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Couriers and drivers – women or men? Opinions on gender in platform work “via apps” in Poland

Abstract

The article examines gender-related perceptions and stereotypes of platform-based courier and driver jobs, focusing on factors such as physical aptitude, safety concerns, work flexibility, and anonymity. The theoretical background to the empirical research was the theory of statistical discrimination. The main purpose was to provide the views of Polish residents on gender diversity in the context of platform work as couriers for delivering meals from restaurants or shopping and taxi drivers. The following hypothesis was set: clients might be guided by stereotypes in their opinions given to platforms workers. The methods used were critical analysis of the scientific achievements of literature and a diagnostic survey, using the questionnaire technique. The paper explores the concept of digital labour platforms (DLPs) focusing on offline service delivery and provides a concise overview of statistical discrimination theory. It also examines the results of a survey conducted among adult inhabitants of Polish cities. The findings indicate that while certain gendered perceptions remain strong, attitudes seem to be not far away from gender neutrality.

Keywords: digital labour platforms, gender inequality, work “via apps”, couriers, drivers.

Kurierzy i kierowcy – czy płeć ma znaczenie? Opinie na temat kobiet i mężczyzn w pracy platformowej w Polsce

Abstrakt

Przedmiotem badań w artykule uczyniono stereotypy związane z płcią w kontekście pracy kurierów i kierowców świadczących usługi za pośrednictwem platform cyfrowych (DLP), koncentrując się na takich aspektach, jak predyspozycje fizyczne, kwestie bezpieczeństwa, elastyczność pracy oraz anonimowość. Teoretycznym punktem odniesienia dla badań empirycznych była teoria dyskryminacji statystycznej. Głównym celem było przedstawienie opinii mieszkańców Polski na temat kobiet i mężczyzn w kontekście pracy platformowej, tj. jako kurierzy dostarczający posiłki

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z restauracji lub zakupy oraz jako kierowcy taksówek. Postawiono następującą hipotezę: klienci platform mogą kierować się w swoich ocenach pracowników stereotypami dotyczącymi płci. Zastosowane metody badawcze obejmowały krytyczną analizę dorobku literatury naukowej oraz metodę sondażu diagnostyczny z wykorzystaniem techniki ankietowej. W artykule omówiono pojęcie cyfrowych platform pracy z akcentem na usługi realizowane offline i przedstawiono krótką charakterystykę teorii dyskryminacji statystycznej. Dokonano analizy wyników badania ankietowego przeprowadzonego wśród dorosłych mieszkańców polskich miast. Można stwierdzić, że choć pewne stereotypy płciowe nadal są obecne, postawy respondentów nierzadko bywają neutralne.

Słowa kluczowe: cyfrowe platformy usług pracy, nierówności płci, praca przez aplikację, kuryerzy, kierowcy.

JEL: J16, J39, J49.

INTRODUCTION

Discussions about female and male traits and skills often revolve around a mixture of theories from various fields. Economics typically provide insight into how gender differences, real or perceived, impact economic outcomes like labour market participation, wage gaps or occupational choices. A distinct approach has been adopted in this paper. Setting the analysis in the context of perceived sex-based differences, this article addresses the topic of digital labour platforms (DLPs) with focus on opinions on those that provide offline services – couriers and drivers. To date such a study has not been conducted in Poland; only related themes have been covered in relation to China (Kwan, 2022), Argentina (Micha et al., 2022) and India (Ghosh et al., 2022), among others. According to those authors, DLPs can perpetuate existing gender biases, leading to an undervaluation of female work who face lower earnings and worse conditions compared to their male counterparts. The emphasis here is not on inequality as a result of certain processes but on its underlying determinants. The research problem addressed concerns the extent to which gender stereotypes influence customer perceptions of platform workers. This approach provides new insights, thereby filling a gap in the existing literature. The main objective is to diagnose and present the views of Polish residents on the gender diversity in the context of platform work as: couriers for delivering meals from restaurants or shopping and drivers in the light of the theory of statistical discrimination. Such background seemed to be noteworthy in the context of the research problem raised since the theory relies on stereotypes about average group characteristics. The hypothesis stated here was that platform clients might be guided by stereotypes in their opinions given to platforms workers. The hypothesis was verified through an analysis of the structure of responses to a survey that included, among other items, questions concerning participants' opinions on this issue. Existing studies confirm that various biases may influence customers satisfaction evaluations and produce discriminatory judgments for minority and female employees (Hekman

et al., 2010). There are also studies suggesting that female or minority drivers receive lower ratings from passengers (i.e. Greenwood et al., 2018; Micha et al., 2022). Thus, it can be assumed that opinions of the platforms' influence the positioning of the workers and finally – their incomes. The motivation to explore the topic stemmed from the desire to examine whether similar premises can be observed in the Polish market, especially in view of the growing popularity of services purchased via platforms and noticeable on the streets of Polish cities couriers and drivers. The data presented here provide a unique opportunity to explore opinions on platform workers with regard to their gender. The methods used were critical analysis of the scientific achievements of literature and a diagnostic survey, using the questionnaire technique. The article examines the results of a survey conducted among adult inhabitants of Polish cities.

