



Self-employment through ride-hailing: Drivers' experiences in Johannesburg, South Africa



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Orientation: Ride-hailing services have gained popularity in South Africa because of their ability to provide a reliable alternative to traditional modes of transport. However, little is known about ride-hailing drivers.

Research purpose: The purpose of this study was to determine the ride-hailing drivers' job satisfaction levels and the challenges they experienced.

Motivation for the study: This study was motivated by the lack of scholarly information on the experiences of drivers involved in ride-hailing in the context of South Africa.

Research design, approach and method: This study adopted a pragmatic approach through a mixed-method, survey-based design. Fifty-three ride-hailing drivers were randomly interviewed in Johannesburg, South Africa, using a pre-designed and piloted questionnaire. Data were analysed using methods of descriptive interpretation and inductive thematic analysis.

Main findings: A descriptive statistical analysis showed that most ride-hailing drivers provide the service to earn their primary income. Furthermore, a thematic analysis found that ride-hailing drivers felt unsafe providing these services because of the violence they experienced from minibus taxi operators in the region.

Practical/managerial implications: In a country plagued by unemployment, the development of small businesses is an important income-generating opportunity for many. To further develop the employment potential of the growing ride-hailing industry, governments at various levels should provide greater support and safety measures for ride-hailing drivers.

Contribution/value-add: This study contributes a unique dataset in exploring ride-hailing drivers' self-employment, job satisfaction and challenges in Johannesburg, South Africa.

Keywords: ride-hailing drivers; ride-hailing; self-employment; sharing economy; Uber; Bolt; Taxify; minibus taxi violence.

Introduction

According to the Quarterly Labour Force Survey (QLFS), unemployment was 30.8% in quarter 3 of 2020 (Statistics South Africa 2020), a record high for the country. Despite annual employment growth across various industries, such as social services, agriculture and mining, employment in the manufacturing, trade, construction and utility industries declined substantially in recent years, causing the rise in South Africa's unemployment rate. As a result, many South Africans turned to self-employment through entrepreneurship for livelihood. Mahadea and Kaseeram (2018) similarly suggest a strong push factor from unemployment to entrepreneurship – necessity entrepreneurship. This gives rise to the growing informal and township economies, where vulnerable populations such as women and youth are able to enter the labour market through enterprise (Charman 2016), and participate in the economy.

Ride-hailing companies became popular in South Africa in 2015, creating an opportunity for self-employment. However, as the industry grew, it posed a threat to the minibus and metered taxi industry, resulting in violence and strike actions from minibus and metered taxi operators (Henama & Sifolo 2017). In addition to minibus and metered taxi discontent, ride-hailing drivers in South Africa face other challenges, such as targeted hijackings (Kimberley 2019) and increased operating costs because of a lack of vehicle ownership (De Greef 2018).

The literature on ride-hailing services rarely captures the drivers' experiences, particularly in South Africa. Instead, existing local literature explored the South African ride-hailing experience (Henama & Sifolo 2017) and examined how ride-hailing services are changing the passenger

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transport 'game' (Dube 2015). To the best knowledge of the authors, existing literature does not examine the experience of ride-hailing drivers. Subsequently, this study contributes to the growing body of knowledge in South Africa on ride-hailing, with a particular emphasis on ride-hailing drivers' experiences. The study focuses on the challenges ride-hailing drivers face, the industry's employment-creating abilities, and the satisfaction derived from ride-hailing.

Literature review

Considering the previously mentioned focus of the study, it is important to discuss the rise of the ride-hailing industry and its position within the greater sharing economy, as well as the successes of, and challenges faced by, the ride-hailing industry over the last decade. Although there is a considerable body of literature that encompasses various facets of the sharing economy, including the ride-hailing industry, studies that focus on the drivers' experiences are very limited. For this reason, the bulk of this literature review will discuss key themes from the ride-hailing literature in a broader context.

