0
2472: Archivists, conservators and curators	32	0	0.0
2481: Quality control and planning engineers	1,842	153	8.3
2482: Quality assurance and regulatory professionals	2,706	295	10.9
2483: Environmental health professionals	261	111	42.5
2491: Newspaper, periodical and broadcast editors	285	4	1.4
2492: Newspaper and periodical broadcast journalists and reporters	393	24	6.1
2493: Public relations professionals	1,511	86	5.7
2494: Advertising accounts managers and creative directors	467	23	4.9

Table 15: *4 digit occupations within top 2-digit occupation code - 52 (2023).*

2-digit occupation class = 52: SKILLED METAL, ELECTRICAL AND ELECTRONIC TRADES			
Occupations (4-digit)	**Total adverts**	**With driving requirements**	**Percentage requiring driving**
5211: Sheet metal workers	115	9	7.8
5212: Metal plate workers, smiths, moulders and related occupations	171	5	2.9
5213: Welding trades	1,736	118	6.8
5214: Pipe fitters	380	59	15.5
5221: Metal machining setters and setter-operators	2,577	103	4.0
5222: Tool makers, tool fitters and markers-out	348	28	8.0
5223: Metal working production and maintenance fitters	4,712	2,252	47.8
5224: Precision instrument makers and repairers	275	20	7.3
5225: Air-conditioning and refrigeration installers and repairers	1,000	714	71.4
5231: Vehicle technicians, mechanics and electricians	8,837	6,410	72.5
5232: Vehicle body builders and repairers	739	216	29.2
5233: Vehicle paint technicians	661	114	17.2
5234: Aircraft maintenance and related trades	74	7	9.5
5235: Boat and ship builders and repairers	126	37	29.4
5236: Rail and rolling stock builders and repairers	38	0	0.0
5241: Electricians and electrical fitters	7,595	3,033	39.9
5242: Telecoms and related network installers and repairers	2,566	420	16.4
5243: TV, video and audio servicers and repairers	46	15	32.6
5244: Computer system and equipment installers and servicers	265	68	25.7
5245: Security system installers and repairers	1,044	568	54.4
5246: Electrical service and maintenance mechanics and repairers	2,158	742	34.4
5249: Electrical and electronic trades n.e.c.	47	10	21.3
5250: Skilled metal, electrical and electronic trades supervisors	1,634	549	33.6

Table 16: *4 digit occupations within top 2-digit occupation code - 53 (2023).*

2-digit occupation class = 53: SKILLED CONSTRUCTION AND BUILDING TRADES			
Occupations (4-digit)	**Total adverts**	**With driving requirements**	**Percentage requiring driving**
5311: Steel erectors	13	2	15.4
5312: Stonemasons and related trades	29	9	31.0
5313: Bricklayers	601	515	85.7
5314: Roofers, roof tilers and slaters	674	602	89.3
5315: Plumbers and heating and ventilating installers and repairers	5,178	3,816	73.7
5316: Carpenters and joiners	2,186	1,232	56.4
5317: Glaziers, window fabricators and fitters	128	91	71.1
5319: Construction and building trades n.e.c.	1,342	792	59.0
5321: Plasterers	815	682	83.7
5322: Floorers and wall tilers	611	565	92.5
5323: Painters and decorators	2,319	1,726	74.4
5330: Construction and building trades supervisors	1,368	512	37.4

A.5 Number and percentages of adverts by driving requirement for 'Top Five' 2-digit occupations at 4-digit Level in 2023

These tables show the top 15 4-digit occupations for each of the four macro driving requirement classes, based on 2023 data.