The paper is organised as follows. Following the introduction, the first section concerns the concept of the DLPs with a focus on services delivered offline. The next part examines briefly the statistical discrimination theory. This is followed by a separate section describing the methodology and the subsequent section presenting the results. The final part encompasses the conclusions, discussion and limitations of the study.

LITERATURE REVIEW – PLATFORM WORK WITH A FOCUS ON OFFLINE DIGITAL LABOUR PLATFORMS

Platform work can be described as on-demand work facilitated by digital (internet) platforms which, by means of algorithms, intermediate between two groups of independent users: workers and clients (customers), both registered on a given platform. The organisation of the process of transaction is quite characteristic of this business model. In outline: the work is structured around discrete tasks, in contrast to traditional employment models characterized by ongoing work relationships. All services are ordered by clients via smartphone apps (possibly via websites), and the algorithm suggests workers who could possibly perform the task. Payment is often per task/project, rather than a salary or hourly wage (Farrell, Greig, 2016; Ostoj, 2020; Ostoj, 2021). Many DLPs operate globally, therefore the workforce registered even on one platform is notably diverse, encompassing individuals from various demographic backgrounds, skill levels, and geographic locations (Vallas, Schor, 2020). This diversity is also facilitated by the low barriers to entry for many types of work.

There are two basic groups of DLPs (ILO, 2021; Vallas, Schor, 2020; Schmidt, 2017). The first group, online platforms, utilize advanced internet and mobile technologies, making services accessible to both customers and workers internationally or even globally. The tasks are performed remotely via platforms

such as Amazon Mechanical Turk, Clickworker, TopCoder, Upwork (and many others), and include a wide range of services from relatively simple activities such as video transcription or annotating images to more complicated services such as translation, software development or graphic design. The second group – offline platforms, employ mobile and geolocation technologies to connect local workers with clients in need of physical, location-specific jobs. They usually embrace such services as taxi, delivery, care provision, house cleaning, and odd jobs. The examples of platforms are Uber, Deliveroo, Glovo, Task Rabbit, Hilfr, Rappi, or Handy. The main focus of the paper is on the two prominent sectors within offline platforms, namely delivery and taxi services. Delivery platforms connect couriers with customers who need to transport things, ranging from groceries and restaurant meals to packages and personal items. In turn, taxi platforms connect passengers looking for transportation with nearby drivers. Both delivery and taxi platforms use a proprietary algorithm to match workers with clients; the algorithm considers factors like proximity, worker availability and their ratings, estimated time of arrival and probably many other factors that are not made public by the platforms.

DLPs provide customers with several benefits, including 24/7 availability, upfront and competitive prices, or fast service delivery. The situation is more complex from the perspective of the workers. Based on the analysis of the subject literature, it becomes feasible to categorize the attributes of platform work into two categories – advantages and disadvantages. Within each category, a specific subset of the characteristics inherent to offline services can be identified (Table 1).

Table 1. Pros and cons of platform work

	Advantages	Disadvantages
Related to both online and offline work	• The opportunity to earn additional or higher income. • A more flexible work schedule. • The ability to organize and manage one’s own workload without external oversight. • Greater independence in decision-making. • Minimizing exposure to bias or unfair treatment. • Avoiding repetitive and monotonous routines.	• Unpredictable and often insufficient earnings. • Lack of social safety nets. • Algorithmic delegation of tasks and evaluation of work, with reduced human supervision. • The need to be available and vigilant almost constantly. • No access to guidance, mentorship, or support from colleagues and supervisors. • Covering work-related costs.
Related to entirely offline services	• Involving continuous movement and varying locations (ideal for individuals who thrive in non-static environments).	• Involving direct interactions with clients. • Dealing with heavy traffic in cities. • Exposure to harsh weather conditions.

Source: (Pal, Kumar, 2024; Faisal, 2024; Verdin, O’Reilly, 2022).