The sharing economy and the rise of ride-hailing

The sharing (or collaborative) economy is not a new concept. Early inspiration for the development of a sharing economy came from ideas popularised by Felson and Spaeth (1978) in terms of the joint consumption by consumers of goods and services. Later, Harvard Professor Yochai Benkler proposed a model of commons-based peer production, whereby the production of outputs is a collaborative effort of large groups of people, performed in a decentralised manner (often using the internet). The outputs generated from this process are made available to a large group of consumers in the same decentralised manner using a non-market-based medium – this medium would later become what is known today as open-source software and creative commons data (Benkler 2002). The concept of a sharing economy was proposed as a modern-day solution to Lloyd's (1833) postulation of a *tragedy of the commons*, a condition that occurs in any environment of shared resources where individuals who act autonomously and according to their own self-interest, act in a way that is against the common good by over-using or destroying those shared resources (Hardin 2009). From this stance, the underpinnings of sustainability and environmental responsibility for the sharing economy are derived.

Since the early 2000s, elements of what would become the modern-day sharing economy have existed, and internet-based peer-to-peer platforms like eBay (for buying and selling goods), Napster and Scour (for sharing data files) have existed since access to computers and the internet became commonplace. The modern sharing economy, defined as 'the peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services' (Hamari, Sjöklint & Ukkonen 2016:1) gained popularity in 2008 amidst growing concerns regarding the sustainability and environmental adversities of traditional business operations.

Uber Technologies Inc. (hereinafter 'Uber'), the first major and most well-known ride-hailing service, was founded in 2009, and it grew exponentially in the months following its inception. Researchers argue that the most important reason for its rapid and sizeable growth is its use of information and communications technology (ICT) in overcoming barriers to entry that exist in traditional transport industries (Manyika et al. 2016). As a result, Uber has been commended for the effectiveness of its ICT-based model in connecting service providers (drivers) with consumers and reducing inefficiencies and transaction costs associated with traditional transport models (such as the metered taxi industry) (Lee et al. 2018). Salnikov et al. (2015) also argue that whilst ride-hailing services like Uber are often not the cheapest option for consumers (compared with public transport or metered taxi services), many still choose to use ride-hailing services because they offer greater comfort, convenience and frictionless payment options. Uber and other ride-hailing services have also been commended for reducing the need for personal cars, easing road congestion in cities and lessening the global warming effects emanating from personal transportation (Cohen & Kietzmann 2014).

However, despite its growing popularity, Uber faced criticism about its negative effect on the metered taxi and other transportation industries, the employment classification rights of its drivers, and its accountability for drivers' actions (Harding, Kandlikar & Gulati 2016). Some authors also question the appropriateness of including ride-hailing companies like Uber in the sharing economy; Meelen and Frenken (2015) argue that Uber Black, which comprises Uber employees who are registered taxi operators, and UberX, Uber's most popular service provided by freelance drivers not formally employed by Uber, cannot be classified as being part of the sharing economy. This is because the drivers in both cases go out of their way to pick up consumers and transport them to their desired locations, which goes against the definition of the sharing economy (which stipulates that the driver should be making the trip anyway). As a result, these authors view Uber as being no different from any other taxi service.

Regulation and competition concerns

The rapid growth of ride-hailing as a sub-industry within the transportation industry has raised regulatory concerns, both in terms of the drivers (labour classification, worker rights and tax treatment) and the companies (competition and legalities between companies and drivers) (Flores & Rayle 2017). Moreover, the lack of focused regulation of the ride-hailing industry could be a significant problem. For instance, in the United States of America (USA) and other developed countries, large firms within the ride-hailing industry were able to disregard regulations that apply to the metered taxi industry (Flores & Rayle 2017), leading to serious competition policy issues. These regulations, as barriers to entry into the metered taxi industry, are primarily in the form of licensing requirements and health and safety regulations. In many cities worldwide, taxi unions have thus protested the lack of

similar requirements for ride-hailing services. This lack of regulation effectively removes barriers to entry and creates an unfair advantage for the ride-hailing industry.