Table 17: *Top 15 occupations by driving requirement "LICENCE", 2023.*

Occupations (4-digit)	All adverts	DRIVE_REQUIREMENT	LICENCE	Percentage of occupation	Percentage of ALL adverts with ANY driving requirement
8211: Large goods vehicle drivers	17,854	17,757	14,459	81.0	9.4
5231: Vehicle technicians, mechanics and electricians	8,837	6,410	4,961	56.1	3.2
8214: Delivery drivers and couriers	8,509	8,164	4,083	48.0	2.7
2461: Social workers	13,682	5,837	4,056	29.6	2.6
6135: Care workers and home carers	16,187	5,914	3,875	23.9	2.5
3552: Business sales executives	12,821	4,728	3,303	25.8	2.1
8219: Road transport drivers n.e.c.	6,072	5,976	3,135	51.6	2.0
5315: Plumbers and heating and ventilating installers and repairers	5,178	3,816	3,011	58.1	2.0
3556: Sales accounts and business development managers	19,193	4,862	2,499	13.0	1.6
5241: Electricians and electrical fitters	7,595	3,033	2,267	29.8	1.5
5223: Metal working production and maintenance fitters	4,712	2,252	1,846	39.2	1.2
5323: Painters and decorators	2,319	1,726	1,654	71.3	1.1
7111: Sales and retail assistants	19,943	3,515	1,557	7.8	1.0
2440: Business and financial project management professionals	11,393	1,820	1,102	9.7	0.7
5316: Carpenters and joiners	2,186	1,232	1,040	47.6	0.7

Table 18: *Top 15 occupations by driving requirement "DRIVERS", 2023.*

Occupations (4-digit)	All adverts	DRIVE_REQUIREMENT	DRIVERS	Percentage of occupation	Percentage of ALL adverts with ANY driving requirement
8211: Large goods vehicle drivers	17,854	17,757	17,737	99.3	11.5
8214: Delivery drivers and couriers	8,509	8,164	8,090	95.1	5.3
8215: Driving instructors	7,422	7,422	7,422	100.0	4.8
8219: Road transport drivers n.e.c.	6,072	5,976	5,948	98.0	3.9
5231: Vehicle technicians, mechanics and electricians	8,837	6,410	2,593	29.3	1.7
8212: Bus and coach drivers	1,210	1,210	1,210	100.0	0.8
3556: Sales accounts and business development managers	19,193	4,862	354	1.8	0.2
8222: Fork-lift truck drivers	2,947	778	350	11.9	0.2
5223: Metal working production and maintenance fitters	4,712	2,252	340	7.2	0.2
3119: Science, engineering and production technicians n.e.c.	2,460	1,087	339	13.8	0.2
3552: Business sales executives	12,821	4,728	282	2.2	0.2
6135: Care workers and home carers	16,187	5,914	276	1.7	0.2
9252: Warehouse operatives	7,503	1,146	260	3.5	0.2
5315: Plumbers and heating and ventilating installers and repairers	5,178	3,816	239	4.6	0.2
1241: Managers in transport and distribution	1,424	421	227	15.9	0.1

Table 19: *Top 15 occupations by driving requirement "DRIVE_COURSE_OF_WORK", 2023.*

Occupations (4-digit)	All adverts	DRIVE_REQUIREMENT	DRIVE_COURSE_OF_WORK	Percentage of occupation	Percentage of ALL adverts with ANY driving requirement
2461: Social workers	13,682	5,837	4,372	32.0	2.8
6135: Care workers and home carers	16,187	5,914	3,439	21.2	2.2
8214: Delivery drivers and couriers	8,509	8,164	3,317	39.0	2.2
3552: Business sales executives	12,821	4,728	1,571	12.3	1.0
5315: Plumbers and heating and ventilating installers and repairers	5,178	3,816	1,335	25.8	0.9
3553: Merchandisers	2,057	1,182	1,057	51.4	0.7
3556: Sales accounts and business development managers	19,193	4,862	1,027	5.4	0.7
5241: Electricians and electrical fitters	7,595	3,033	1,019	13.4	0.7
7111: Sales and retail assistants	19,943	3,515	907	4.5	0.6
5434: Chefs	24,918	1,207	851	3.4	0.6
3555: Estate agents and auctioneers	1,955	1,145	624	31.9	0.4
8219: Road transport drivers n.e.c.	6,072	5,976	602	9.9	0.4
9252: Warehouse operatives	7,503	1,146	524	7.0	0.3
5231: Vehicle technicians, mechanics and electricians	8,837	6,410	502	5.7	0.3
3554: Advertising and marketing associate professionals	10,560	1,151	495	4.7	0.3