Platform work (Table 1) offers advantages such as flexibility, autonomy, greater anonymity, and avoidance routine but, it comes with challenges including i.a. unstable income, lack of social protection, and algorithmic management. Offline work, while providing face-to-face interaction and physical activity, also requires dealing with urban traffic and weather conditions. The reflection on the content of the Table prompts an inquiry into whether certain characteristics might play any role in the context of gender issues and what the potential consequences might be. However, it is essential to base the approach on established scientific theory.

STATISTICAL DISCRIMINATION THEORY – AN OVERVIEW IN THE CONTEXT OF PRESENT DAY

Statistical discrimination theory relies on stereotypes about the average group characteristics to make decisions under uncertainty (Becker, 1957; Baumle, Fosset, 2005; Bertrand, Duflo, 2016). It was developed by K. Arrow (1971) and E. Phelps (1972) and explains how group inequality can arise and persist even when decision-makers (like employers or consumers) are rational and non-prejudiced. The authors suggest that discrimination occurs because those agents have imperfect information about the productivity of individuals. Instead of making decisions based on complete information, they rely on statistical averages or historical data about the group to which a person belongs. For example, if a group (a minority, a gender) has historically been less productive, employers might assume that all of its members are less productive, leading to discrimination in the form of differences in job opportunities or wages between the groups (Thijssen et al., 2021). The theory also covers scenarios where discrimination arises from differences in the reliability or “noise” of signals (like test scores) that applicants send to employers. Even if two individuals from different groups have identical above-average signals, the one from the group with a higher historical mean might be favored because their signal is seen as more reliable, even if those groups are otherwise identical in terms of actual ability. In short, employers might use group characteristics as proxies for individual productivity. Thus, employment decisions are not taken entirely on the basis of individual characteristics but rather on the basis of (perceived) group features. The process appears to be reinforced if decision-makers are prejudiced or irrational. In the context of gender issues, such discrimination may result from socially shared stereotypes about male and female traits and skills legitimated by various ideologies (di Stefano, 2019; Sielska, 2023). The problem has been also developed i.e. within the framework of the hypothesis of sex segregation in the labour market. Due to the role attributed to women and

men and the belief in different sets of gender-specific characteristics, women are often perceived (even by themselves) as being better in roles requiring empathy, communication, and nurturing while men are seen as better in STEM fields and physical work. Because of traditional caregiving roles, occupations offering flexible hours or the possibility to combine work with family responsibilities are also often more appealing to women. Men are seen as responsible for earning income to support their families, which is why earning potential and job stability are significant factors. Such opinions about females and males might serve as proxies for individual characteristics leading to various forms of discrimination.

On the surface, adopting the statistical discrimination theory may be controversial in combination with the DLPs issues, as it originates from the 1970s, whereas the platforms emerged in the 21st century. Furthermore, there is no negotiation in such business model, since the rates are predetermined and current decisions are made by algorithms, not humans. No formal hiring decisions are made either, it is sufficient that the potential platform workers meet certain conditions and registers on a platform. Therefore, human mistakes or stereotyping seem unlikely. However, the inadequacy of this theory becomes apparent. First of all, the algorithms employed are not transparent and are designed in alignment with the preferences of the platform owners, with no assurance that they are free from discrimination (Orwat, 2020), including gender bias. Secondly, the algorithms consider customer opinions, which may already be influenced by stereotypes existing in a society. With such reasoning and applying the theory of statistical discrimination to the situation of women and men working as couriers or drivers for the DLPs may explain differences in customer choices and ratings which can appear. The theory suggests that platform clients, having incomplete information about individual drivers or couriers, may make decisions based on stereotypes or statistical averages related to the group to which the person belongs. Although it is not possible to decide on worker gender (or any other characteristic such as nationality, race etc.) at the assignment stage, platform workers are rated after each completed task. In the light of the theory, customers might base their evaluations not solely on the actual experience but also on biases derived from general beliefs about the group. For example, if men have historically been more commonly employed as drivers or couriers, clients might, consciously or unconsciously, assume that men are more competent or better suited for this job. As a result, a female driver receives lower ratings than a male driver for the same quality of task performed. These ratings influence further matching process, namely drivers with better ones might get more ride requests or be matched with higher-rated passengers. The system can create anxiety, as consistently low ratings could reduce their earnings or even lead to deactivation. More lucrative assignments for men not only may affect the gender differences in earnings, but also job security for

women. Moreover, groups of taxi or delivery drivers perceived as doing a better job may also be rewarded informally in the form of tips, reinforcing inequality.