Ganapati and Reddick (2018) discussed the approaches taken by local governments in the USA in regulating sharing economy activities, including ride-hailing, at the city level. The authors outline three approaches to regulation: no regulation (54% of municipalities surveyed), blanket regulation identical to those imposed on related, regulated industries (40% of municipalities surveyed), and those who admitted that tailored regulations were necessary, but needed more time and information to formulate them.

Although the metered and minibus taxi industry in South Africa is different from the USA and other developed countries in terms of structure and regulation, the same issues exist. The introduction of ride-hailing services in South Africa quickly led to contention between taxi unions and government, protests by taxi-industry workers, and acts of violence by minibus taxi drivers against ride-hailing drivers, which persisted for several years (Burke 2017; Dlamini 2018). However, it is anticipated that the most recent proposed amendment to South Africa's National Land Transport Act in 2020 is likely to ease tensions between the minibus taxi and ride-hailing sub-industries. Furthermore, the National Land Transport Amendment Bill will introduce new regulations for the ride-hailing industry in South Africa and impose fines for non-compliance in an effort to promote fairness within the industry and greater safety for ride-hailing consumers (Omarjee 2020).

Another challenge facing the ride-hailing industry in South Africa – one far more difficult to regulate – is the potential for criminals to use ride-hailing platforms for criminal acts. On a number of occasions, drivers working for Uber or Taxify (now Bolt) have allegedly kidnapped, robbed, raped or murdered consumers (Businesstech 2019). In response, ride-hailing companies insist that they take every possible precaution to screen and assess applicants when hiring drivers, and they should not be held legally responsible for drivers' criminal actions. Moreover, because drivers are not formally employed by the ride-hailing companies, the law tends to protect the companies in this regard.

In the developed world, ride-hailing services also pose a competition risk to public transportation modes such as trains, trams, subway and bus services. In a study spanning seven large cities in the USA, Clewlow and Mishra (2017) reported that a significant number of consumers substituted their use of light rail (trams and subway trains) and bus services for ride-hailing services. The authors also determined that ride-hailing services were supplementary to commuter rail services, and they argue that city planners, regulators and policymakers should be aware of these changes in consumer behaviour when planning public transportation networks. However, Ganapati and Reddick (2018) found that there are cities where the public sector has begun to partner

with ride-hailing companies, potentially decreasing public transit services that compete with ride-hailing services.

In South Africa, however, the lack of widespread and reliable public transportation is likely a factor contributing to the growth and success of ride-hailing services. Henama and Sifolo (2017) analysed the effect of Uber on South Africa's transport industry and concluded that for intra-city travel, Uber and other ride-hailing services had created a somewhat cost-effective and safe alternative to the limited options of public transportation and the widely used but notoriously unsafe minibus taxi service. Furthermore, the authors revealed that for inter-city travel, where buses (usually quite expensive), trains (cheaper, but limited in scope and generally unsafe and uncomfortable) and minibus taxis are the only options for many commuters, Uber is currently investigating cost-effective inter-city travel options as an add-on to their existing suite of ride-hailing services.

Earnings and labour dynamics

Ride-hailing services have created a platform where workers can make a comfortable living in a flexible working environment. Berger et al. (2018) conducted a study in London and found that the median hourly wage of Uber drivers was £11, placing drivers in London in the lower half of the city's income spectrum but still, on average, above the minimum wage (at the time) of £7.83 per hour. The authors also determined that, despite being in the lower-income bracket, drivers were more satisfied than workers in other jobs largely because of greater flexibility.

Henao and Marshall (2019) conducted a study of driver earnings based on a limited sample (one driver over a 1-year period) in Denver. They found that, whilst hourly earnings can be well above the regional minimum wage, there are several factors that influence this amount. The authors considered three operational cost models and reported that drivers' basic 'hourly wage' could be significantly reduced (by as much as \$4) when these costs are accounted for. The authors also claimed that drivers tended to 'cruise for rides' – moving between high-demand areas – instead of parking in a single location and waiting for rides, which adds further expenses. After accounting for these costs, the authors noted that the 'hourly wage' can drop significantly below the regional minimum.