Table 20: *Top 15 occupations by driving requirement "DRIVE_TO_WORK", 2023.*

Occupations (4-digit)	All adverts	DRIVE_REQUIREMENT	DRIVE_TO_WORK	Percentage of occupation	Percentage of ALL adverts with ANY driving requirement
3556: Sales accounts and business development managers	19,193	4,862	2,765	14.4	1.8
7111: Sales and retail assistants	19,943	3,515	2,290	11.5	1.5
3552: Business sales executives	12,821	4,728	2,155	16.8	1.4
5315: Plumbers and heating and ventilating installers and repairers	5,178	3,816	1,553	30.0	1.0
5241: Electricians and electrical fitters	7,595	3,033	1,224	16.1	0.8
5223: Metal working production and maintenance fitters	4,712	2,252	917	19.5	0.6
5231: Vehicle technicians, mechanics and electricians	8,837	6,410	854	9.7	0.6
2440: Business and financial project management professionals	11,393	1,820	821	7.2	0.5
2453: Quantity surveyors	5,794	1,587	699	12.1	0.5
6135: Care workers and home carers	16,187	5,914	589	3.6	0.4
2121: Civil engineers	5,843	1,357	504	8.6	0.3
5225: Air-conditioning and refrigeration installers and repairers	1,000	714	482	48.2	0.3
5434: Chefs	24,918	1,207	462	1.9	0.3
3541: Estimators, valuers and assessors	3,740	920	443	11.8	0.3
3114: Building and civil engineering technicians	1,690	801	440	26.0	0.3

Appendix B: Text search parameters

Licence (*Description*)

Full UK licence|full UK license|full UK manual|valid UK licence|valid UK license|B licence|B license|full DVLA vehicle licence|provisional licence|provisional license|driving licence|driving license|driver licence|driver license|drivers licence|drivers license|drivers' licence|drivers' license|drivers's licence|drivers's license|driver's licence|driver's license|manual licence|manual license|manual driving licence|manual driving license|manual vehicle driving licence|car licence|car license|uk driv|uk driving

Points (*Description*)

full clean licence|full clean license|full UK clean|clean licence|clean license|clean driving licence|clean driving license|clean driving record|maximum 6 points|max 6 points|than 6 points|6 minor points|the 6 points|inferior to 6 points|6 points or less|6 points on licence|6 points on license|maximum 3 points|max 3 points|than 3 points|inferior to 3 points|3 points or less|3 points on licence|3 points on licence

AbleDrive (*Description*)

requires a driver|car driver|car drivers|car user|need to be a driver|needs to be a driver|must be a driver|currently learning to drive|driver is essential|driver required|prefer a driver|ability to drive a car|ability to drive company vehicle|ability to drive hire vehicle|ability to drive is essential|ability to drive is a requirement|ability to drive to and from|you can drive|someone who can drive|driving is a must|you must drive|must drive as|must drive and|must drive.|must drive;|must drive,|you need to drive|need to be able to drive|ability to drive.|ability to drive,|ability to drive;|able to drive,|able to drive.|able to drive;|driving to different sites|driving to sites|full driver

Driver – General (DrivGen)

Title

driver|chauffeur|PTS Care|transit van|van job|Multi drop|multidrop|multi-drop|drop off parcels

Excludes: forklift, FLT, digger, excavator, 360

Description

driving experience|expert driver.|expert driver,|van experience|transit van|van parcel delivery|van delivery|van delivery driver

Excludes: forklift

Driver – Specialized (DriveSpec)