With regard to the stereotypes and features of platform work delineated in the preceding section, the question arises as to whether the profession of delivery person or taxi driver can be considered more suitable for one gender than the other. Attention has been paid to gender-related issues stemming from the theory, as well as to offline platform-based work. The aspects of physical strength and conditioning, flexibility and anonymity were selected for more in-depth study. The question of income in the context of gender and the role of the man as the breadwinner was dropped. Although platform work is low paid, it is often seen as complementary work, so it is difficult to grasp the context of gender differences.

RESEARCH METHODS

The study was conducted employing a diagnostic survey method, with the use of an internet-based questionnaire technique. It was outsourced to an organisation with access to a comprehensive research panel allowing for the selection of a representative sample of the adult Polish population residing in urban areas, ensuring diversity and representativeness in terms of gender, age, and education. The survey was conducted in December 2023. The sample (401 respondents) included 51.1% women and 48.9% men. By age: 9.5% were aged 18–24; 19% were aged 25–34; 41.6% were aged 35–54, and 29.9% were aged 55–70. By place of residence: 47.6% were residents of large cities with more than 50,000 inhabitants; 52.4% were residents of cities with up to 50,000 inhabitants. The survey of rural residents was abandoned due to anticipated poor recognition of the phenomenon. The structure of the sample in terms of the level of education was as follows: 43.6% of people with higher education, 25.9% with post-secondary or secondary vocational education, 17.7% with general secondary education, 11% with vocational education and 1.7% with lower secondary, primary or incomplete primary education.

A concise introduction at the outset of the questionnaire was incorporated to differentiate between workers operating “via apps” and “traditional” couriers and taxi drivers. Given that the survey focused on gathering gender-related opinions rather than experiences, the criterion to exclude individuals who had never ordered services through such platforms was omitted. A subset of findings derived from an analysis of responses to two separate questions devoted to couriers and drivers is presented. Each question was structured in a closed format, allowing respondents to select only one answer from the provided options. Responses here were expressed on a five-point Likert scale: from 1 – *I completely disagree*, to 5

– *completely agree*. The questions were as follows: *In your opinion, is there any link between gender and the job of a courier delivering meals/shopping ordered via platforms, such as Pyszne.pl, Glovo, Wolt? In your opinion, is there any link between gender and the job of a driver providing passenger transport services ordered via platforms, such as Uber, Bolt, FreeNow? The responses suggested were: a) more suitable for men because of physical predispositions, b) more suitable for men because it can be dangerous (contact with awkward customers), c) gender is irrelevant, d) more suitable for women because it allows for greater flexibility and the possibility of combining work with domestic responsibilities, e) more suitable for women because of greater anonymity.* It is noteworthy that the neutral answer is general in nature. This was intended to counterbalance to the other four responses in which references to stereotypes are made.

RESULTS FROM THE SURVEY

The structure of the answers obtained shows a complex picture of platform workers in the context of gender differences in the eyes of Polish city dwellers (Table 2).

Table 2. Opinions on courier and driver job in the context of gender (in %)

Statement about the job*	Couriers			Drivers		
	1-2	3	4-5	1-2	3	4-5
More suitable for men due to physical predispositions	27.2	23.7	49.2	39.1	24.2	36.7
More suitable for men because it can be dangerous	26.0	18.2	55.9	24.7	23.4	51.9
Gender is irrelevant	26.6	27.7	45.6	21.4	31.7	46.9
More suitable for women because it allows for greater flexibility	51.6	27.4	21.0	49.2	22.9	27.9
More suitable for women because of greater anonymity	45.1	34.7	20.2	46.6	32.4	21.0

* 1 – Completely disagree, 2 – Rather disagree, 3 – Undecided, 4 – Rather agree, 5 – Completely agree.

Source: own elaboration based on research results.

Physical aptitude was the first issue considered (Table 2). Nearly half of the respondents (49.2% – combining the responses of those who rather agree and completely agree) lean towards the view that the courier job may be more suitable for men due to predispositions. This proportion suggests that a considerable number of people perceive the physical demands of the work – such as carrying items or cycling long distances – as potentially more challenging for women.

More than 27% reject the idea that this job is more suited to men, indicating they believe the predisposition is not a significant factor. On the topic of taxi drivers, it becomes evident that 36.7% of respondents declare the view that men might be more suitable for the job of a driver. Although this is a significant percentage, it is less than half, which indicates that a majority either disagrees or is undecided about this notion.