Fielbaum and Tirachini (2020), in a study of drivers in Santiago, Chile, reported results similar to those of Henao and Marshall (2019). The authors applied multiple income and expenditure estimation techniques and found that drivers' mean hourly earnings were far below the basic hourly wages when various costs were considered. They also established that mean earnings were usually less than half of Uber's estimates of drivers' earnings, and far below the 'Uber promised earnings' (the estimate of earnings that Uber uses in its advertising to recruit drivers). Interestingly, drivers in Santiago still tended to make more than the national minimum wage and the regional median wage, despite the costs taken into account in the authors' calculations.

In South Africa, there are two serious impediments to the earnings model that result from the country's high level of income inequality. The first issue is that, whilst South Africa has a prescribed minimum wage of R20.76 per hour (approximately equivalent to \$1.30), the minimum wage rules are often not enforced, especially for unregulated and part-time work (Truter 2020). Assuming that drivers earn above minimum wage after operational costs are accounted for, this means that drivers need to work very long hours, providing several rides, in order to make a comfortable living. In addition, many ride-hailing drivers in South Africa cannot afford their own vehicles and therefore rent vehicles to provide ride-hailing services. This can cost drivers more than half their earnings in rent and, in some instances, drivers are also expected to hand over a portion of the income they receive to the owner of the vehicle after the ride-hailing company takes its commission of between 20% and 25% (De Greef 2018).

In the USA, Chen et al. (2019) adopted an approach to studying the income of ride-hailing drivers over an 8-month period using ride-hailing income relative to income from traditional transport modes, instead of considering absolute income. The authors emphasised that the flexibility associated with ride-hailing and the ability to work when it is most profitable to do so are some of the key benefits for ride-hailing drivers. The authors stated that ride-hailing drivers exhibit a highly elastic labour supply and, to be compensated for the loss of this flexibility in traditional work models, their wages would need to double.

Experiences of drivers

It is important to consider workers' experiences in this industry instead of simply assessing the income-and employment-generation potential of ride-hailing services. This is especially important in South Africa, where ride-hailing drivers have been the victims of violence resulting from competition concerns.

One of the first studies to seriously consider ride-hailing drivers' experiences was conducted by Berger et al. (2018), who compared data from the UK's Office for National Statistics with data collected from Uber drivers in London. The authors found that, on average, Uber drivers reported both higher satisfaction and feelings of 'worthwhileness' from their jobs than other workers in London. Uber drivers, on average, also reported higher levels of happiness. The authors point out that this is at odds with the consensus in the well-being literature that lower-income earners usually report lower levels of life satisfaction. Given this finding, Uber drivers' employment classification becomes important, as self-employment correlates with higher life satisfaction levels. However, the authors also found that Uber drivers reported higher levels of anxiety than other London workers. This finding is in line with those by Blanchflower and Oswald (1998), who argued that there is a trade-off between higher levels of life satisfaction and higher anxiety levels.

Finally, the authors determined flexibility was a motivator for the higher levels of life satisfaction reported by Uber drivers. Whilst there is no strong statistical evidence that this is the case, they propose weak correlative evidence, stating:

[D]rivers who state that they partnered with Uber to take advantage of the flexibility the platform offers also exhibit substantially higher subjective well-being. Conversely, the minority of drivers that put less emphasis on the role of flexibility or would prefer to be classified as an employee rather than independent contractor, exhibit relatively lower levels of life satisfaction and higher levels of anxiety. (Berger et al. 2018:6)

Malin and Chandler (2017) also identified a trade-off between high flexibility and high levels of anxiety – what the authors termed 'splintering'. Their study utilised data generated through a semi-structured interview process and found that the anxiety associated with many aspects of the job could outweigh the limited gains from flexibility to work when and where the drivers want. The authors concluded that these workers should be recognised as employees (not contractors) with the same employment benefits as employees in more traditional work settings. This may not alleviate all the 'precarity' experienced by ride-hailing drivers, but it would balance the trade-off between anxiety and flexibility.