Title

HGV 1|HGV 2|HGV1|HGV2|HGV1 CE|HGV CAT C|HGV Class|HGV Driver|HGV Night Driver|Utility Driver|Class 1|Class1|Class one|Class 2|Class2|Class two|C1 Lorry|C2 Lorry|7.5 Tonne|7.5t|75t|75 Tonne|75 ton|3.5 Tonne|35 Tonne|35t|35 ton|3.5t|LGV Cat|LGV 1|LGV 2|LGV1|LGV2|LGV Clas|LGV Driver|Lorry driver|DRIVER 75T|Cat C|Cat C1|C1|Class C|Cat D|Cat D1|Cat CE|Category CE|PCV|HIAB|Heavy Drivers|Heavy Driver|Tanker|Tank Crewman|Warehouse Distribution Assistant|Tractor driver|tractor driving|Minibus driver|Mini Bus Driver|bus driver |Coach driver|Coach Drivers|Shuttle Bus|ADR driver|ADR card|Driving instructor|Driver Trainer|Refuse driver|Ambulance practitioner

Description

Certificate of Professional Competence|CPC Driver|Driver CPC|CPC card|licence with a CPC|Driver Qualification Card|full CPC|valid CPC|Approved Driving Instructor training|ADI training|drive large goods vehicle|HGV Licence|HGV License|HGV 1|HGV1|HGV 2|HGV2|Class 1 lorry|Class 2 lorry|C1 lorry|C2 lorry|7.5t|75T|75 Tonne|75 Ton|7.5 Tonne licence|7.5 Tonne license|7.5 licence|7.5 license|35 Tonne|35T|35 ton|3.5 tonne|3.5T|Light Van|LGV Cat|LGV 1|LGV 2|LGV1|LGV2|LGV Cat|LGV Clas|LGV Driver|National Vocational Training|NVT|Class 1|Class1|Class one|Class 2|Class2|Class two|C1 licence|C1 license|C1 lorry|C+E category lorry|Class 1 C+E|Provisional C1|Full C1|HGV|lorry licence|lorry license|Lorry driver|C+E lorry|full HGV|HGV licence|HGV license|LGV licence|LGV license|PDP|PD Passport|ADR Certificate|ADR Licence|ADR Tanker|Fuel Tanker|Tanker Driver

Taxi (*Title*)

Taxi Driver|UBER Driver|Uber Partner - Driver|Uber Partner Driver|Driver for Private Hire|Drivers for Private Hire|Private hire driver|Minicab|Mini cab|PCO

Excludes: Bus drivers

Own Vehicle

Title

Car Owner Driver

Description

Own vehicle|own car|own van|own working vehicle|own working car|own working van|lease or own|drivers with own|driver with own|Access to car|Access to a van|Access to a vehicle|access

to vehicle|need a car|use of a car|Car essential|car essential|car is essential|Car required|car is required|driver with a car|have a car|car owner|access to a reliable car|owner/driver

Company Vehicle (*Description*)

Company Van|Company Car|Company vehicle|car and benefit|car or car allowance|Car/Car allowance|allocated vehicle|get a new vehicle|you will get a vehicle|brand new van

Public Transport (*Description*)

no public transport|no bus or train links|access to reliable transport|any public transport|no public transport|public transport is not available|lack of public transport|lack of reliable public transport|limited access to public transport|public transport is very limited|public transport is limited|public transport limited|limited public transport|limited transport|no access to public transport|not to be able to rely on public transport|not serviced public transport|not services by any public transport|off of transport links|off transport links|off public transport|outside of public transport|not easily accessible by public transport|not accessible by public transport|not accessible using public transport|not on a public transport route|not suitable for public transport|no reliable public transport|poor public transport|public transport poor|not within easy reach|transport is essential|little public transport

Location (*Description*)

due to location|due to the location|isolated location|remote location|remote area|rural location|rural area|location is quite remote|location is remote|outside of the city|outside the city|far from the city|Few minutes drive|Short drive from|Short drive to|Short drive away

Fuel (*Description*)

Fuel Card|Fuel Allowance|fuel expenses|petrol expenses|petrol cost reimbursed|paid petrol cost|fuel cost reimbursed|paid fuel cost|fuel cost covered|45p per mile|discounted fuel

Mileage (*Description*)

mileage

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