The potential dangers arising primarily from difficult customer interaction were then examined. More than half of the respondents (55.9%), agree to some extent with the statement that the job of a courier delivering meals or shopping might be more proper for men for this reason. 26.0% of people disagree with the statement, suggesting that they do not believe gender matters in the context of perceived risks. 18.2% of the respondents remain undecided. Similar proportions are observed regarding driving jobs. Almost 52% of individuals “completely” or “rather agree” that the job is more suitable for men. This perspective could stem from traditional views on gender roles or perceptions of men being more capable of handling dangerous situations. The significant portion (23.4%) of the respondents indicates uncertainty. The relatively small group likely believes that gender is not a relevant factor in safety concerns in this profession.

The third statement aimed to gather opinions while ensuring respondents felt comfortable answering without requiring them to give a reason. The distribution of responses regarding the couriers reflects a lack of consensus among respondents. Namely, 27.7% are undecided, 26.6% disagree to some extent and 45.6% agree to some extent. The response pattern to the statement concerning drivers reveals a slightly different trend. 21.4% disagree with the statement that gender is irrelevant, indicating a minority perceives gender as relevant in this role, though the proportion is smaller than agreement levels. Nearly 47% agree to some extent (28.9% “Rather agree”, 18.0% “completely agree”), showing that almost half of the respondents see gender as irrelevant. 31.7% are undecided, representing the largest group, which suggests that many respondents consider the issue to be situational or lack a strong opinion.

Yet another statement addressed the matter of flexibility. The response structure to the remark that courier work is more suitable for women because it allows for combining work with household duties indicates a predominant disagreement among the respondents. More than half of them (51.6%) reject the idea that courier work is inherently more suitable for women due to its flexibility. 27.4% are undecided while minority (21%) aligns with the view that flexibility in courier work makes it better suited for women. There are slight variations in the response patterns to analogous question regarding to drivers. Namely, almost 50% disagree to some extent that driving work is more proper for women because of flexibility. 27.9% agree that this feature of the job may make it more suitable for women, while 22.9% are undecided. It seems that the responses referring to both

couriers and drivers demonstrate that gender stereotypes linking women to flexible work and domestic responsibilities are not strongly supported by the majority in Poland, though the undecided group highlights that these perceptions may linger.

Anonymity is the last issue raised here. The overall structure reveals skepticism toward the argument that anonymity specifically makes courier work more appropriate for women. 45.1% of the respondents disagree with the statement while the largest group (34.7%) comprises undecided. A smaller group (20.2%) completely or rather agrees, showing limited support for the notion that platform anonymity significantly benefits women in courier work. In the context of job as a driver, nearly half of respondents (46.6%) do not view platform-based anonymity as a key factor in making driving work more suitable for females. A fairly large group (32.4%) lacks a clear stance or sees the relationship between anonymity and gender-based discrimination as unclear or situational. A smaller group (21.0%) shows support for the idea that anonymity in platform-based driving services is particularly beneficial for women.

The analysis indicates that gender stereotypes are present in perceptions of courier and driver jobs, but they are not forceful nor universally accepted. The higher percentage of undecided respondents suggests that societal perceptions of gender roles in these professions may be more nuanced or context-dependent, meriting deeper investigation into underlying factors.

CONCLUSIONS

While some stereotypes persist in Poland, especially with regard to physical demands and safety, societal views indicate a more gender-neutral perceptions of these jobs. They can be also manifested differently depending on the profession. Stereotypes about physical strength and job safety are more pronounced for couriers than drivers. Driving seems to be perceived as more gender-neutral, while courier work still carries traditional perceptions. The notion that women should do flexible jobs is not widely supported, however, some still hold this view. Anonymity is not considered a key gender-related factor. The analysis of respondents' answer patterns suggests that only some of the commonly held gender stereotypes are present in Polish society. Thus, the hypothesis set out in the article is only partially confirmed. The results also differ from those cited from similar studies conducted in other countries, where the findings were more conclusive. Nevertheless, it should be emphasized that only opinions were surveyed and not specific decisions regarding the ratings they gave to the workers or the tips handed. On the one hand, this may be considered a limitation of the study, because it makes direct comparisons and broader discussion more difficult; on the other

hand, it is important to acknowledge that platform work remains a relatively recent phenomenon in Poland – while it is relatively well-known in urban areas, not all individuals have necessarily engaged with such services. Yet, this does not preclude the possibility of having a formed opinion on the subject. Future research could refine the sample by focusing exclusively on platform service users and incorporating questions related to decision-making rather than solely opinions. Yet, this approach may require further time until the phenomenon becomes more recognisable in the Polish labour market.

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