Fielbaum and Tirachini (2020) used a more specific set of questions to analyse drivers' experiences in Chile. First, the authors sought to find what attracted drivers to the job, and they identified (in order of prevalence) flexibility, the enjoyment of driving, better working conditions than previous jobs, and wage levels as primary motivators. Regarding drivers' job satisfaction, a set of statements regarding individual job aspects was made, and drivers expressed their experiences on a 7 point scale (7 being extremely satisfied). The average score across all elements was 4.5, and the most common score was 5, suggesting that drivers were quite satisfied with their job overall.

Research methodology and design

Research method

This study was motivated by the growing problem of unemployment in South Africa. It aimed to analyse whether ride-hailing drivers offer their services as a form of self-employment using a mixed-method approach. The study adopted a pragmatic approach to research by developing, validating and administering a structured survey instrument. Questions in the instrument prompted micro-level quantitative and qualitative data from ride-hailing drivers so that their motives for driving, job satisfaction and workplace challenges could be better understood. The golden thread of this study aimed to explore the following three tenets:

- the ride-hailing drivers' employment-creating abilities
- the satisfaction that ride-hailing drivers derive in the industry
- the challenges facing ride-hailing drivers in their line of work.

Research design

The most recent studies on ride-hailing drivers draw attention to the tax implications of this disruptive aspect of urban mobility (Zoepf et al. 2018) and the experiences of ride-hailing drivers in terms of job satisfaction, working conditions and earnings (Berger et al. 2018; Fielbaum & Tirachini 2020). These studies employed a survey-based approach to gathering information from ride-hailing drivers. Zoepf et al. (2018) used a website (therideshareguy.com) to invite email subscribers to complete a ride-hailing driver survey. Berger et al. (2018) employed ride-hailing company data, a polling company and government surveys to interview a representative sample of ride-hailing drivers. Similarly, Fielbaum and Tirachini (2020) used social media groups for ride-hailing drivers and driver associations to distribute self-administered questionnaires.

This study adopted a survey-based research design by administering questionnaires through in-depth interviews, similar to Malin and Chandler's (2017) approach. A fieldworker administered the questionnaire by hailing a ride using common ride-hailing smart mobile applications. Whilst the ride-hailing driver drove the fieldworker to their destination, the questionnaire was completed through a consensual interview. This approach was used to (1) access drivers easily, (2) make it worth the driver's time by facilitating an honest response during a paid ride and (3) eliminate questionnaire fatigue for the driver by allowing them to talk to the fieldworker as opposed to completing a written questionnaire.

Research questions

The study sought to address the following research questions:

- Do ride-hailing drivers offer these services to self-address unemployment?
- Are ride-hailing drivers satisfied with working in the sub-industry?
- What challenges do ride-hailing drivers experience in their line of work?

Questionnaire

As stated, this study made use of a questionnaire administered through in-depth interviews. The instrument was designed to intuitively deduce biometric and well-being related information based on the ride-hailing drivers' lived experiences. Well-being dimensions were defined broadly and thematically grouped with an emphasis on economic, financial, subjective and physical dimensions of well-being. The questionnaire's final section contained an open-ended question requesting drivers to comment openly on their experiences. During the collection of the data, the identity of all respondents remained confidential and no identifying information is presented in any part of this study.

The research instrument was designed using a cross-sectional survey design approach, which involves the consensual

surveying of a sample of participants at a particular point in time. The questionnaire was designed using the design criteria outlined by Kitchenham and Pfleeger (2002), namely (1) search the relevant literature, (2) construct an instrument, (3) evaluate the instrument and (4) document the instrument.

Therefore, prior to the survey design, relevant literature was consulted to establish existing positions in the literature on the topic and determine how previous studies surveyed respondents. At the time of the survey design, few studies could be found that surveyed ride-hailing drivers. Instead, existing literature either focused predominantly on ride-hailing legislation (Witt, Suzor & Wikström 2015), social costs (Rogers 2015), competition in the ride-hailing industry (Dube 2015; Wallsten 2015), or evaluating the industry within specific contexts (Henama & Sifolo 2017). As a result, the authors could not rely on existing, standard instrumentation, and thus the questionnaire was developed with very little guidance from the ride-hailing literature. Instead, survey design literature was consulted rigorously.

A first draft of the questionnaire was developed using the survey design criteria outlined by Sullivan (2011), Kitchenham and Pfleeger (2002). These criteria include instrument reliability and validity. To ensure that interviews yielded valid (consistent and dependable) results when administered to similar respondents in a comparable setting, the questionnaire contained distinct sub-sections, and each sub-section contained a particular set of concrete, unambiguous questions, containing clear response options to guide the respondent. A majority of the questions in the questionnaire thus produced consistent and comparable categorical responses from ride-hailing drivers.

Instrument reliability was ensured through a number of steps. Firstly, all questions in the questionnaire related directly to the study objectives. Apart from a few additional demographic questions, no unnecessary questions were included to prevent interview overload for respondents. Secondly, each interview was facilitated using a combination of either English and Zulu or English and Tswana to ensure the survey questions were understandable and allowed for easier communication and expression in a native South African language. Thirdly, no more than 20 questions were asked, and the interview was limited to 30 min to gather accurate responses whilst avoiding interview fatigue. Fourthly, whilst the questionnaire primarily contained closed-ended questions, a few open-ended questions were included to allow respondents to comment more openly on issues they felt to be of particular importance. Finally, the first draft of the questionnaire went through a rigorous piloting process with 10 ride-hailing drivers, and the results were used to improve the quality of the questionnaire.

The piloting process's first objective was to ensure that the briefing, informed consent and survey questions were understandable to ride-hailing drivers and yielded sensible responses. The second objective was to ensure the field

worker's trips could be tracked and verified using mobile ride-hailing applications. The ride-hailing application history allowed the authors to ensure that a unique ride-hailing driver was interviewed each time. In addition, the field worker kept an interview log sheet that was verified against the application history to corroborate respondent participation. Both the pilot ($n = 10$) and sample size ($n = 53$) were small because of limited funding for the study. Drivers were hailed randomly using mobile ride-hailing applications. Thus, a random sampling technique was used to identify research respondents.

Ethical considerations

This study received ethical clearance from the University of Johannesburg's School of Economics research ethics chair on 01 October 2019, ethical clearance code: 2019ECON07.

Results and discussion

Descriptive analysis: Demographic information

A descriptive analysis of basic demographic information from the questionnaire suggests that the majority of drivers for ride-hailing companies in this particular sample were between the ages of 26 and 45. The sample was male-dominated, with only 3.77% of drivers identified as female. Almost two-thirds of the sample comprised South African ride-hailing drivers (see Table 1).

Descriptive analysis: Economic and financial well-being

Descriptive statistics related to ride-hailing drivers' economic and financial well-being provide a clear picture of the employment creation potential of ride-hailing services in South Africa. The vast majority of driver earnings in the sample fell in South Africa's middle-income category between R19 201 and R307 200 per annum (Statistics South Africa 2011). This was calculated by multiplying the various income bracket amounts from Table 2 by 12 for annual estimates. Furthermore, 90.57% of ride-hailing drivers found their income from ride-hailing better than income from previous jobs, and 62.26% stated the income they received from driving was sufficient to cover their expenses. Moreover, 39.62% reportedly left previous employment to take up ride-hailing as their main source of generating an income; this is considerable, considering that 45.28% of the sample were

previously employed on a full-time basis. Of the sampled drivers, 88.68% earned all their income from their ride-hailing services, and only 11.32% of drivers supplemented their income through other businesses.

The descriptive statistics in Table 2 suggest some adversities that drivers in the sample experienced in the ride-hailing industry. For instance, 64.15% of drivers provided ride-hailing for more than 51 h per week, which far exceeds a typical 40-h workweek. Moreover, 54.72% of sampled drivers

TABLE 2: Economic and financial indicators.

Variable	Key statistics	<i>n</i>	%
Main source of income from ride-hailing	Yes	47	88.68
	No	6	11.32
Supplementary income from another job or business	No	47	88.68
	Own business	6	11.32
Previously employed	Yes	28	52.83
	No	25	47.17
Part-time or full-time at previous employment	Full-time	24	45.28
	Part-time	3	5.66
	Declined to answer	26	49.05
Reason for leaving previous employment	Better job	21	39.62
	Retrenched	5	9.43
	Declined to answer or missing	27	50.94
Driving hours per week (in hours)	10–20	1	1.89
	21–30	4	7.55
	31–40	7	13.21
	41–50	7	13.21
	51 or more	34	64.15
Shift	Day shift	4	7.55
	Night shift	6	11.32
	Combination	43	81.13
Daily fares	10–15	1	1.89
	16–20	8	15.09
	21–25	6	11.32
	26–30	11	20.75
	31 or more	3	5.66
Monthly take-home income	Unknown	24	45.28
	R0 – R2500	2	3.77
	R2501 – R5000	5	9.43
	R5001 – R7500	30	56.60
	R7501 – R10 000	13	24.53
Income from driving better or worse than previous jobs	More than R10 000	3	5.66
	Better	48	90.57
	Worse	4	7.5
Income from driving sufficient to cover expenses	Missing	1	1.89
	Yes	33	62.26
Commission paid to the ride-hailing company is fair	No	20	37.74
	Yes	24	45.28
Exact commission percentage	No	29	54.72
	20%	22	41.51
	25%	20	37.74
Vehicle is self-owned	Missing, refused or unknown	11	20.75
	Yes	22	41.51
	No	31	58.49

TABLE 1: Key demographic information.

Demographic variable	Key statistics	<i>n</i>	%
Age (in years)	Declined to answer	9	16.98
	18–25	2	3.77
	26–35	21	39.62
	36–45	17	32.08
	46+	4	7.55
Gender	Male	51	96.23
	Female	2	3.77
Citizenship	South African	34	64.15
	Non-South African	19	35.85

did not believe that commission paid to ride-hailing companies, self-reported as ranging between 20% and 25%, is fair (these reported commission percentages align with those reported by De Greef 2018). Furthermore, 58.49% of the sampled drivers did not own their vehicle, whilst 37.74% of drivers believed that income earned from ride-hailing is insufficient.

Descriptive analysis: Subjective and physical well-being

The descriptive statistics in Table 3 support some of the adverse driver experiences that emerged in Table 2. The majority of drivers in the sample experienced an intermediate increase in their level of satisfaction, which is not in line with findings from the international literature (Berger et al. 2018; Chen et al. 2019). In addition, 79.25% of drivers stated they would quit driving if alternative employment with the same earning potential arose. Also, 79.25% of drivers felt unsafe on the job.

Inductive thematic analysis: Secondary themes

In the open-ended questions, drivers were asked to provide insight into the best and worst aspects of the job (up to three aspects each). The information gained from these questions provides limited but valuable insight into ride-hailing drivers' personal experiences whilst on the job.

For the best aspects of the job, many respondents cited 'flexibility' (34 out of 53) (in line with the findings by Chen et al. 2019), 'meeting new people' and 'I enjoy driving' (36 out of 53). Options such as 'can use the car to run errands' and 'better opportunities (networking) from clients' were mentioned more than once. One respondent did not report a single positive aspect of the job, saying, 'None. I always feel unsafe'.

The most common worst aspects of the job reported by drivers were safety-related issues (30 out of 53), general concerns about crime and hijackings (10 out of 53), rude or drunk customers (17 out of 53) and customers who do not pay (13 out of 53). Reckless driving, low wages and having to work late at night also featured more than once. The safety-related issues and general concerns about crime and hijackings are in line with concerns reported in Kimberley's (2019) study.

When asked to provide further comments about their experiences of the job (which was optional), eight out of the nine respondents who chose to answer made safety-related comments – related to both crime, hijacking and violence against ride-hailing drivers. 'My window was damaged in Hillbrow by meter taxi owners', 'safety is an issue' and 'I hate everything about this job, your life is always at risk. There is nothing as bad as always being scared at the job' are some of the comments that reinforce the negative experiences of drivers.

Findings from the open-ended questions could explain the relatively low to intermediate level of satisfaction in the

TABLE 3: Subjective and physical well-being.

Variable	Key statistics	n	%
Driver happiness	Satisfaction level 3	1	1.89
	Satisfaction level 4	14	26.42
	Satisfaction level 5	9	16.98
	Satisfaction level 6	17	32.08
	Satisfaction level 7	10	18.87
	Satisfaction level 8	1	1.89
	Satisfaction level 9	1	1.89
Stop driving if alternative employment with the same earning potential arose	Yes	42	79.25
	No	8	15.09
	Maybe	3	5.66
Feel safe whilst on the job	Yes	3	5.55
	No	42	79.25
	Missing, refused or unknown	8	15.09

study's sample of ride-hailing drivers and substantiate why many of these drivers would change jobs if another job offering with equal pay became available.

Limitations of the study

There were two major study limitations. As a result of limited funding, the pilot sample ($n = 10$) and the main sample ($n = 53$) were relatively small, limiting the generalisability of the findings to the ride-hailing driver population in South Africa. Moreover, many ride-hailing drivers felt uneasy about reporting sensitive information, such as exact income values. As a result, relatively large income brackets were created to encourage a more general reporting of sensitive information. Most survey questions were arranged to gather responses in discrete, categorical format to encourage ride-hailing drivers to provide as much reliable information as possible in a non-invasive manner. This, together with the small sample size, limited the kinds of empirical techniques that could be applied to the data.

Further research

Researchers who wish to continue research in this area should be mindful of a few matters. Firstly, fearing violence from minibus taxi-operating competitors in the transport industry, ride-hailing drivers are very wary of people interviewing them. It is important to establish trust in the sector prior to interviewing the drivers. Secondly, it is important to interview a large sample of drivers across the country to ensure the generalisability of the findings to the ride-hailing driver population in South Africa. Thirdly, including a combination of continuous and discrete categorical variables will allow more robust statistical analysis. If trust is established with ride-hailing drivers and a larger sample of drivers is interviewed, a variety of in-depth, reliable information could be elicited, which may provide richer insights into the ride-hailing driver population in South Africa.

Conclusion

The bulk of ride-hailing literature focuses on various consumer and legislative aspects of the industry, and ride-hailing drivers receive relatively little attention in scholarly literature. Given

their recent increasing importance in South Africa's ride-hailing sub-industry, this study sought to fill this gap in the literature by focusing on the employment creation potential of ride-hailing. This study examined whether ride-hailing drivers were previously unemployed and started providing ride-hailing services as a means of self-employment. In addition, the study sought to determine the job satisfaction and challenges experienced by ride-hailing drivers to better understand the driver's position in South Africa's ride-hailing sub-industry.

The authors argue that ride-hailing drivers find greater self-employment opportunities, flexibility and earning potential in driving relative to previous full-time employment. However, ride-hailing drivers experience an intermediate level of satisfaction working in the sub-industry, citing safety as their primary concern. Against this backdrop, it is important for governments at various levels and relevant stakeholders to invest in further research into this growing sub-industry to better understand the type of support needed by ride-hailing drivers in creating safer spaces for self-employment in the broader transport industry in South Africa.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

G.W. was the project leader and was responsible for the project conceptualisation, project design, literature study and management of data. N.R. managed the University of Johannesburg, University Research Committee funding application, funding administration, instrument pilot, instrument validity assessment, field worker facilitation and methodology formulation. Both authors co-wrote the article and analysed the data.

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Data availability

The data that support the findings of this study are available upon reasonable request from the corresponding author, N.R.

To ensure the privacy of the participants, data are not publicly available.

Disclaimer

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